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A Cultural Perspective
on Merovingian Burial Chronology
and the Grave Goods from the Vrijthof
and Pandhof Cemeteries
in Maastricht



Mirjam Kars

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Promotor: Prof.dr. F.C.W.J. Theuws
Copromotor: Dr. T.A.S.M. Panhuysen

Overige leden:

Prof.dr. H. Steuer
Prof.dr. L. Verslype
Prof.dr. J.G.A. Bazelmans
Dr. R.G.A.M. Panhuysen
Prof.dr. M. Gnade

Faculteit der Geesteswetenschappen

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Contents

PART I

INTRODUCTION	7
CHAPTER 1	13
THE TYPOLOGY AND CHRONOLOGY OF MEROVINGIAN GRAVES AND GRAVE GOODS AND THE CULTURAL ASPECTS OF MATERIAL CULTURE: A RENEWED DEBATE ON BURIAL CHRONOLOGY	
1.1 THE BURIAL CHRONOLOGY OF THE MEROVINGIAN PERIOD: CONTENT OF THE CURRENT DEBATE	13
1.2 CHRONOLOGICAL METHODS AND THE QUEST FOR SHORT CHRONOLOGICAL PHASES: A CONFLICT?	16
1.2.1 The chronological ordering of graves	18
1.2.2 The object-types in graves	24
1.2.3 The circulation of objects	26
1.3 RECONSIDERING CULTURAL VARIABLES AND THE QUEST FOR SHORT CHRONOLOGICAL PHASES: A CONFLICT?	27
1.4 CONCLUSION: A REDEFINITION OF THE CHRONOLOGICAL DEBATE	32
CHAPTER 2	35
CULTURAL CATEGORIES OF GRAVE GOODS ON THE BASIS OF VARIOUS RELATIONS BETWEEN GRAVE GOODS AND THE DECEASED	
2.1 THE DEVELOPMENT OF THE DEBATE ON THE MEANING OF EARLY MEDIEVAL GRAVE GOODS	35
2.2 SOCIAL STRESS AND THE COMPETITIVE DISPLAY OF GRAVE GOODS	39
2.3 RHETORIC STRATEGIES AND THE USE OF GRAVE GOODS: THE SYMBOLIC CONSTRUCTION OF ANCESTORS AND CLAIMS ON LAND	47
2.4 GRAVE GOODS AS GIFTS TO THE DECEASED	51
2.5 THE USE OF GRAVE GOODS AS A TECHNOLOGY OF REMEMBRANCE	52
2.6 THE AGENCY OF THE DEAD AND THE LIVING	55
2.7 CONCLUSION: FIVE CULTURAL CATEGORIES OF GRAVE GOODS AND THEIR CONSEQUENCES FOR CHRONOLOGICAL ANALYSIS	59
CHAPTER 3	63
CULTURAL CATEGORIES OF OBJECTS, THEIR CIRCULATION, AND THE IMPLICATIONS FOR CHRONOLOGICAL ANALYSIS	
3.1 GENERAL OUTLINE OF THE FUNCTION, MAINTENANCE AND TERMINATION OF PROLONGED CIRCULATION	64
3.1.1 Objects with prolonged or complex circulation: Various sorts of circulation and 'heirlooms'	65
3.1.2 General incentives for continuous and terminated transmission of ceremonial or collective heirlooms: Do they apply to the variety of heirlooms?	66
3.2 COMPLICATED CIRCULATION, OBVIOUS ARCHAEOLOGICAL EVIDENCE	71
3.2.1 Antiques and exotics	71
3.2.2 Normal circulation: Does it exist?	74
3.3 COMPLEX CIRCULATION, OBSCURE EVIDENCE: FAMILY HEIRLOOMS OR THE EXCHANGE OF OBJECTS BETWEEN FAMILIES AND INTERGENERATIONAL TRANSMISSION	75
3.3.1 Mobilia and the organisation of inheritance practises	76
3.3.2 The regulated exchange and transmission of goods in the context of marriage	77
3.3.3 Marriage gifts as examples of continuous object transmission	80
3.4 CULTURAL TRANSMISSION AS THE INCENTIVE FOR THE CONTINUITY OF OBJECT TRANSMISSION AND POSSIBLE REASONS FOR TERMINATING THIS CONTINUITY	82
3.5 CONCLUSION: CULTURAL CATEGORIES OF OBJECTS ON THE BASIS OF EXCHANGE AND TRANSMISSION AND THE CONSEQUENCES FOR CHRONOLOGY	86
CONCLUSION TO PART I	89

PART II

THE TYPO-CHRONOLOGICAL ANALYSIS OF THE GRAVE GOODS FROM THE VRIJTHOF AND PANDHOF CEMETERIES IN MAASTRICHT (THE NETHERLANDS) FROM A CULTURAL PERSPECTIVE	95
4.1 THE VRIJTHOF AND PANDHOF CEMETERIES: THE CONSTRUCTION OF A TYPO-CHRONOLOGY	96
4.1.1 The published cemeteries of the Middle Meuse Area (Belgium) and the Netherlands	100
4.1.2 The typo-chronologies of the Rhineland Area (Germany)	102
4.1.3 The typologies of Northern France	106
4.1.4 The typologies of Southern Germany, Switzerland and the Mediterranean world	109
4.2 CULTURAL CATEGORIES OF GRAVE GOODS AND CULTURAL CATEGORIES OF OBJECTS, PHYSICAL ANTHROPOLOGICAL RESEARCH AND THE CHRONOLOGICAL DEBATE: A NEW CULTURAL PERSPECTIVE ON BURIAL CHRONOLOGY	111
4.2.1 Cultural categories of grave goods	113
4.2.2 Cultural categories of objects on the basis of exchange and transmission	116
CONCLUSION TO PART II	123
THE GRAVE GOODS FROM THE VRIJTHOF AND PANDHOF CEMETERIES	
INTRODUCTORY REMARKS FOR THE DESCRIPTIVE CATALOGUE	127
THE FINAL DATING OF THE GRAVES	127
LIST 1: THE DATABLE GRAVES FROM THE VRIJTHOF AND PANDHOF CEMETERIES	129
LIST 2: THE GRAVE GOODS/OBJECTS FROM THE VRIJTHOF AND PANDHOF CEMETERIES (SITES)	134
POTTERY	173
GLASS VESSELS	205
BELTS	225
BROOCHES	260
BRACELETS	280
EARRINGS	284
DECORATIVE PINS	289
FINGER RINGS	294
DECORATIVE PENDANTS	299
GIRDLE HANGERS AND AMULETS	304
PURSES	316
JEWELS	320
BEADS	321
SEAXES AND SEAX SCABBARDS	367
FRANSISCAS AND AXES	383
UMBO	387
LANCES	388
ARROWHEADS	389
SWORD: SIMPLE	390
SHOES AND LEG WEAR	391
UTILITARIAN OBJECTS	396
COINS (ROMAN/MEROVINGIAN)	408
BIBLIOGRAPHY	411
SUMMARY	421
SAMENVATTING	425
DANKWOORD	431
APPENDIX 1: FIGURES 1-96, THE GRAVE GOODS FROM THE VRIJTHOF AND PANDHOF CEMETERIES	433
APPENDIX 2: THE CIRCULATION SPAN OF VARIOUS GRAVE GOODS ASSEMBLAGES	531

List of figures

Figure 1. The location of the Servatius complex in Maastricht.....	8
Figure 2. The excavated cemeteries of the Servatius complex in Maastricht.	9
Figure 3. Grave goods from the grave of Childeric, Tournai 482.....	10
Figure 4. Steuer's possibility scheme: The 'possible funeral time span' of graves	15
Figure 5. The sequence of graves as a result of seriation..	17
Figure 6. The representation of the average circulation periods of object-types and the variation in circulation periods.	26
Figure 7. The cultural and methodological aspects of the burials and grave goods in the debate on the chronology of the early medieval period.	33
Figure 8. The representation of a normal production, distribution and circulation curve.	74
Figure 9. The continuous circle of the transmission of objects and options for their removal.....	81
Figure 10. The cemetery plans of the Vrijthof and Pandhof cemeteries.	96
Figure 11. The research areas of the consulted typo-chronology schemes compared to Maastricht and the middle Meuse area.	101
Figure 12. The total range of circulation of complete assemblages in individual graves.	119
Figure 13. The circulation span of the grave goods from Vrijthof grave 194 and Pandhof grave 10799	121
Figure 14. Various foot shapes of Merovingian bowls/dishes.....	183
Figure 15. Parallels of the 'Mediterranean' plate buckles from Maastricht.	236
Figure 16. The distribution pattern of 'Mediterranean' plate buckles over Merovingian Gaul.....	237

Introduction

With the title 'A Cultural Perspective on Merovingian Burial Chronology', it is implied that such a perspective is required as an integral component of this field of research in Merovingian archaeology and that such a perspective has been absent, or at least not yet comprehensively developed.¹ The burial chronology of the Merovingian period has been established on the basis of an abundant number of furnished graves throughout early medieval Gaul and is, in principle, accepted by early medieval archaeologists.² These burial phases are obtained with methods of which the practical backgrounds, performance and possibilities for ongoing chronological refinement are, already over a period of approximately one century, extensively discussed in what can be called the chronological debate. The chronological analysis of the grave goods from the Vrijthof and Pandhof cemeteries of the Servatius complex in Maastricht, Netherlands (Figure 1),³ in antiquity a part of northern Gaul, is published in this thesis. The initial work hypothesis for this study was that the statistical method of seriation, the customary method for chronological analysis in Merovingian burial archaeology, could provide reliable sequential orderings of the graves and grave goods from these cemeteries. Several problems, however, were encountered in the first stages of the preparations for this analysis. These problems originally relate to seriation as a chronological method, but they relate especially to the observed shortcomings of the general 'cultural' assumptions that stand at the basis of the consulted chronological studies of Merovingian cemeteries. This thesis therefore aims at the redefinition of the chronological debate which incorporates, next to the practical aspects of chronological analysis, a thoroughly discussed cultural perspective and its consequence for chronological research on the early medieval burial evidence.

Furnished burial, the most prominent archaeologically visible characteristic of the funerary rite in Merovingian Gaul, was already practised in the late Roman period, and disappeared in the course of the eighth century. The characteristics and temporal change of the Merovingian burial rite, but also of the period just before, in Northern Gaul, is already described in broad outline.⁴ A change in grave goods repertoires over this period can be observed: a change that relates to the many transformations in social, economic, political, religious and cultural life. An important cemetery in which the burial continuity from the late Roman period on can be observed is the extensive cemetery of Krefeld-Gellep,⁵ but the majority of the excavated cemeteries have a shorter life span. The burial evidence from Maastricht covers the period from the fourth century, although this evidence is scarce, to the period

¹ In short, 'cultural' refers in this thesis to the general, although constantly negotiated and thus persistent or variable, 'way of doing things' in early medieval society, of which some aspects will be explored in detail in the upcoming chapters.

² 'Merovingian' and 'early medieval' are used alternately. Both terms refer in this thesis to the earliest phases of the early medieval period from which the majority of the characteristic burial practises are known: principally, the sixth and seventh centuries, but also the periods just before and thereafter.

³ The all round analysis of the cemeteries will be published in two separate volumes by the Servatius project group (research term: 2002-2009) of which the researchers involved were Prof. Dr. F.C.W.J. Theuvs, Dr. T.A.S.M. Panhuysen, Dr. R.G.A.M. Panhuysen, Dr. E. Smits, Drs. D.E. Smal, Drs. N.L. Jaspers and Drs. M.F.P. Dijkstra (all from the Amsterdam Archaeological Centre). The members of this group studied the structure of the cemeteries, the individual grave structures, the skeletal remains, the sections (on the basis of which a reconstruction of the landscape was made) and the architectural remains. The Servatius project was financed by the University of Amsterdam, the Netherlands Organisation for Scientific Research, and the town of Maastricht.

⁴ Halsall 1995a.

⁵ See the extensive list of Pirling's publications from 1966 to 2006 of this cemetery.

around the end of the seventh century.⁶ The fifth-, and especially the sixth- and seventh-century burials, are the most prominent in the Servatius complex.



Figure 1. The location of the Servatius complex in Maastricht

Several archaeological excavations in and around the church of Saint Servatius produced the sets of data, which together form the archaeological record that is referred to as the Servatius complex (Figure 2). This archaeological complex consists of the ancient construction remains of the religious buildings that preceded the current church, an extended number of burials with skeletal remains and a variety of grave goods, as well as other features. The excavations of the Vrijthof site (1969/70) and the Pandhof site (1953/54) revealed numerous graves of the Merovingian period. The Merovingian Pandhof cemetery of the sixth and seventh century was preceded by burials from the late Roman period (fourth century) and the fifth century, a century that can at best be considered a phase of transition from the late Roman to the Merovingian period. The boundaries of this cemetery were not completely exposed by the excavators. However, it is thought that the burials before the first building phase of the stone church (around 550) originally formed one burial ground with the graves that were excavated during the campaign from 1981 to 1989 inside the current church.⁷ How the difference between the burials *intra muros* and *extra muros* were perceived after c. 550 remains open for debate. The Vrijthof cemetery, although situated close to the Pandhof cemetery, is a separate burial ground that was in use in the sixth and seventh centuries. The excavations of the Pandhof and Vrijthof cemeteries have only very summarily been published to date, and the chronological phasing of the Servatius complex has been based on the ancient building phases of the church.⁸

⁶ The Pandhof site is after the eighth century still in use as a burial ground, but this period does not fall within the scope of this thesis.

⁷ Panhuysen 1991.

⁸ Panhuysen 1988, 309-312; 1990a; 1991; Panhuysen/De La Haye 2002, 106-115; Panhuysen 2005, 68-97.

The first phase is the *Cella Memoria* phase (c. fourth and fifth centuries). It was named after a construction of stone that was excavated inside the church and which was for some time thought to be the grave chapel of Servatius, although its function and dating has been subject to considerable discussion thereafter. The Pandhof site was evidently in use as a burial ground in the fourth and fifth century; for the late third century, there are some indications of burial activity, but no concrete proof. The Vrijthof site, on the basis of the available archaeological evidence, was not in use as a cemetery at this time. The second phase is the *Templum* phase (sixth-seventh centuries), named after the construction of the *Templum Magnum* (second half of the sixth century, but characteristic of this phase) by bishop Monulphus. During this phase, both the Pandhof site and the Vrijthof site were places where the inhabitants of Maastricht and the surrounding area buried their dead. Although the Pandhof and Vrijthof cemeteries are two separate burial grounds, both were located near a church, constructed of stone, which celebrated the cult of the Christian Saint Servatius. The choice for the interment of the dead in one of these cemeteries was by then surely influenced by the proximity of the church, but considering the dead and the burying groups as confirmed Christians offers a one-sided picture regarding this selection. The third early medieval phase is the *basilica* phase (eighth-tenth centuries), which is named after the construction of a large new church with a ground plan of a *basilica* on the location of the *Templum Magnum*. This is the period in which the Merovingian period gradually transforms into the Carolingian period, and during which the custom of furnished burial also came to an end. The burial evidence from the Servatius complex in particular offers the possibility to refine these building phases with temporal sub-phases on the basis of the chronological analysis of the grave goods, the vertical stratigraphy and radiocarbon dates.

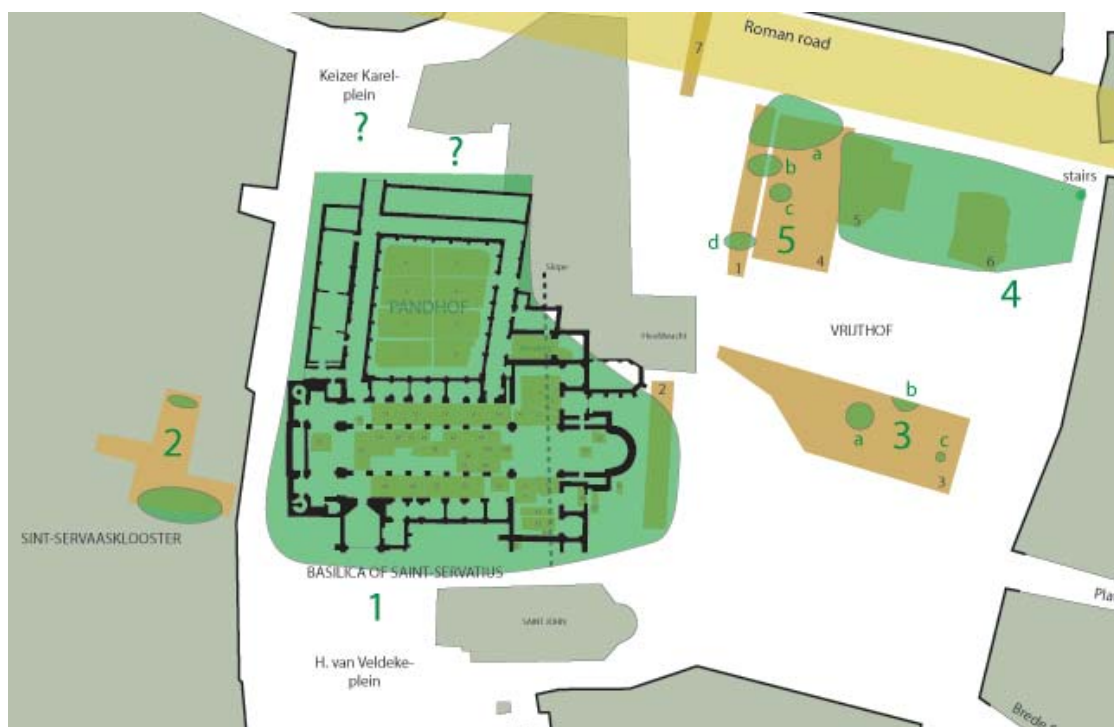


Figure 2. The excavated cemeteries of the Servatius complex in Maastricht.

The Servatius complex as a whole is a relatively unique site in early medieval Europe.⁹ Not many sites are known to have such extensive burial remains related to a church and an early medieval centre of

⁹ Others are the churches of Saint-Victor in Xanten, Saint-Severin in Cologne, Saint-Denis in Paris and Saint-Maximin in Trier.

already considerable importance, compared to the abundant and numerous sixth- and seventh-century (row graves) cemeteries from rural locations. The cemeteries of the Servatius complex were not the only burial grounds in Maastricht, but the Vrijthof and Pandhof cemeteries were the largest cemeteries in the area during the sixth and seventh centuries. Some of the features of both cemeteries are of an extraordinary character compared to other Merovingian burials. These graves with a remarkable appearance, although they contain numerous exclusive objects of gold and silver cannot, however, be compared with the most luxurious and extravagant burials of this period such as the well-equipped grave of Queen Arnegunde in the *basilica* of Saint-Denis (Paris), the legendary grave of Childeric in Tournai, or the famous graves that were excavated in the Cathedral of Cologne (Figure 3). Although conspicuous and with noticeable resemblances, the 'richest' graves of the Vrijthof and Pandhof cemeteries do not fall into the same category of graves of this upper echelon of Merovingian society. The remainder of the furnished graves from the Vrijthof and Pandhof cemeteries fit into the common image of Merovingian funerary practises, and the discussion of the cultural perspective on burial chronology in this thesis relates not so much to the graves of kings, queens, princes and princesses, but rather to the graves of the social strata below.

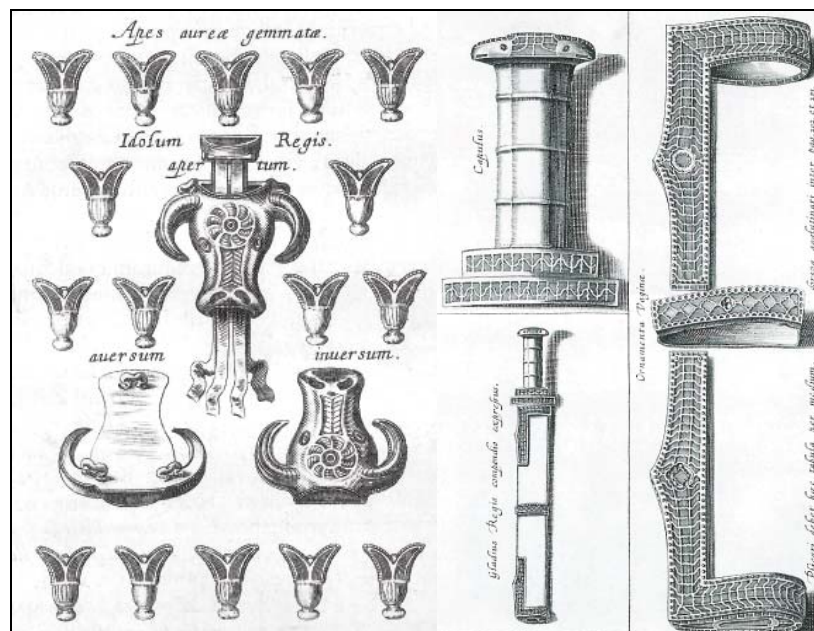


Figure 3. Grave goods from the grave of Childeric, Tournai 482 (after Chiflet 1655, 141, 202).

One of the primary goals of this thesis is to publish a selection of the burial evidence, the grave goods from the Vrijthof and Pandhof cemeteries, which could contribute to the analysis of the chronological and topographical development of the Servatius complex. The construction of a solid method for the description, classification and absolute dating that serves the variety of grave goods from these two burial grounds was required for this goal. The study of early medieval grave goods knows a nearly century-old tradition in which the primary focus has been on chronological reconstructions of burial phases. However, the methods have changed, from the dating of only a limited range of the grave goods to computerised methods with a statistical component in which all the grave goods can be processed. This lengthy tradition of chronological investigation has resulted in a vast amount of typo-chronological schemes, mainly developed in Germany and France where the majority of early medieval cemeteries were excavated. This body of chronological sequences of grave goods became a commonly acknowledged construct, based on a range of assumptions, of which the validity is generally accepted.

The obtained typo-chronological schemes are assumed to form a solid basis for the chronological analysis of various cemeteries for which isolated typo-chronological schemes cannot be produced, but also for interpretative models concerned with the cultural aspects of mortuary practises (i.e. the deposition of objects with the dead). The main discussion in the chronological debate currently revolves around the degree of chronological refinement that can be established.

The publication of the grave goods from the Vrijthof and Pandhof cemeteries resulted in Part II of this thesis which consists of their basic chronological analysis. However, in contrast to the original plan, it does not form the major discussion. The local specifics of each early medieval cemetery require isolated dating procedures. The dating methods generally used are seriation and/or topo-chronological analysis. The dataset of the Vrijthof and Pandhof cemeteries do not meet the requirements for seriation or other statistical dating methods in terms of size and sufficient numbers of usable grave ensembles, and the typo-chronological results that were obtained by seriation or topo-chronology on the basis of cemeteries somewhat remote from Maastricht had to form the analytical basis. On several occasions, however, questions arose regarding the accuracy of the typo-chronological schemes offered. The fact that these schemes are framed by the moment of death, together with the observations that the complex life processes of the deceased and the material culture involved that precedes death were not integrated as meaningful components of the chronological discussions, was the main incentive for this contemplation. The characteristics and results of this reflection can be found in Part I (Chapter 1 to 3) in which the perception of the assumed 'chronological reality' is questioned from a cultural perspective in which the role of material culture in the world of the living in particular is addressed. It is not the aim of this thesis to deconstruct the generally accepted chronological sequences of the vast majority of the material culture from graves. Rather, a major part of the discussion in this thesis is formed by the observed need to integrate essential cultural aspects of early medieval life and material culture into the chronological debate in order to not only obtain a sound basis for further investigation, but also to legitimate the continuation of this debate.

Chapter 1 elucidates the disadvantages of the absence of a thoroughly discussed cultural perspective in the chronological debate, especially in relation to the ambition for short chronological phases in Merovingian burial archaeology. It seems a logical step to find solutions for this absence in the interpretative debate on Merovingian burial customs. Chapter 2 illustrates that theoretical thought in early medieval archaeology has mainly been developed for the ritual context of mortuary practises, and that the material component of situations and events outside the funerary context is underexposed. This conclusion forms the point of departure for Chapter 3. The discussion of the ambition to keep objects in circulation, which involves decisions regarding distribution, exchange, acquisition, keeping and transmission, offers the possibility to explore the way in which objects create relations and identities in various contexts other than solely the funerary context. The identification of cultural categories of objects on the basis of exchange and transmission shows to what degree the accuracy of the up-to-now produced typo-chronological schemes can be appreciated. The introduction to Part II presents the connection between the preceding chapters of Part I and the discussion of the grave goods from Maastricht. Here it is explained how the chronological results for the Vrijthof and Pandhof cemeteries were obtained and how the conclusions regarding the chronological accuracy from a cultural perspective in the first three chapters were integrated into this analysis.

The choice for this discussion has resulted in two initially contradicting parts. On the one hand, existing typo-chronological schemes were used on the basis of which the burial evidence from the two cemeteries was dated. On the other hand, a discussion was started in order to question the chronological accuracy of exactly these typo-chronological schemes. However, another solution was not available, and the grave goods and graves from Maastricht are published on the basis of a selection of the available typo-chronological schemes, but in line with the conclusions of the first chapters. A new research project, which has already started, creates an opportunity to construct an isolated typo-chronological scheme for

the Middle Meuse area, into which the burial evidence from Maastricht will be integrated.¹⁰ The conclusions regarding the chronological analysis from a cultural perspective will form the basis for the construction of this typo-chronology for the Middle Meuse area. Thus, the focus of this thesis lies on the chronological analysis of the grave goods from Maastricht, which is influenced by the cultural perspective on chronology, as discussed in Part I. The aim is to illustrate that both the chronological and interpretative debate can be widened when a perspective is developed not only for the rich material culture from graves as funerary expressions, but also for this group of material culture as objects that shaped the lives of the living during the Merovingian period before they were selected as grave goods.

¹⁰ The Anastasis project (research term: 2009-2013).

Chapter 1

The Typology and Chronology of Merovingian Graves and Grave Goods and the Cultural Aspects of Material Culture: A Renewed Debate on Burial Chronology

This chapter aims at the evaluation and redefinition of the chronological debate in Merovingian archaeology. In doing so, the integration of two separate lines of research is required: the typochronological research of grave goods as it is practised for a long time in early medieval burial archaeology, and some aspects of the more general and broadly developed theoretical debates on funerary customs and the meaning of material culture in various social contexts. The attainable length of the chronological burial phases is probably the most prominent discussion in the current chronological debate, and the quest for short chronological phases seems to be a research goal on its own. Burial and the selection of objects from the material culture of the living for funerary rites, however, is a social practise that consists of variability in choices. The contemporary chronological debate is characterised by the lack of a thorough awareness of certain relevant cultural variables and their influence on chronological results and therefore the possibilities for refined chronologies. The scholarly ambition for short chronological phases will be analysed in relation to the backgrounds of the chronological method of seriation in particular, which is generally accepted as a reliable method for the dating of graves on the basis of their contents. The problems and shortcomings of this method are of a practical and statistical nature, but they also relate to the absence of identified cultural variables as indispensable components of the chronological debate, especially when short chronological phases are the goal. A detailed discussion of these variables and their place in the chronological debate will shape the discussions in the following chapters. First, however, their precise identification, their relation with a chronological method such as seriation, and their contribution to the redefinition of the chronological debate will be explored.

1.1 The burial chronology of the Merovingian period: Content of the current debate

The chronology of the Merovingian period is in the archaeological discipline of this period mainly based on grave goods from more or less extensive cemeteries and should therefore be defined as the burial chronology of this period. Although the methodology of Merovingian burial chronology is, at least according to the list of publications of the last few decades, a fashionable subject, the results of the discussions are rather one-sided.¹¹ The current chronological discussions in early medieval archaeology in France and Germany, where the majority of the cemeteries were excavated, concentrate mainly on the refinement and adjustment of the existing typologies, the possibilities of the refinement of the chronological phases, and the adjustments of the absolute dates ascribed to these so-called '*Stufen*', '*Schichten*' or '*Phasen*', from now on referred to as phases. The application of the chronological methods themselves, seriation and horizontal stratigraphy, are already discussed in detail, and their practical and

¹¹ This is probably due to the fact that 'method' was not distinguished from 'methodology'. The explanation of the technical and practical aspects of chronological methods and the ongoing adjustments of the chronological results alone do not shape the chronological debate; the underlying assumptions of the methods and their relation with relevant cultural aspects of early medieval life, death and material culture require reflection in order to validate chronological results.

technical backgrounds are no longer part of the recent debate.¹² Although the techniques of seriation and horizontal stratigraphy are in fact simple, this chapter illustrates that their underlying assumptions and the need to incorporate relevant cultural variables into the chronological validation of their results are subjects that are underestimated in the chronological debate. Only the chronological method of seriation will be the subject of discussion in this chapter, which was developed and used for chronological analysis in France and the Rhineland area (Germany), for reasons that will be explained later on. Nevertheless, the conclusions in this chapter also relate for the majority to other statistical dating methods and the method of horizontal stratigraphy. At times it was thought that especially seriation was an instrument that made it possible to create relative chronologies of graves in an objective way.¹³ It is now acknowledged that this objectivity is false, although this conclusion did not actually change the practise of chronological analysis. A more general shared opinion is that the relative chronology of the early medieval period is one of the most refined and fundamentally accurate chronologies in the archaeological discipline, and that the available amount of burial data on which it is based is so comprehensive that new finds will not change the chronological insights dramatically when they are included in new seriations.¹⁴ This general shared optimistic opinion may explain why the majority of the participants of the chronological debate concentrate on further refinement of typologies and absolute dating.

The leading 'methodological' discussions are on the one hand part of more detailed publications of a cemetery or a cluster of cemeteries, and on the other hand, they are publications that deal with the subject on its own. The founding works of early medieval chronology are those of Werner (*Münzdatierte austrasische Grabfunde*, 1935) and the elaboration of this work by Böhner (*Die fränkischen Altertümer des Trierer Landes*, 1958), who developed a method to construct a typo-chronology of grave goods that was based on the finds in the region near Trier (Germany). This method (often referred to as 'combinational analysis') was in fact a basic form of seriation. Thereafter, most of the publications that dealt with the typo-chronology of graves and grave goods relied on this work of Böhner, without concerning too much about theoretical backgrounds and the methodological problems of chronological analysis. The most important publications of cemeteries in which it is explicitly mentioned that methodological issues are considered and discussed are those of the cemeteries of *Rübenach* (Neuffer-Müller and Ament, 1973), *Rübenach* and *Mayen und der Pellenz* (Ament, 1973; 1976a), *Schretzheim* (Koch, 1977), *Ardenne and Meuse* (Périn, 1980), *Zur Chronologie merowingerzeitlicher Frauengräber in Südwestdeutschland* (Roth and Theune, 1988), *Pleidelsheim* (Koch, 2001) and in particular, in the publication of the cemeteries of the lower Rhineland area (Siegmond, 1998) and the successive work of the *Franken Arbeits Gruppe* (Müssemeier, Nieveler, Plum and Pöppelman, 2003).¹⁵ However, the discussions in these publications are, as already mentioned, mainly concerned with the adjustments of existing typologies and absolute dates, and with complementary statistical methods that are considered to provide objective proof for the chronological significance of the results.¹⁶

¹² The method of computerised seriation in Merovingian burial archaeology is, for example, extensively discussed by Périn (1980), Ihm (1983), Herzog (1987) and Roth (1994). For an extended general introduction to chronological methods with specific attention to seriation, see O'Brien/Lyman (1999). The method of horizontal-stratigraphy is especially discussed by Ament (1973; 1976; 1977) and Koch (1977). It is also referred to as the chorological or topo-chronological method; this method is developed and used especially for the chronological analysis of the cemeteries from Southern Germany. The object-types are plotted out on the cemetery plan from which the development of the cemetery (the chronological phases) can be extracted. The application of this method requires specific conditions: the cemetery has to consist of a regularly developed cemetery plan through time and it has to be excavated completely. This chorological method has been combined with the method of seriation (Roth/Theune, 1988; Koch 2001; Stauch, 2004).

¹³ Müssemeier et al. 2003, 13.

¹⁴ See for example Legoux/Périn/Vallet 2004.

¹⁵ See Chapter 4 of this thesis for a more detailed discussion of the methodological considerations in some of these works.

¹⁶ Both a discussion of the method of seriation and horizontal stratigraphy and the combination of the two methods can be found in these publications. See Chapter 4 for a detailed discussion of the application of both methods in the studies that were used for the chronological analysis of the finds from Maastricht.

The chronological discussions that are not embedded in the publication of a cemetery primarily focus on the evaluation and adjustment of the phases, as Böhner published them.¹⁷ Altogether, the onsets for an encompassing chronological debate in which the assumptions behind the methods used are combined with material aspects of social life, the selection of objects for funerary rites, and their influence on chronological analysis are only sporadically mentioned in these publications.

An exception from this overview is the in 1977 published article of Steuer (*Bemerkungen zur Chronologie der Merowingerzeit*) in which the importance of the assessment of the 'burial time span' is introduced (Figure 4). The burial time span refers to the minimum length of time in which graves can accurately be dated when the interrelation of cultural aspects such as the various acquisition moment of objects, the circulation period of objects and the age at death are taken into consideration.¹⁸ This article can be appreciated for the awareness it creates regarding the problems of Merovingian burial chronology. The methodological and theoretical conclusions of Steuer, however, are hardly ever followed or elaborated on by other scholars working in the field, despite the observation that the article is frequently cited.¹⁹ Steuer himself elaborated on this subject in a more recent article (*Datierungsprobleme in der Archäologie*, 1998), in which he eloquently added the problems concerned with the quest for short chronological burial phases. These articles could form the foundation for a further development of the chronological debate, despite the fact that some important subjects were not, or not thoroughly, explored by Steuer. Further investigation of the backgrounds of the aforementioned cultural variables is of particular interest for the development of the chronological debate.

It can be concluded that the current chronological debate in early medieval archaeology predominantly revolves around one question: How short can the chronological phases actually be? The consequences of the incorporation of cultural variables into the current chronological debate for especially the validation of short phases will be discussed in the following sections. First, the underlying assumptions of the complete process of seriation as a chronological method will be analysed in relation to the creation of short phases. How do the current discussions of typology, relative dating and absolute dating relate to the construction of short phases, and what is missing in these discussions? Which cultural aspects of early medieval society and burial practises subscribe or challenge the cultural reality of these short chronological phases? Can these discussions form the chronological debate, and will they create a platform to sustain this debate in early medieval archaeology? How can supplementary and independent data such as the analysis of the skeletal remains find a place in this debate and in future research?

1.2 Chronological methods and the quest for short chronological phases: A conflict?

The chronological methods, which are generally used in contemporary Merovingian mortuary archaeology for the creation of isolated typo-chronological schemes, are seriation and/or horizontal stratigraphy. Both are performed on the basis of a typology of the objects from graves. The subsequent steps that are required to create a chronology on the basis of these methods are carried out separately, but are ultimately considerably entangled. The choices made in each of them are of great influence on the final appreciation of the obtained chronology. The majority of Merovingian cemeteries do not meet the requirements to be analysed successfully by the chronological method of horizontal stratigraphy,²⁰

¹⁷ See for example Martin, 1989. A new chronology scheme was, for example, proposed by Ament, 1977.

¹⁸ Steuer 1977, 387-390, 397-98, 403, Abb. 'Umlaufs- und Vergrabungszeiträume von Altertümern'; 1998, 141, Abb. 4.

¹⁹ Theune also made the observation that Steuer's thoughts are often referred to but never employed (1999, 25). One of the most explicit rejections of Steuer's thoughts as relevant considerations for chronological research can be found in the work of Périn (1980, 195-198). The assumption that the dead were buried with their inalienable personal possessions and that these objects are not subject to inheritance practises implies, according to Périn, that disturbing cultural aspects such as those discussed by Steuer are of minor influence on chronological analysis. The majority of archaeologists who are involved in chronological research subscribe this basic assumption (see also Siegmund, 1998, 222-223), and Steuer's cultural variables as a consequence never obtained a solid position as matters of reflection in the chronological debate.

²⁰ See note 16.

and their chronological analysis depends on seriation.²¹ The result of a seriation is a sequence of graves and their contents, which is generally interpreted as a chronological sequence (Figure 5). The method of seriation forms the basis of most of the publications in which the chronological analysis resulted in short burial phases. Given that seriation is a statistical method that averages the processed data, but at the same time seems to provide sequences of graves on the basis of which refined chronology schemes could be created, it is decided to focus on this method, which was mainly applied and developed for the chronological analysis of the cemeteries in the Rhineland area in Germany and in northern France. The main question to be answered here is how the chronological seriations and their underlying assumptions relate to the construction of short phases and to the presumed cultural reality of the obtained chronological sequence and these short burial phases.

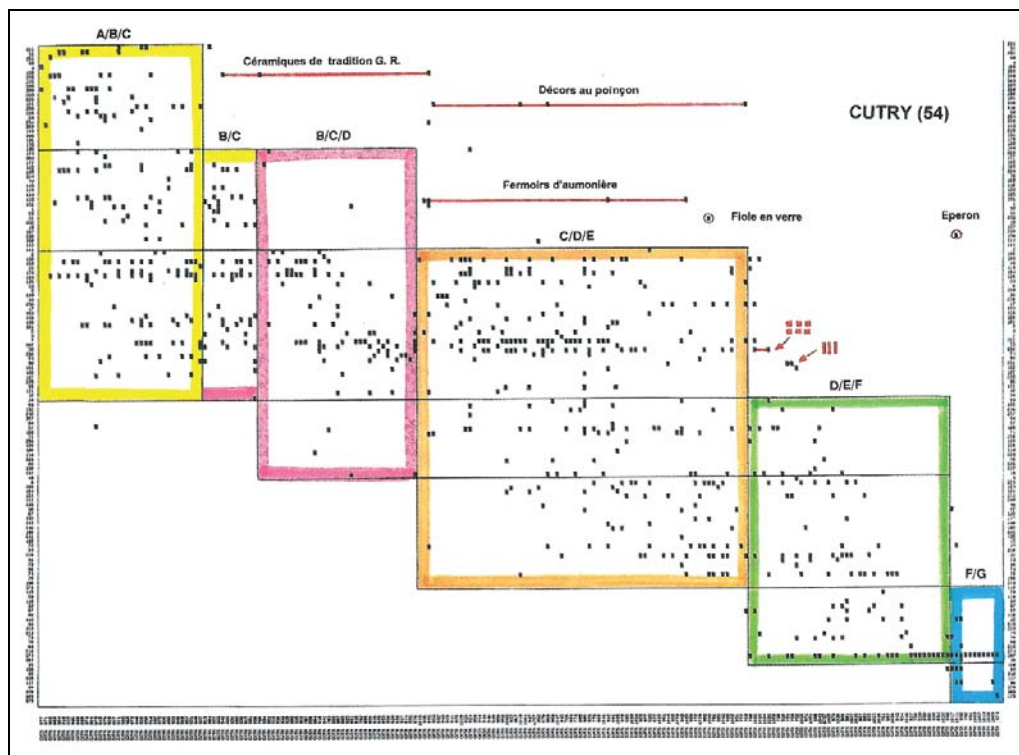


Figure 5. The sequence of graves as a result of seriation. The graves are plotted on the x-axes, the objects on the y-axes. The boundaries that are drawn in the sequence represent the relative chronological phases to which eventually absolute dates are attached. The occurrence of the grave goods (object-types) over the phases represents their circulation period (after Legoux 1998, 171).

The various steps for a chronological seriation are first, the creation of a typology, second, the actual statistical process of seriation on the basis of this typology, third, the construction of relative chronological phases of graves by drawing boundaries in the obtained sequence, fourth, the assignment of absolute dates to the relative chronological phases of graves, and finally (when possible), the combination of the chronological results with the results of the additional methods of horizontal and vertical stratigraphy.²² After this, the absolute chronological sequence of graves and grave goods is

²¹ Böhner (1958) introduced the combinational method, which developed into a much more refined and computerised procedure of seriation, the method commonly applied nowadays.

²² Vertical stratigraphy, however, is not widely used as an additional chronological method for the analysis of Merovingian cemeteries, since they rarely developed in layers.

translated into a typo-chronology scheme (a scheme of phases with their characteristic object-types) in order to present conveniently arranged results.²³ That the outcome of a seriation is already for the greatest part decided in the typological choices made in the first step is generally acknowledged.²⁴ It is often also stated that the created relative sequence of graves and grave goods of the Merovingian period generally represents chronological reality. It is only the exactness of the absolute dates, it is argued, that remains open for discussion.²⁵ It can be questioned whether relative dating is always accurate and involves fewer problems than absolute dating; in fact, absolute dating involves an additional set of methodological problems.²⁶ The problems of both relative and absolute dating with seriation become apparent in the following discussion of the problematic relation between the scholarly ambitions for short chronological phases and the (statistical) limitations of chronological methods. In doing so, three levels of information that can be read in a chronological seriation of graves are identified. The information that becomes obscured in the statistical processing of graves and grave goods is defined for each of these levels, as are their related assumptions and problems regarding the chronological significance of the obtained sequences and the historical reality of short chronological phases (Table 1).²⁷

The contents of a chronological seriation	Obscured information	Problems: Chronology and short phases from a cultural perspective
1. Graves The relative and absolute sequence of culturally gendered graves	-Biological sex -Age at death -Ordering variables other than time -Empty graves -Graves with one object (-Disturbed graves)	-Similarity is contemporaneity? -Phase boundaries and absolute dates: scholarly constructs -The exactness of the positions of graves in the sequence -Absence of independent data -Burial with personal possessions and a rapid replacement of objects as cultural reality?
2. Objects The range and distribution of object -types	-Unique objects / singular features -Recurring object -types in a grave -Unknown cultural criteria	-Morphological changes in object groups: Do they always relate to time? -Refined typologies for cultural analysis, crude typologies for chronological analysis
3. Circulation The average circulation periods of object -types	-The circulation period of individual objects	-The average representation of circulation -Limited knowledge of circulation as a social process -Various categories of objects equal various processes of circulation?

Table 1. The three levels of information in a chronological seriation of graves and grave goods in relation to the statistical and cultural limitations of the creation of short chronological phases.

1.2.1 The chronological ordering of graves

The first level of information is identified as the actual chronological ordering of graves, as it is obtained by the method of seriation (Table 1). A seriation of graves is an arrangement of a number of graves on the basis of their contents (grave goods assemblages), which are classified as a series of object-types. The greater the resemblance of the grave goods assemblages, the closer they are placed in relation to

²³ See Theuvs (2001, 196) for a more detailed discussion of the problematic aspects of this 'translation'.

²⁴ See for example Hines 1999, viii; Koch 2001, 26-27; Müssemeier et al. 2003, 13.

²⁵ Ament 1977, 133; Steuer 1977, 398.

²⁶ See Theuvs (2001, 196-197) for some remarks regarding the problems of absolute dating on the basis of coins.

²⁷ The three levels of information together illustrate the limited set of data (compared to the content of the burial remains from the Merovingian period) on which chronological analysis is based. The position of the grave goods in relation to the body, the types of grave structures, the orientation of the graves, the position of the grave in the cemetery, and the types of grave markers, etc. have rarely been incorporated into seriations for chronological analysis.

each other in the seriation sequence. Only graves with two or more finds can be processed in a seriation; a grave with none or only one find cannot be ordered in relation to other graves.²⁸ The graphical representation of a seriation shows the ordered sequence of graves on a diagonal line, which is believed to represent a chronological sequence (Figure 5).²⁹ An interpreted chronological seriation consists of the division of this continuous relative ordering in chronological phases to which absolute dates are attached. The average circulation periods of object-types can be established on the basis of this construct.³⁰ It is usually thought that the regular change through time of the composition of the grave goods assemblages (and also the gradual change in the morphological features of objects) is the ordering principle of the created sequences. This is based on the supposition that the higher the degree of similarity between grave goods assemblages is, the more likely it is that they date in the same chronological period, which is in fact the main underlying supposition of a chronological seriation.³¹ Regarding the short chronological burial phases as a representation of cultural reality implies an additional set of assumptions. It implies that the objects that were used as grave goods rarely have deviant or prolonged circulation periods in the period prior to their deposition, and, especially with regard to the short phases (15-30 years), that the objects underwent a relatively rapid rate of replacement; they were in circulation as long as approximately one generation. These assumptions relate to the presumed nature of the relation between grave goods and the deceased; the deceased were buried with their inalienable personal possessions. Hence, a rapid change of approximately one generation of grave goods repertoire can be observed in the burial evidence. Aspects of this fundamental cultural assumption, which is a requirement for the construction of short chronological phases, will be discussed later in detail. First, the general chronological significance (similarity equals contemporaneity) of the sequences obtained by seriation will be discussed.

The phasing of burial moments provides opportunities to reconstruct the timely change of grave goods depositions and therefore the reconstruction of the development of funerary rites. However, is this what the seriations of graves on the basis of their contents show? ³² A seriation is generally considered to represent an average of dates of object production, use, and deposition.³³ With regard to the underlying assumption, that similarity equals contemporaneity it will be illustrated below that comparable graves can hypothetically date in different chronological phases and vice versa, that dissimilar graves can date in the same chronological phase, especially when short phases are created (Table 2).³⁴ The examples illustrate that a seriation does not necessarily represents a sequence of actual or averaged burial moments.

The problem of the basic chronological assumption (that similarity equals contemporaneity), the disregard of underlying cultural variables in the chronological debate, and the problems concerned with the aim to create short chronological phases all become visible in these two examples. It can be concluded that with the method of seriation, graves can be dated in the phase of their actual construction, but also at a substantial time before their construction, because the acquisition moment of the objects (what causes assemblages with which one is buried to be similar, assuming that contemporaneous objects show considerable resemblance) in these examples is dated. This is problematic when conclusions are drawn on the circulation period of objects (they can be in the

²⁸ Graves containing only one or no objects can find a place in the grouping of graves by the chronological method of horizontal stratigraphy.

²⁹ The graphical result of a seriation shows the grave numbers on the x -axes and the object-types on the y -axes.

³⁰ The average data of a seriation is phrased, for example, by Dickinson as: "...a Correspondence Analysis of burial assemblages 'averages' *dates of artifact production* [...] with *dates of use* and *dates of deposition*" (Dickinson 2002, 79-80).

³¹ This basic assumption should be tested with vertical stratigraphy (O'Brien/Lyman 1999, 4). The possibilities to test chronological orderings against vertical stratification, however, are scarce for Merovingian cemeteries.

³² See also Steuer 1998, 136-140.

³³ Dickinson 2002, 79-80.

³⁴ Comparable examples were also presented by Steuer (1998 136-140, 142, Abb. 5) on the basis of which the theoretical problems of short chronological phases were illustrated. The two examples in this thesis are hypothetical, and very probably a simplification of reality, in order to explore which cultural variables need to be part of the chronological debate and require further research. Further exploration of these cultural variables is underexposed in Steuer's work.

possession of a person for an extended period of time without this being shown in a seriation) or when claims are made about rapid changing grave goods repertoires. A seriation therefore shows the similarities between grave goods assemblages, which, however, is not necessarily the same as contemporaneous burial phases. On the basis of the examples, it becomes apparent that a seriation of burial phases should rely on the newest objects that were added to the assemblages and that these should have been extracted from the material culture in circulation at that moment. This means that these objects have no life-time connection with the deceased, but were selected to suit the burial practise of that moment; the so-called occasional objects. Contemporaneous burials should contain some 'occasional' objects that are considerably similar in order to create an ordering of burial moments. It remains questionable whether it was a general practise to deposit 'occasional' objects with the dead in Merovingian times. This is not yet explored in the chronological debate, and accepting that seriations are averages of production, use and deposition does not completely solve this problem, as the examples have illustrated. These examples are hypothetical with a variety of cultural assumptions behind them. In order to answer the question of whether a seriation can result in chronological phases of burials, it will first be discussed which ordering principles other than time could cause assemblages to be similar or dissimilar and how exact the position of a grave in a sequence from a more practical point of view actually is.

Example 1: Dissimilar graves date in the same chronological phase

Woman 1	Woman 2
Year of birth: 530	Year of birth: 585
Acquisition objects: 14 years (year 544: phase 4)	Acquisition objects: 14 years (year 599: phase 7)
Age at death: 75 years (phase 7: 605)	Age at death: 15 years (phase 7: 600)
Date objects: phase 4	Date objects: phase 7
Real date grave: phase 7	Real date grave: phase 7

Example 2: Comparable graves date in different chronological phases

Woman 1	Woman 2
Year of birth: 530	Year of birth: 530
Acquisition objects: 14 years (year 544 phase 4)	Acquisition objects: 14 years (year 544: phase 4)
Age of death: 15 years (year 545: phase 4)	Age at death: 75 years (year 605: phase 7)
Date objects: phase 4	Date objects: phase 4
Real date grave: phase 4	Real date grave: phase 7

Table 2. Two examples of graves of women that can date in different or corresponding chronological phases, depending on the moment of object acquisition and the age at death.³⁵

The ordering principle of gender is obvious for the graves of the early medieval period, and seriations are performed separately on the graves of men and women.³⁶ There are strong indications that the age

³⁵ The moment of object-acquisition at the age of 14 is hypothetical and chosen for illustrative reasons; the practise of formalised acquisition of objects is only scarcely discussed for the Merovingian period. However, it can be assumed that the acquisition of the wide variety of objects that are known from the Merovingian period relates to various moments in the life cycle of persons (see Chapter 3 in this thesis for a further discussion of this subject). The phases and their length in the table are based on the lower Rhineland phases of Siegmund (1998).

of the deceased is also decisive for the range of objects deposited with him or her.³⁷ This implies once more that dissimilar graves (contemporaneous burials of women or men of different age groups) can date in the same phase. The burials of a 60-year-old woman and a 20-year-old woman may be contemporaneous. However, if their grave goods represent their cultural age, they have different appearances and may be placed considerably apart in the obtained sequence. If these contemporaneous graves do not have shared object-types, they will never be connected in a seriation, and can consequently be interpreted as chronologically different. If this is the case, seriations should be performed separately on gender and age groups. It can be imagined that contemporaneous burials may have deviating appearances for various reasons. One of the key questions in the chronological debate should relate to the expected singular influence of time, which causes graves to be similar or dissimilar in appearance.³⁸ In addition to age, this can also be influenced by the social or economic position, cause of death, number of children, etc.³⁹ Such distorting influences of a cultural character are also not solved by accepting that a seriation provides 'averages'. The discussion on the relative and absolute phases in a seriation of graves is not only technical and statistical, but is also related to social life and to the choices of the survivors regarding the construction of a desired image of the deceased. The degree to which the components of social life disturb the chronological picture as constructed by archaeologists should be integrated in the chronological debate. The chronological accuracy of the orderings obtained by seriation or other chronological methods can only be substantiated by independent evidence such as vertical stratigraphical sequences of the ordered graves and scientific research such as radiocarbon dating.⁴⁰

Next to the chronological significance of a sequence of seriated graves (similarity is contemporaneity), the chronological significance of short phases (15-30 years) can also be questioned. The construction of phases with absolute dates in a seriation makes it possible to assign graves to one specific phase. A phase represents a limited period of time in which the associated assemblages of grave goods (=grave) are more comparable to each other than to assemblages in other phases. The division of the seriation in relative chronological phases and the assignment of absolute dates to these phases is a scholarly construct.⁴¹ The boundaries of the relative phases are based on the disappearance of certain object-types or the appearance of a new set of object-types in the sequence of graves. Generally, however, no clear-cut 'groups' can be identified in the sequence of graves in a seriation. Clear procedural steps are not described for the drawing of such boundaries in a continuous sequence of graves. Dickinson rightly mentions that "There is also an inevitable tension between sorting data in a CA seriation to accent continuities and in a grid-square matrix to emphasize relative phases".⁴² Absolute dates are attached to these boundaries by coin-containing graves, dendrochronological data and historically dated graves. Both the establishment of relative phases and the assignment of absolute dates to these phases reveal methodological problems.⁴³ It is generally acknowledged that every boundary drawn is too strong and does not meet historical reality, and that these chronological divisions are merely an analytical tool.⁴⁴ These general acknowledged remarks, by which the modelled and

³⁶ The identification of a grave of a woman or man in most studies is based on the gender associations of the grave goods. When available, the determined biological sex of the buried persons is often used for comparison. The 'neutral' graves are in a seriation processed with either the graves of the men or women.

³⁷ Halsall 1995; 1996; Stoodly 2000; Stauch 2008.

³⁸ Multi-dimensional statistics do not necessarily solve this problem because knowledge about ordering variables and the way to translate them into typologies stands at the basis of this problem. See Chapter 4 for an example of how multi-dimensional ordering is used on the basis of Siegmund's typology of the Rhineland area.

³⁹ The search for meaningful correlations between the assemblages of grave goods and certain biological variables is promising in this respect.

⁴⁰ Steuer 1998, 143-145. Next to the renewed interpretation of the vast number of coins, he mentions the possibilities of radiocarbon dating and dendrochronology in relation to the age at death for the evaluation of the constructed and generally accepted chronological phases. See Stutz (1994) for a realistic point of view regarding archeometric methods (radio carbon dating, thermoluminescence, and dendrochronology). She claims that these methods do not offer absolute dates because of their imprecision; the obtained dates should always be interpreted against the background of their archaeological context (Stutz, 1998, 103). Narrow chronological burial phases require detailed independent dates to be tested, and it is questionable whether these detailed dates can be obtained.

⁴¹ Steuer 1977, 380.

⁴² Dickinson 2002, 80.

⁴³ Theuvs 2001, 195-197.

⁴⁴ Steuer 1977, 379-381.

averaged character of the results of a seriation are accepted, do not correspond to the quest for short chronological phases, which assumes a regular and rapid replacement of the object assemblages that can also be read in a seriation. Researchers who question this regularity promote longer chronological phases (generally 50 years or longer).⁴⁵ They also concede to the need for chronological boundaries for analytical reasons, but believe that long phases are less in conflict with historical and cultural reality, and that relatively long phases are therefore a preferable basis for further analysis of the burial remains.

Although chronologies and chronological phases are constructions, it can be stated that they represent the development of the grave goods assemblages over the course of time to some degree. However, what is the chronological significance of short phases? It can be questioned whether a seriation provides sequences that are exact enough for the creation of short phases. Hence, the exactness of the position of the graves in the sequences must be questioned. A seriation is performed only on a selection of the once existing, but also of the currently available data. This means that if all the objects, including those that have decayed (wood, textile, etc.), lost through post-excavation processes, and those that could not be incorporated in the analysis as a consequence of statistical requirements, were incorporated in the seriation, the place of the graves in a sequence obtained by seriation could change dramatically. This could also occur when the typology used is adjusted into a more refined or coarser classification, and when other features of the burial evidence such as grave structures and orientation of the graves are integrated in the chronological analysis with the method of seriation.

The obtained sequence is a result of scholarly choices; it is not even close to a direct reflection of the reality of deposition. The short phases are created on the basis of this incomplete and manipulated dataset. How can the position of a grave in a seriation be perceived? I think a seriation appears to represent a very general chronological ordering of graves, rather than a precise one because the close proximity of graves is only based on a relative comparison of a selection of the total burial evidence, of what the grave contents once were, and of archaeologists' choices regarding the burial evidence. A precise ordering and nearly exact positions of graves should be the starting point when short phases are the aim, and therefore the availability of the complete set of burial data that was once present. This dataset, however, is only fragmentarily available for archaeologists. Ascribing a historical reality to the refined chronological burial phases of graves should be dealt with cautiously, as the two aforementioned examples taken from a cultural perspective have already illustrated. Nonetheless, the results of chronological seriations are regularly published as relatively precise results.

Apart from the descriptive typology, the analytical result of a chronological seriation is generally presented in two ways: in a list of dated graves, in which the graves are restricted to one (sometimes more than one) phase, and in a typo-chronology scheme that represents the subsequent chronological phases with their characteristic contents in the form of object -types, i.e. the chronological change of the object-types. The average circulation period for most object -types is limited to the phase of their most frequent occurrence in a seriation, and the typo-chronological scheme is often published as the 'final result' of a chronological analysis of a cemetery.⁴⁶ This typo-chronology scheme is a simplification of the descriptive overview of types and their associated dates.⁴⁷ When the circulation periods of the object-types are considered independently (as is often done in studies of cemeteries without their own seriations and which rely on other typo-chronology schemes for the chronological analysis), it becomes difficult to restrict the dating of the graves to one phase solely on the basis of this information. It appears, for example, that most of the object-types in the graves of Siegmund's phase 5 (Rhineland phase 5: 555-570 AD) are not restricted to this phase; they also occur in phases 3, 4, 6 and 7.⁴⁸ On the

⁴⁵ Stoodly 1999, 15-16; Lucy 2002.

⁴⁶ In some typo-chronology schemes, the occurrence of object-types in multiple phases is illustrated by an arrow that crosses the phase boundaries, and in some typo-chronology schemes this is not represented. In the latter, the object-types are graphically restricted to a single phase. See also Steuer, 1998, 130-135, Abb. 2-3.

⁴⁷ Theuvs 2001, 196.

⁴⁸ Siegmund 1999, 180-195, 204-205. He clearly states that the establishment of chronological groups of graves is necessary for research purposes, but that the presentation of his typo-chronology scheme does not support the so-called 'phase model'. However, his graphical depiction of the 12 Rhineland phases with their characteristic object-types

basis of this information alone, it would be difficult to assign the grave to only one phase. A discrepancy exists between the exact position of a grave in a sequential ordering of graves with created phases (boundaries) and the length of time in which the grave can possibly date according to the circulation periods of its contents (object-types). The exact dating of a grave to one phase can consequently only be realised by a seriation (or other chronological method), not on the basis of available typo-chronologies.

This discrepancy can best be illustrated with the opposition between the 'phase model' and the so-called 'battleship model'.⁴⁹ The premise behind the phase model is that certain grave goods assemblages exist together during a specific period of time. They appear and disappear quite rapidly, after which they are replaced by another series of grave good assemblages. The battleship model contrarily assumes that much more overlap exists between the occurrence and disappearance of various object-types. Moreover, the various circulation periods of different but contemporary object-types are also considered. The battleship model is generally accepted as the most plausible model to represent the development of material culture through time, although the typo-chronological schemes as a result of an analysed seriation are often published as if they represent a phase model.⁵⁰ When the battleship model is accepted, phases (especially short ones) are more difficult to create and are more 'artificial' compared to the change in material culture according to the 'phase model'. The paradox is that the battleship model is preferred over the phase model, but that the latter provides a solid basis for (short) chronological phases and that the results of seriation are often handled as if they represent such a phase model. Apart from the comment that his creation of short distinct phases should not be interpreted as a phase model, Siegmund does not make further reservations about the seemingly sharp boundaries. On the contrary, he relates some essential cultural conclusions to the 'observed' rapid change in material culture, as will be illustrated below.⁵¹

The construction of legitimate short chronological phases from a cultural perspective requires a limited period of time between the acquisition of contemporary objects and their burial with the deceased. The limited period of time between the acquisition of contemporary objects and burial, as illustrated in the examples, applies to death at a young age. This relates to the assumption that the dead were buried with their personal belongings, of which it is thought that the majority acquired the dress-related items in particular in their teens and early twenties, and that these items remained inalienable personal possessions thereafter. No research has actually questioned how and at which moment object assemblages from Merovingian graves were constructed.⁵² Was this in the course of life, in the early stages of life, or just before death? It further remains questionable whether the creation of assemblages of objects at approximately the same moment implies a degree of similarity, and what the variation is in the process of object assembly and subsequent burial. Although multiple models can be utilised, the debate on burial with personal possessions in particular becomes important with regard to these questions, as will be discussed in Chapter 2.

Summarising, the problems of the validation of the chronological results that are obtained with the method of seriation, and especially the cultural reality of the short burial phases, relate to the specific nature of burial evidence (incomplete, selective), the underlying problems of (statistical) procedures (typologies and seriations average the data, which is already a selection of what was originally present), and to the absence of considerations from a cultural perspective.

is the representation of a genuine phase model. Siegmund explains his typo-chronology scheme as an analytical tool. This was already more thoroughly discussed by Theuvs (2001).

⁴⁹ Theuvs 2001, 196.

⁵⁰ The 'battleship' model as a point of departure is often explicitly mentioned. See for example Roth/Theune (1988, 9) and Siegmund (1998, 178), although he mentions that for some objects the 'phase model' seems more justified; some objects appear and disappear nearly exclusively together.

⁵¹ Siegmund 1998, 222-223.

⁵² This may be due to the fact that it is generally acknowledged that chronologies of graves and grave goods are a "...sort of mid-way point..." between the production and the deposition of objects which, however, is not necessarily considered to be problematic for chronological research (Hines 1999, ix; Steuer 1998, 139-140; Dickinson 2002, 79-80). According to Hines (1999), this is only problematic when the assemblages to be studied are large and inconsistent.

1.2.2 The object-types in graves

The second level of information in a chronological seriation of graves involves the presence of the defined object-types (Table 1).⁵³ The individual grave goods need to be classified as a range of object types in order to perform a seriation of graves on the basis of their contents. Both the graves and the typological groups require some statistical conditions.⁵⁴ The objects that are unique and occur only once in the burial evidence are not included in the analysis. The defined object-types have to consist of a reasonable number of individual objects for their statistical workability. The main contribution to the chronological debate from a cultural perspective regarding typologies deals with the discussion of the significance or meaning of the identified object-types, and therefore with the question of whether the morphological characteristics on the basis of which they are classified represent a temporal development. The uniqueness of Merovingian grave goods (hardly any object is entirely similar to another) requires an artificial grouping to make them suitable for statistical processing. Object-types can be defined in a fluid scale from very general to very specific depending on the research goals set and the statistical requirements. The variability of Merovingian grave goods offers various classification possibilities. Consequently, every typology scheme can be regarded as subjective and theory-loaded, and every typology scheme will result in another sequence of graves. If a seriation is intended to produce a chronological ordering of graves, the grave goods should be classified accordingly.⁵⁵ Is it possible to create such an unambiguous chronological typology for all the grave goods? Can the position of graves in a chronological sequence change considerably when the underlying typology scheme is altered? What does this reveal about the aim for short chronological phases?

The underlying assumption of a chronological typology is that categories of objects show a morphological change through time, which is captured in the defined subtypes of each category.⁵⁶ Garnet disc brooches, for example, are a specific group of objects. The subtypes with associated dates in, for example, Siegmund's typology scheme are:⁵⁷

-*Fib.1.1*: (Rhienland phase 3/4) *Kleine Almandinscheibenfibel; rund, einzonig, vier und mehr Zellen*

-*Fib.1.2*: (Rhienland phase 4) *Kleine Almandinscheibenfibel; Vierpaßform*

-*Fib.1.3*: (Rhienland phase 4/5) *Almandinscheibenfibel; rund oder rosettenförmig; zweizonig*

-*Fib.1.4*: (Rhienland phase 5) *Almandinscheibenfibel; rund oder rosettenförmig; zwei- oder dreizonig; in der Mitte tiefe Felder ohne Almandineinlage*

-*Fib.1.5*: (Rhienland phase 6) *Große Almandinscheibenfibel; rund, dreizonig, engzellig mit Almandinen belegt*

-*Fib.1.6*: (Rhienland phase 8) *Schiebenfibel Kaarst Grab 12.1*

The subtypes represent the temporal change of the morphological characteristics of an object -type. It can be assumed that the evolutionary premise very generally applies to the material culture from Merovingian cemeteries. The definition of broad typological groups (only 'garnet disc brooches' without subtypes) makes the problem of the chronological significance of object-types less substantial (disc brooches, for example, disappear from the burials in the seventh century), but the disadvantage is that it will be more complicated to create short chronological phases in the obtained orderings of graves. The

⁵³ Only the occurrence of an object-type in a grave can be read in a seriation of graves, not the frequency of its occurrence in a grave. The difference between 'occurrence seriation' and 'frequency seriation' is described by O'Brien and Lyman (1999). Archaeologists of the Merovingian period work with 'occurrence seriation' because the multiple occurrence of an object-type in a grave does not occur often enough that it can form the basis of a statistical ordering. Moreover, the multiple occurrence of one object-type in a grave is rarely considered as a chronologically significant feature.

⁵⁴ See Périn (1980, 129-136) for a detailed description of the statistical requirements for seriations.

⁵⁵ O'Brien/Lyman (1999) refer to chronologically significant types as historical types, and offer an interesting discussion of the construction and meaning of types, especially in relation to seriation.

⁵⁶ This evolutionary change as a characteristic of chronological types is extensively described by O'Brien and Lyman in their chapter on archaeological types (1999, 23-58). See also Périn (1980, 156-164) and Jensen/Nielsen (1997, 30-31).

⁵⁷ Siegmund 1998, 45-46.

creation of short chronological phases requires refined chronological typologies such as the classification of the garnet disc brooches of Siegmund. Can these be obtained for all the sorts of objects?

Although new typologies were presented after the pioneering work of Böhner, hardly any methodological or theoretical discussion about the chronological validation of the typological criteria can be found. Their dates are a derivative of the sequences of graves that have been obtained by past chronological research. The most important works in early medieval archaeology that discussed the subjectivity and chronological significance of typologies are those of Siegmund, the Franken AG, Périn, and Koch and Stauch for Southern Germany.⁵⁸ Siegmund and the Franken AG, however, are the ones who explicitly investigated the chronological significance of the selected criteria.⁵⁹ It is difficult to solve the question of whether the specific, detailed characteristics of objects are actually significant temporal aspects. Siegmund presented some tests to prove this significance.⁶⁰ The danger of circular reasoning, however, is very much present, since independent data such as radiocarbon dates and detailed vertical stratigraphy, which could provide proof for the validity of the more or less narrow date-ranges of object-types, are only sporadically available.

The construction of a typology, however, is indispensable for different research purposes. This manipulation of the dataset in order to perform statistical procedures and to handle the often huge amount of material, disguise the specific features of individual objects. The conclusion that a typology already averages the variation makes it even more urgent to question the exactness of the position of a grave in a sequential ordering. A seriation on the basis of a typology is already the second step in which averages are averaged again. This conclusion argues in favour of the creation of a general reconstruction of Merovingian burial phases. The broader a typological group is defined, the more the specific characteristics of objects are obscured. Broad typological groups are probably the best point of departure for the creation of meaningful, although general, chronological results, which can form the basis of the cultural analysis of the development of the funerary rite over a period of approximately three to four centuries.

However, the wide variety of objects and their appearances are specifically suitable to be analysed from a cultural perspective. Härke, for example, discovered a significant correlation between the length of knives and the age at death.⁶¹ The length of the knives was hardly ever considered a significant typological criterion, which is, as now can be concluded, justified for chronological analysis. What would happen to the positions of graves in a sequence if the underlying typology was, for example, altered with refined subtypes on the basis of the length of the knives? The graves of old and young men who died in approximately the same period would not be identified as contemporaneous graves on the basis of this refined classification of knives. Features that are indicative of the age at death should therefore not be incorporated in chronological classifications. It can be imagined that specific features of other sorts of objects also relate to the age at death, or perhaps other social categories, but these correlations have not yet been discovered. This is another example on the basis of which the accuracy of the chronological results of a seriation, especially the refined ones, can be questioned. General typologies are less sensitive to the influence of features that are more significant for other aspects such as the age at death than they are for time. However, broad chronological phases are a consequence of this choice. The conclusion is that refined chronological typologies can in fact only be created when the chronological significance of all the classified features is known; otherwise, it is a hazardous undertaking. Next to insights in their chronological significance, it would be interesting to discover how specific features relate to biological variables such as gender, age and pathology. For such cultural research questions, refined classifications are the preferable option. Various tests can identify the correlations between very specific features such as decoration motives and colour nuances, as well as between such features and biological variables of the dead. Such specifics, however, should not form the typological

⁵⁸ See Chapter 4 for the discussion of their 'chronological' typologies.

⁵⁹ Siegmund 1998, 176-177; Müssemeier et al. 2003, 13.

⁶⁰ Siegmund 1998, 121-127.

⁶¹ Härke 1989; 1992, 187-190, Abb. 39.

basis for chronological analysis. The obscured individuality of objects, on the other hand, is in particular related to the problems of the averaged circulation periods of the constructed object-types.

1.2.3 The circulation of objects

The third level of information that can be extracted from the results of a seriation is the various circulation periods of object-types (Table 1). The graphical depiction of a chronological seriation of early medieval graves and their contents, which is divided into absolute chronological phases, apparently offers an easy way to determine the period during which object-types were deposited as grave goods (Figure 5). This is often referred to as the circulation period of object-types because it is considered to represent their averaged period of production, use and deposition.⁶² Such conclusions, however, are based on the results of seriations of which the chronological accuracy and the chronological meaning of the assigned phases, especially the short ones, are now questioned. The circulation period of an object - type in a seriation is often used to substantiate the temporal limits of that object-type.⁶³ As previously mentioned, the chronological meaning of an object-type is a requirement for a chronological seriation, and one should consequently be aware of some degree of circular argumentation. The main question for now is how object circulation from a cultural perspective relates to the requirements for short chronological phases. Which research questions regarding the circulation of objects should be added to the chronological debate? What do short phases imply with regard to the circulation (production, use and deposition) of objects?⁶⁴

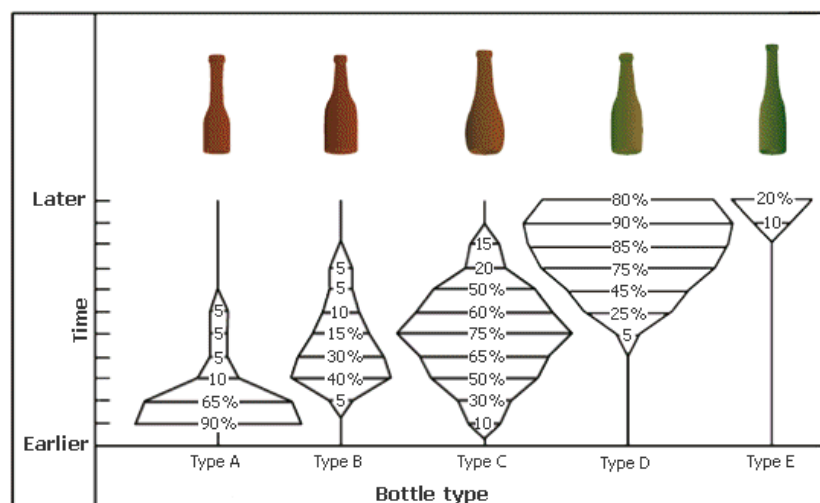


Figure 6. The representation of the average circulation periods of object-types and the variation in circulation periods.⁶⁵

The primary circulation is the circulation of objects, which includes the start, growth and end of production, followed by a period in which they are still frequently used and exchanged (Figure 6).⁶⁶ After this period, objects can stay or be reintroduced in circulation for various reasons. It is evident that short

⁶² The point has to be made that the appearance of an object -type in a relatively high number of graves does not equal a longer circulation period, although it may appear as such in a seriation.

⁶³ Müssemeier et al. 2003.

⁶⁴ When objects are clearly older pieces within an assemblage of grave goods, they are removed from the seriation. It should be questioned whether the mixture of older and younger objects in an assemblage can always be identified. This will be further discussed in Chapter 3.

⁶⁵ From: http://encarta.msn.com/media_461546925_761572159_-1_1/Seriation.html.

⁶⁶ Steuer 1977; 1998.

chronological phases are theoretically incorrect when it frequently occurs that similar objects (of the same object-type) have both short and prolonged circulation periods (a high degree of variation in their circulation periods); consequently, the phases do not represent the actual burial moments, and the objects can be in circulation considerably before and after the phases in which the type is dated. The actual primary circulation period of the object-types and the prolonged circulation of the individual objects are difficult to determine outside the context of the burial evidence, for hardly any large production centres are known (centralised production, as in the Roman period, did not exist) and similar objects from contexts other than cemeteries are scarce in considerable quantities.⁶⁷ Circulation, therefore, is a subject that requires further theorisation. The complete set of early medieval grave goods is extensive in variety, and the circulation period of all the groups of objects should be perceived differently.⁶⁸ A general distinction is often made between 'personal' items such as dress-related objects and portables such as seaxes, swords and purses, and more 'impersonal' objects such as pottery, glass and furniture. The definition of such categories is an attempt to define the nature of the connection between the objects and the dead, and they imply various trajectories of circulation.⁶⁹ On the basis of such categorisations, it can be suggested that a common pot has a less complex and different circulation period than, for example, a sword.⁷⁰ General categorisations probably oversimplify the role of material culture in social life. The theoretical and cultural backgrounds of production, distribution, exchange, acquisition, use and transmission and how they relate to funerary activities should be integrated into the chronological debate, and will as such be further discussed in Chapter 3.

On the basis of the discussion of the three levels of information in a seriation, it can be concluded that the exactness of the position of the graves in a seriation can be questioned; partly because the method (typology and seriation) averages and obscures information, but mainly because the chronological analysis is performed on incomplete and manipulated data. The historical reality of the short burial phases, which are created on the basis of these results, is questionable. This is even more so because it was concluded that a series of cultural variables were not fully explored in relation to the chronological analysis. The investigation of both the nature of the connection between grave goods and the deceased (such as for example the concept of personal possessions), and the variety of the associated circulation of objects are identified as essential components of the chronological debate, and they will receive further reflection in the next chapters. However, first, what are the opinions of the participants of the chronological debate regarding their ambition for short or long chronological phases in relation to these cultural components of the chronological debate?

1.3 Reconsidering cultural variables and the quest for short chronological phases: A conflict?

It was concluded that the central discussion in the current chronological debate aims at the highest possible refinement of absolute chronological phases.⁷¹ This can be observed in the development of the typo-chronological schemes in early medieval archaeology. Whereas the first schemes of Werner (1935) and Böhner (1958) consisted of chronological phases of approximately 50 years or more, some of the recent typo-chronologies consist of phases as short as 15 years.⁷² It is claimed that these short burial

⁶⁷ Damage and repairs can be informative for the time an object circulated before its deposition as a grave good. For a good example, see Von Richthofen (2000).

⁶⁸ Steuer 1977, 386-387.

⁶⁹ Dress-related objects are often assumed to be more connected with a person's life than, for example, pottery or glass vessels.

⁷⁰ These suggestions are very subjective and based on the presupposition that the rare occurrence and valuable material component of objects make them more likely to be cherished for a long period. Further discussion of this subject can be found in Chapter 3 of this thesis.

⁷¹ Although infrequent, the prevalence for the construction of longer chronological phases is expressed in recent research, for example, in Stoodly (1999) and Lucy (2000).

⁷² This development was observed by Steuer (1998). Next to the schemes of Werner and Böhner, phases of approximately 50 years were published by Ament (1977), Périn (1980), and Koch (1977). The more recent typo-chronologies with shorter phases can, for example, be found in the work of Siegmund (1998), Müssemeier et al. (2003), Koch (2001) and Stauch (2004). See Chapter 4 for a detailed discussion of the creation of their typo-chronology schemes.

phases come close to representing the historical and cultural reality of the early medieval period.⁷³ This implies that a rapid and steady change in the appearance of the grave goods assemblages can be observed, and that objects with a prolonged or deviant circulation period were rarely deposited as grave goods. In other words, it is assumed that the short phases reflect the already long-lasting supposition that the dead were buried with their inalienable personal possessions. That this presupposition was originally falsely based on historical sources is generally acknowledged, but it is still considered a sort of logical, unquestionable custom and persists as a major assumption (with the current assumed cultural reality of the 'observed' short phases as evidence), especially in the chronological debate. From a theoretical point of departure, however, another cultural reality can be imagined.

Two contradicting works regarding their expressed prevalence for short or long chronological phases can serve to illustrate the general ideas in early medieval archaeology with regard to the cultural aspects that were identified as important components of the chronological debate in the previous sections. The realistic length of chronological phases is explicitly related to certain cultural aspects of early medieval society in both the work of Siegmund (1998) and Steuer (1977; 1998), although from different standpoints. The fact that contradicting standpoints have already been expressed implies that the historical reality of the current chronological schemes can be questioned. Siegmund came to his 'cultural' conclusions after his construction of the typo-chronology for the lower Rhineland area (Germany) with short chronological phases as an important (cultural) result.⁷⁴ Steuer chose a theoretical starting point, for which he identified a number of relevant cultural variables, to discuss the realistic length of chronological phases.⁷⁵ Their contradicting points of view are best illustrated in Table 3.

Siegmund 1998 (based on the created Rhineland chronology)	Steuer 1977; 1998 (based on a theoretical discussion)
Short phases: 15-45 years	
Graves that are alike date in the same phase	Graves that are alike can date in different phases
Chronological homogeneous graves: majority	Chronological homogeneous graves: can exist
Chronological heterogeneous graves: rare	Chronological heterogeneous graves: can exist
Short circulation period of objects	Long circulation period of objects is possible
Old objects are sporadically used as grave goods	Old objects can be used as grave goods
No inheritance	Inheritance is possible
	Long phases: > 50 years

Table 3. The opposite standpoints of Siegmund and Steuer with regard to the length of chronological phases in early medieval burial archaeology.

Despite their opposite perspectives, it seems that both Siegmund and Steuer share one assumption which, however, is not explicitly mentioned: Persons in the early medieval period were buried with the personal belongings that they acquired during their lifetime. In Steuer's model, this can be concluded from his concern with the various acquisition moments of certain objects (which were assumed to have been kept after acquisition) and the consequences of this for the chronological analysis of grave contents (Figure 4).⁷⁶ In his most recent article on this subject, this can be read in a phrase such as "*Immer ist die Fundkombination irgendwann im Leben der gestorbenen Person zusammengekommen und am*

⁷³ Siegmund 1998, 222-223. See for example the title of the latest publication of Legoux, Périn and Vallet, '*Chronologie normalisée du mobilier funéraire Mérovingien entre Manche et Lorraine*', which suggests that the final phase of typological and chronological refinement is entered.

⁷⁴ Siegmund 1998, 222-223.

⁷⁵ Steuer's basic theoretical ideas can be found in his article from 1977. The central problem of short phases is formulated in his article from 1998.

⁷⁶ Steuer 1998, 141, Abb. 4.

Schluß dann als Totenausstattung ins Grab gelegt worden".⁷⁷ In Siegmund's work, this is expressed by phrases such as *"...mit jedem Tod wurde eine Trachtausstattung der allgemeinen Benutzung entzogen, mit jeden neuen Leben wurde auch die Herstellung einer neuen Trachtausstattung notwendig"*, and considering a rare example of a chronological heterogeneous grave, *"Diese etwa um 560 n. Chr. zu datierenden Stücke dürfte sie erst in höherem Alter erworben haben"*.⁷⁸ To assume that persons are buried with their personal possessions implies that the acquisition moment of objects in life and their subsequent appropriation as inalienable personal possessions, which were consequently not transmitted through practises of inheritance or other forms of transmission, become interesting and important subjects of research that require a place in the chronological debate. What do Siegmund and Steuer think about the acquisition and ownership of objects?

The supposition that people are buried with their personal belongings in the work of Siegmund (short phases) implies a set of assumptions regarding the acquisition moment of objects, and it also implies that similarity equals the contemporariness of grave construction, i.e. that relatively similar assemblages of grave goods can be restricted to short chronological phases. Siegmund assumes that objects that were related to the adornment of the body (clothing) and weapons were acquired in life. Siegmund believes that the rapid change of available and acquired objects in life is reflected in the burial evidence. Early medieval people were, according to Siegmund, fashion-conscious people. The few examples of temporal heterogeneous assemblages of grave goods are explained by the (presumed and not substantiated on the basis of skeletal remains) high age of the deceased. Their high age makes it possible to see the rapid change in fashionable objects reflected in the assemblage they acquired through their lifetime. These examples, however, are exceptions. Siegmund thinks that it was unusual to keep objects that became out of fashion. In Siegmund's opinion, dress accessories and weapons were not acquired over a long period, but rather at specific moments in life (*punktuell erworben*).⁷⁹ It seems as if Siegmund wishes to express that objects were regularly replaced with new fashionable objects in the course of a person's life. This implies that the elderly were generally buried with their recently acquired objects or with old objects that were altered according to the prevailing fashion standards, although this is not explicitly expressed.⁸⁰ Such statements can only be substantiated with comparisons to the determined biological age of the deceased. The graves from the lower Rhineland area can, according to Siegmund, be dated in short phases because of this rapid replacement of objects in life. The age at death, therefore, has little distorting influence. The chronological results of the lower Rhineland area, as it can be extracted from Siegmund's cultural considerations, represent acquisition moments, which, in time, lie close to the burial moments. The distorting influences on chronology through deviant circulation periods of the grave goods do not play a significant role. Siegmund discovered that early medieval antiques (objects that are clearly from an earlier phase) are rarely used as grave goods in the Rhineland, and consequently that the choice of grave goods does not include inherited objects.⁸¹ This does not mean that the inheritance of moveable property was not part of early medieval social life; it merely suggests that these objects were rarely selected as grave goods.

It can be questioned, however, to what extent the rapid change in material culture is represented in Siegmund's research results. Rhineland phases 5 and 6 (both 15 years in length) are relatively short. If one examines the contents of the graves in these phases, most of these graves appear to contain objects that occur in two or more phases. *Köln-Müngersdorf* grave 97A, for example,

⁷⁷ Steuer 1998, 135.

⁷⁸ Siegmund 1998, 222. Phrases that express more or less the same can be found in numerous studies. See Chapter 4 in this thesis for a selection of them.

⁷⁹ Siegmund 1998, 222-223.

⁸⁰ This is not in accordance with the majority of the correlations that were found between grave goods assemblages and the age at death such as in the model of Halsall for Lorraine (north-eastern France). See Chapter 2 for a more detailed discussion of these correlations.

⁸¹ This was also concluded by Périn (1980, 180). It remains questionable whether this applies to very old objects in more recent assemblages (which are easy to identify) or less old objects in younger assemblages (which are more difficult to identify as older). This specific subject of more or less prolonged circulation will be elaborated in Chapter 3.

contains a *Sax 1* (seax) and a *Lan 2.4* (lance).⁸² The knife and small bronze buckle from this grave are not included in the seriation of Siegmund. Siegmund dates the seax in Rhineland phases 4 to 7, and the lance in Rhineland phase 4. The grave is dated to Rhineland phases 4-5 (530-570).⁸³ On the basis of the information of the contents of the grave alone (as represented in the typo-chronology scheme and described in the typological overview), the grave should be dated in phases 4 to 7 (530-610). Only on the basis of the position of the grave in the seriation with applied chronological boundaries, it is dated to one phase (phase 5). This assignation was probably broadened into two phases on the basis of additional information (see Chapter 4). However, a considerable number of the graves in Siegmund's list of datable graves are assigned to one phase.⁸⁴ Does one accept the position of the graves as the correct position in the chronological ordering, or does one question this exactness of the places of graves in a seriation? It can be assumed that the seriation represents a general chronological ordering (the graves on both extremities of the seriation very likely date in chronologically different periods), but that the exact position of the graves in relation to each other, especially of those within the short phases in the middle of the seriation, can be doubted. It was already discussed that this exactness should be questioned because the ordering is based on a selection of the available burial evidence; the position of the graves in relation to each other is based on incomplete data. If one questions this exactness, the lance from *Müngersdorf* grave 97A may very well be an old element in the assemblage and may be deposited in Rhineland phase 7. In addition, if one only considers the circulation periods of the object-types that appear in the graves of Rhineland phases 5 and 6 (which each consist of 15 years), the change in grave good repertoire may not be as rapid as Siegmund suggests. Too much importance is placed on the positions of the graves in the obtained sequence. The drawing of boundaries and their chronological significance is extremely important to discuss more thoroughly, especially when important conclusions regarding the cultural aspects of early medieval society and burial practises, such as Siegmund proposed, are based on this presumed exactness of the created chronology. The graves and the associated circulation periods of the grave goods require discussion, not just the assignation of the assemblage (grave) to one phase.

Although Steuer has an alternative perspective, he does not dismiss the main chronological assumption that resemblance equals contemporaneity. Rather, he claims that the dating of graves on the basis of their resemblances can be problematic when certain cultural variables are considered. The theoretical problems of the construction of short phases, as illustrated above, are, according to Steuer, not only related to various ages at death and acquisition moments of objects, but also to the different periods in which the objects (that became associated through burial) circulated. This aspect certainly adds more complication to chronological analysis.⁸⁵ In contrast to Siegmund, Steuer incorporates the possibility of burial with relatively old and inherited objects, which is another reason for him to claim that chronological phases shorter than 50 years represent a false image of historical reality.

Considering the theoretical backgrounds of the acquisition moments of certain objects in life, no answers can be found in Steuer's work; only hypothetical situations are sketched. His theoretical framework is schematically represented in his possibility scheme by two possibility groups each consisting of three examples.⁸⁶ Group 1 (Figure 4: situations 1-3) concentrates on the possible burial time span of three graves of persons who lived in different times, but in which a similar object-type was found: the maximum length of the time span for the burials is mainly determined by the acquisition moment at birth, the highest possible age at death, and the longest possible circulation period of the objects. The possible burial time span of the graves on the basis of these examples comprises 100 years. The maximum possible time span of burials that can be associated with group 2 (Figure 4:

⁸² Fremersdorf 1955, tafel 18, 97A.

⁸³ Siegmund 1998, 509.

⁸⁴ Siegmund 1998, 495-515, Liste 3.

⁸⁵ Steuer 1998, 141. Steuer used a fixed circulation length for all object types in his theoretical estimation of possible burial time spans, although he recognises that this may differ for various object -types.

⁸⁶ Steuer 1998, 141, Abb. 4

situations 4-6 (three chronologically different object-types that are found in the grave of one person)) depends on the youngest object-type, for which the circulation period was fixed at sixty years. In these situations, it is represented as if the oldest object-type can only be found with the youngest object-type if they are 'connected' by the lifetime of the deceased. This is not always the case, for instance, when objects are subject to hereditary transmission for a considerable time. However, in these situations, the burial time span depends on the circulation period of the youngest object-type in the grave. How then, should circulation periods be established?

It is clear that Siegmund's work includes some degree of circular argumentation, and that his remarks such as the fact that the elderly could be buried with recently acquired objects, and that people felt the need to replace their objects with more fashionable ones on a regular basis, requires further investigation. A discussion of the cultural components of chronology preferably starts from a theoretical starting point, such as proposed by Steuer. The work of Siegmund and Steuer showed that a theoretical exploration of the nature of the connection between grave goods and the deceased, which also implies an exploration of the variety of associated circulation trajectories, is required for the chronological debate. These two cultural components of social life imply a set of questions that form the basis of further reflection in the context of the chronological debate. Examples of relevant questions are:

- Did people in the early medieval period acquire objects as an individual, and can certain 'general' acquisition moments be considered?⁸⁷
- How did they appreciate these objects? As individual property which should be kept?
- What were the contexts of acquisition? Is the acquisition of objects related to the life-cycle of persons?
- Does the acquisition of objects in the same period and at the same age equal the acquisition of a relatively similar set of objects?⁸⁸
- Were persons buried with the objects they acquired (burial with personal possessions)?
- Were the elderly buried with the objects they acquired at a young age, or was it a general practise that people replaced their objects in the course of their lives?
- Were practises of object transmission (through, for example, inheritance) rare in the Merovingian period, or is only burial with these objects a rare phenomenon?
- What sorts of prolonged circulation other than the prolonged circulation as a consequence of hereditary customs can be considered?
- What sorts of objects other than personal belongings could have been placed in graves, and can these objects have prolonged circulations?
- What is the range of age at death in a cemetery?⁸⁹

This list is not complete, but merely serves to exemplify that a concept of burial with personal possession has more aspects than a simple image of acquisition, keeping, and deposition. The next chapters in this thesis will explore the relationships between people and objects and the associated variation in the circulation of objects, on the basis of which this list of questions that represent the cultural variables in the chronological debate can be extended. It is clear that a conflict exists between the actual assignment of graves to short chronological phases and the theoretical discussion of the assessment of the time span ('the possible funeral time span') in which graves can be dated. This conflict can basically be formulated as the discrepancy between the 'presented burial time span' of graves by assigning them to one chronological phase (generally phases from 15 to 50 years), of which

⁸⁷ Steuer already showed that the acquisition moment of objects is an important cultural variable in the chronological debate (see Figure 4). This subject is hardly ever discussed in early medieval archaeology, despite the general assumption that the objects found in graves are personal possessions, which implies that active acquisition was a component of early medieval life.

⁸⁸ This is one of the results of Halsall's research on the correlation between age and grave goods in the cemeteries of Lorraine (1995); see also Chapter 2 in this thesis.

⁸⁹ In Steuer's possibility scheme (1977, 1998), the age at death was fixed at 50 years for all the examples. The range of age at death for each cemetery or cluster of cemeteries under study needs to be incorporated in the establishment of the possible funeral time span, in relation to the other cultural variables mentioned and the variability of the circulation periods of the associated objects.

the problems and artificiality of the short phases in particular were questioned in the sections above, and the 'possible burial time span' of which the assessment depends on the consequences of considering several cultural variables. The significance of these cultural variables for the Merovingian period appears to be essential for the chronological debate.

1.4 Conclusion: A redefinition of the chronological debate

A number of subjects have been discussed in order to define the contents of a chronological debate in which the practise of chronological analysis and the influence of cultural aspects of early medieval society and burial practises can be integrated. In the end, such a debate can result in chronological schemes of which the outcomes can be considered reliable and on the basis of which further interpretative research can be based. In addition to the problems of chronological methods, discussed on the basis of the method of seriation, some cultural aspects complicate the construction of refined chronologies. It can be stated that a general change of the morphological features of objects that were used as grave goods probably existed over the course of the Merovingian period. However, this change is not to the same degree represented in the burial evidence due to complex social processes starting at their production and perhaps ending at the moment of their deposition in graves. This distortion is averaged by the creation of a typological classification and averaged again by the statistical process of seriation. This averaged character of the chronological results of a seriation is acknowledged and accepted, but is not consequently integrated in the 'cultural' conclusions on the basis of the chronological results. It is questionable whether the dating of graves in relatively limited periods of time represents cultural reality or the actual deposition phases. This becomes even more questionable if one considers the absence of numerous objects in the burial evidence and therefore the seriation. The cultural variables that influenced the appearance of the available burial evidence, however, offer interesting possibilities for future research and can redefine the contents of the current chronological debate (Figure 7).

One of the central discussions in a more broadly defined debate involves the question of whether people in the Merovingian period were buried with their personal possessions. Although in the majority of chronological studies this is considered to be a logical assumption, the concept of personal property and the burial of objects with their alleged owners are not thoroughly explored. If furnished burial with personal possessions is regarded as a cultural aspect of early medieval society, theorising on the circulation periods and the acquisitions moments of objects in the lived life of the deceased become related subjects that also require further research. The rejection of burial with personal possession brings the opposite, burial with occasional objects, into scope: objects that the burying community selected from the material culture in circulation at the moment of preparation for burial. In the next chapters, the case is made that mourners had various choices, and that burial objects cannot be captured in these two opposite categories of grave goods.

Not only the nature of the relation between grave goods and the deceased should be understood, but also the associated circulation processes of objects and object-types should find a place in the redefinition of the chronological debate. The assessment of the circulation period of objects requires knowledge about production processes, distribution, acquisition, exchange and transmission. The identification and exploration of the cultural categories of grave goods, such as the category of personal possessions and the identification of cultural categories of objects on the basis of circulation trajectories, will form the discussions in the following chapters. The results of physical anthropological research, the so-called 'non-selective' data, make it possible to find meaningful correlations between grave goods and, for example, age.⁹⁰ In fact, the comparison between these two kinds of data is

⁹⁰ Härke discussed this distinction in '*Intentionale und Funktionale daten*' (1993) and in 'The nature of Burial data' (1997). The distinction between intentional and functional data, as Härke explains, offers the possibility to detect contrasts and contradictions between these two types of data, which are the best indicators for the variability of choices that were made in the event of death and burial.

promising for future research, and the formulation of relevant research questions that can be answered with the available research results of skeletal remains and as such connect the cultural aspects of Merovingian life and death with chronological results should also be integrated in the chronological debate.

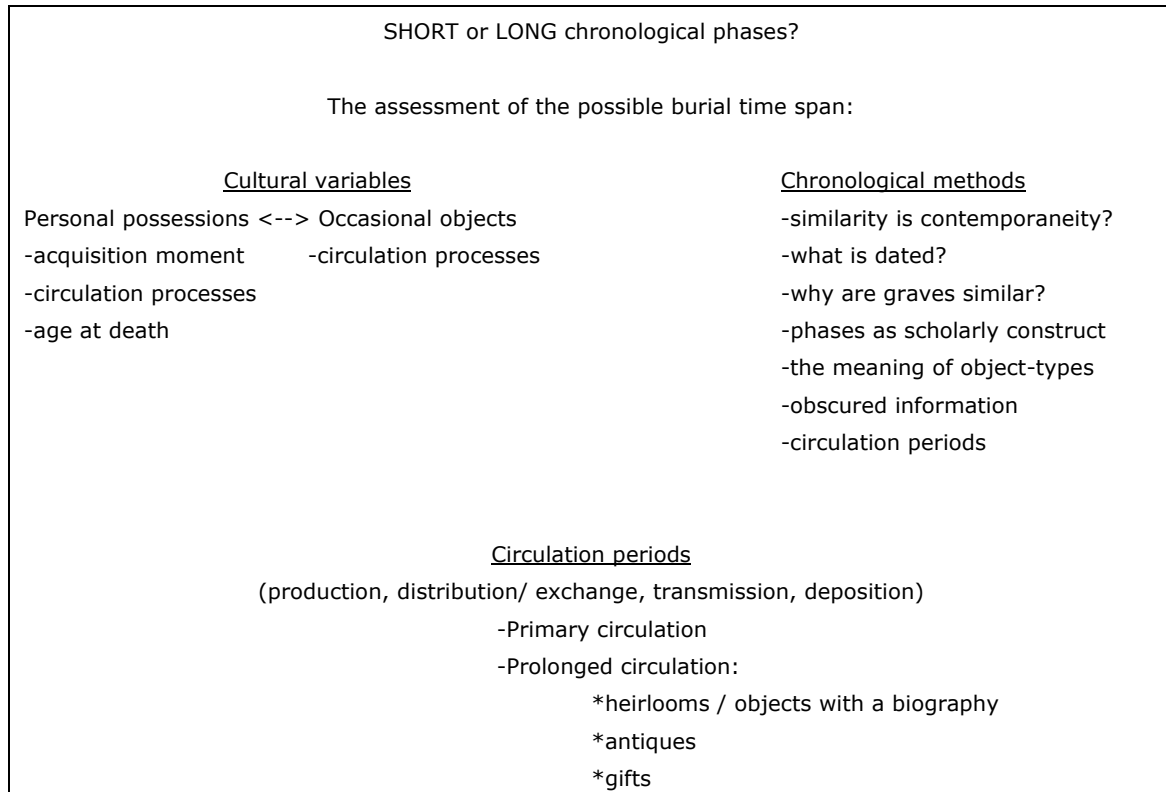


Figure 7. The cultural and methodological aspects of the burials and grave goods in the debate on the chronology of the early medieval period.

Chapter 2

Cultural Categories of Grave Goods on the Basis of Various Relations Between Grave Goods and the Deceased

In the previous chapter it was concluded that the chronological phasing of early medieval graves is primarily based on the assumption that similarities between grave goods assemblages are an indication of their contemporaneity, but that the exactness of this phasing can be questioned (especially when the short-phase model is the analytical point of departure). This presumed exactness raises questions which are concerned with the method of seriation, but also with certain cultural variables such as the age at death, the possibility of deviating circulation periods of objects and the various (hypothetical) acquisition moments of objects during the lifecycle of the deceased as integral components of chronological research. Theorising on these cultural variables and their implications for the chronological debate, however, has rarely been initiated in early medieval burial archaeology. In order to add this cultural dimension to the chronological debate, one central theme will be further explored in this chapter: the identification of various cultural categories of grave goods. Such a categorisation serves to elucidate the nature of the connection between the deceased and their grave goods, and, following this line, the various circulation trajectories of objects in society before their interment as grave goods. The nature of the archaeological evidence has directed the archaeologists of the last few decades to focus on the funerary role of objects that were selected as grave goods. This development in theoretical thinking related the funerary role of these objects mainly to the aspirations of the survivors. The analysis of the development of the interpretative debate in early medieval mortuary archaeology will shape the discussion in this chapter. The focus in this analysis will be on the identification of the various scholarly positions towards the relation between the objects and the deceased, both in life as in death. The same point of departure is chosen for the analysis of a selection of interpretative models that can be considered to cover theoretical thought in early medieval mortuary archaeology of the last few decades. The analysis of grave goods and their role in funerary practises have always been the main concern of archaeologists of the early medieval period, but a shift in their assigned meanings can be observed in the research history of this discipline.

2.1 The development of the debate on the meaning of early medieval grave goods

In the traditional (and in some instances modern) scholarly debate regarding mortuary practises in the early medieval period, it is often assumed, explicitly and tacitly, that the objects found in graves, or at least a selection of them, were the personal belongings of the dead.⁹¹ This initially seems justified considering the fact that the dead were regularly interred with dress-related objects such as jewellery and belts and complementary objects such as weapons or purses with a variety of items, all of which it is reasonable to assume were once used by the deceased. Alternative interpretations that consider the

⁹¹ Although this premise based mainly on historical sources has already been questioned for some time, references to the burial of personal possessions can still be found in recent publications such as for example "*Le propriétaire de cette tombe richement dotée avait manifestement un statut particulier mais lequel?*" (Vrielynck 2008, 33). Numerous other examples can be found (see Chapter 1 and 4). The question is how the recent references should be understood: as a prolongation of the legal interpretation or as a 'common sense assumption' of which the need to explore it is not acknowledged?

nature of the relation between the dead and the variety of grave goods, and, above all, the reasons why the dead were buried with their assumed personal possessions were rarely a matter of discussion in the early stage of the debate. In the previous chapter, it was reasoned that the nature of this relation requires further reflection in order to broaden the one-dimensional chronological discussion, but also for further interpretative research. The first question is whether burial with personal possessions existed, and if so, at which moments in the course of life these possessions were acquired, and what roles the objects had in the lived life of the deceased and in the community.⁹² In addition, can burial objects be chosen from contexts other than the property of the deceased, and are questions regarding the influence of prolonged circulation on chronological analysis relevant with respect to this choice? The dead and their grave goods become one entity in the grave, but whether the burial items actually formed the personal belongings of the deceased is the basic question in this chapter. It forms the point of departure from which various alternative relations between grave goods and the deceased will be explored, first, by sketching the development of the scholarly position towards this subject in the historiography of early medieval mortuary archaeology.

The development of the theoretical and interpretative debate in early medieval mortuary archaeology has already been reconstructed along the line of the general consecutive paradigms in archaeology.⁹³ A general consensus regarding the function of funerary activities can be found in the general death and burial debate in archaeology; in essence, the activities are understood as 'rites-de-passage', the reproduction of society, dealing with the disruption and unease a death causes, and/or the integration of individuals in the ancestral community.⁹⁴ In particular the meaning of object deposition with the dead has been explained against the background of these abstract points of view in the interpretative models in early medieval archaeology. The rest of the funerary remains, and their complementary research potential, such as cemetery structures, the interpretative possibilities of the study of skeletal remains, and the grave structures⁹⁵ themselves are only sporadically used in the search for a theoretical position regarding mortuary behaviour in the Early Middle Ages.

The interpretative models discussed below have a key position in early medieval mortuary archaeology. They are all founded on a selection of the burial evidence, either from one region or from one limited period of time, or on a specific category of grave goods. It can be stated that this selection of interpretative models represents the range of theoretical standpoints. For their analysis, it is first useful to identify the models as either dead-centred or mourner-centred approaches (Table 4).⁹⁶ Dead-centred approaches focus on the role of the individual dead in mortuary practises, whereas the latter concentrate on the participation and socio-political agendas of a group of mourners (organisers of the burial) in funerals. The supposed burial strategy in each model is translated into a theoretical position. This will elucidate the development of the interpretative debate in early medieval mortuary archaeology and the opinions about the relation amongst grave goods, the deceased and the survivors. The theoretical positions, in chronological order from the top down, of the dead-centred approaches can be found in the columns to the left and those of the mourner-centred approaches in the columns to the right. The associated cultural categories of grave goods are listed in the column in the middle.

The traditional dead-centred models (Table 4: Upper left corner) can either be placed in the culture-historical tradition or the processual tradition in archaeology. The burial evidence was generally

⁹²The assumption that people were buried with personal belongings suggests that objects were appropriated as 'personal possession' and implies that an awareness of individuality or 'self' was a component of social life in the early medieval period. The concept of individuality or personhood in ancient societies is a separate discussion (see for example Fowler 2004), which is, despite a preoccupation with personal possessions, rarely touched upon by early medieval archaeologists (for an exception, see Bazelmans 1999, 156-160).

⁹³ Good examples are Pader 1982; Härke 1989; 1997; 2000a; Stoodly 1999, 4-8; Lucy 2000, 174-186; 2002; Effros 2003; Williams 2006, 4-9; Hasall 2010, 21-88.

⁹⁴ Fundamental works in social sciences to which archaeologists often refer in studies of death and burial are those of the anthropologists Van Gennep (1960: *The Rites of Passage*), Hertz (1907: *Contribution a une étude sur la représentation collective de la mort*), Metcalf and Huntington (1979: *Celebrations of Death: The Anthropology of Mortuary Ritual*) and Bloch and Parry (1982: *Death and the Regeneration of Life*).

⁹⁵ Smal (in prep).

⁹⁶ Williams (2004b, 263-265) introduced the term 'mourner-centred' approach in early medieval archaeology, on the basis of which the opposite 'dead-centred' approach is formulated.

considered to be the result of the factual image production of the deceased in life by the burial with their personal possessions. Originally, the concept of burial with personal possessions derived from legal historians and was later embraced as a 'theory' that explained furnished burial by archaeologists.⁹⁷

Dead-centred models	Theoretical position	Cultural categories of grave goods	Theoretical position	Mourner-centred models
Culture-historical and processual approaches	Direct representation of legal status, ethnic affiliation, religious affiliation and socio-economic status	Personal possessions		
		Family possessions Personal possessions Occasional objects	Neutralise social stress and competition	Halsall 1995; 1996
		Occasional objects Family possessions	Representation of new claims on land / Creating community of ancestors	Theuvs 1998; 1999
		Gifts Personal possessions	The rhetoric of giving	King, 2005
		Occasional objects Personal possessions Family possession Gifts	Technologies of remembrance	Williams, 2006
Williams, 2006	Mnemonic agency of the dead body	Occasional objects Personal possessions Family possession Gifts		
Cannon, 2006	Agency of women	Personal possessions		

Table 4. The development of the theoretical positions in early medieval mortuary archaeology and the associated cultural categories of grave goods.

In this 'theory', grave goods were considered to be the *Heergewäte* (weapons and clothing of a man) and *Gerade* (jewellery and clothing of a woman), which were interpreted as inalienable (not to be passed on (as heirlooms)). This was considered to be a strong argument for the explanation of furnished burial as the result of interment with personal possession. However, the individual who actively acquired possession in life was not the subject of research, but rather the community of the dead as a reflection of society. This offered opportunities to explore themes that were related to group identities such as ethnicity⁹⁸ and religious affiliation (pagan versus Christian)⁹⁹, to processes such as migration and cultural

⁹⁷ An important legal historian who contributed to the development of this interpretative framework for furnished burials was Brunner (1898: *Der Tothenteil in germanischen Rechten*). See Härke (2000, 22-23) for references to the construction of this interpretative framework, and Effros (2002, 3-4, 25, 41-43; 2003, 72-79) for an overview and deconstruction of these early scholarly interpretations of Germanic law in relation to funerary practises. The erroneous legal interpretation of furnished burial will be further discussed in Chapter 3 of this thesis.

⁹⁸ It was assumed that the furnished graves were those of Germanic people and the less furnished or unfurnished those of Gallo-Romans because the transmission of personal property through inheritance was an accepted custom amongst the latter group (Effros 2002, 42). Material culture was also assumed to be an ethnic marker which made it possible to identify the graves of ethnic groups such as Alemanni, Lombards, Visigots, etc.

⁹⁹ The religious aspects of burial customs require some remarks in this context. It will appear in this chapter that religious sentiments are rarely discussed as a component of burial rites and the selection of grave goods in the interpretative models of the last few decades. Although it can be concluded that early medieval Gaul was confronted with an increasing Christian infrastructure, it remains obscure to what degree Christianity was experienced as a religious component of life and what role it had in burial practises of various social groups. On a very general level, the spread of Christianity was used to explain furnished burials as those of pagans, and the empty or soberly furnished burials as those of Christians. It is now generally acknowledged that the earliest form of Christianity in Gaul did not

change, and to the economic (rich versus poor) and the legal (status) organisation of society. These early dead-centred models will not be discussed in this chapter, as their worth and flaws, which will appear in the following sections, are already firmly established and require no further evaluation.¹⁰⁰

The main incentive for this change of thought was that it was recognised (due to changes in theoretical standpoints in other fields of archaeology and formulated in the schools of the so-called post-processual and interpretative archaeology) that the ideological components of death and burial and the active role of individuals and social groups in the process of consolidation and change in mortuary behaviour had been underexposed.¹⁰¹ In the archaeological 'death and ritual' debate of the last few decades, it is repeatedly stressed that the appearance of a person in a grave is not simply a 'mirror of life' and that 'the dead did not bury themselves'.¹⁰² In other words, socio-economic status, ethnicity and internalised or practised religion cannot be 'read' directly from the appearance of a person in a grave, and consequently, the variety in the graves of a cemetery is not the same as the structure of society. The way the body was dressed and deposited with grave goods is now considered to be an ideal representation of the dead and its relations, brought together by the burying community, which does not necessarily reflect the 'reality' of the lived life of the deceased.¹⁰³ How was the burial shaped and perceived by the burial community and funeral attendees? What 'goals' were pursued with the performance of ritual activities (such as the selection, display and deposition of objects)? Does it do justice to the complexity of early medieval life to consider the objects deposited with the dead merely as the 'disposal' of inalienable personal property? Generally, a shift in the identification of the role of the burying community from passive to active can be observed. Mourner-centred approaches are much more concerned with the active role or agency of the living (burying group) in order to define themselves in society through various activities of which the burial of a group member is a specific and important one, as illustrated below. Grave goods are, in light of mourner-centred approaches, considered as actively chosen by the burying community, and can be perceived as occasional objects. Consequently, both the lived life of the deceased, its relation to the associated grave goods, but also the relation between the dead and the living, remain underexposed topics. With regard to funerary objects, the focus currently lies on their role and meaning in the specific burial context. Their circulation and role in society before this ritualised event has rarely been a fundamental subject of discussion in the mourner-centred

prescribe the performance of burial practises, and that the basic opposition of pagan versus Christian 'identity' is not represented in the burial evidence (Treffort 1996, 73; Effros 2002). However, the disappearance of furnished burial in the course of the eighth century is commonly ascribed to a profound internalisation of Christian values. It is thought (see for example Treffort 1996, 73-74, 179-183) that the objects that accompanied the dead in the Merovingian period were by then transformed into gifts to religious institutions (gifts *pro anima*). Liturgy and the concept of the Christian afterlife in the Merovingian period has been discussed (Effros 2002, 169-204), but particularly with regard to Christian authority and lay elites. However, as already mentioned, for the other groups, it remains obscure how they defined themselves in relation to Christianity. The prevalence of scholars for socio-political and ideological strategies to theorise on Merovingian burial practises probably reflects the difficulties regarding the investigation of the relation between religious affiliation and ritual choices, especially those choices that result in archaeological evidence (Geary 1994, 2-30). In addition, the concept of provisions for the pagan after-life have not been developed as an interpretative framework to explain furnished burials (the material provision for the after-life, as it is often used as an interpretation of furnished burials in other regions and periods and stands in contrast with the absence of this aspect in the discipline of Merovingian archaeology). The earliest scholars of Merovingian burial practises already refrained from a religious interpretation because they could not explain the lavishly furnished burials in an already Christianised world. As a solution, they focused on the legal interpretation of grave goods as inalienable personal property (Effros 2002, 43-44; 2003, 72), a solution that had profound consequences for the development of the interpretative debate in Merovingian mortuary archaeology.

¹⁰⁰ See Halsall (1992) for an elucidating argument of how furnished burials have been wrongly identified as representations of ethnic groups. The development and pitfalls of ethnic reconstructions on the basis of material culture (from graves) is also discussed in a selection of essays ('On Barbarian Identity. Critical approaches to Ethnicity in the Early Middle Ages' (2002)) and especially by Brather (2004), Curta (2007) and Theuvs (2009). Effros (2002; 2003) and Crawford (2004), discuss the interpretative problems of religious sentiments in relation to burial rites, and Härke (1990), the problems of socio-economic reconstructions on the basis of burial remains.

¹⁰¹ Effros 2002, 43.

¹⁰² Effros (2002; 2003) already discussed the various interpretative directions in early medieval burial archaeology, but this is more of an overview, rather than an analysis of these directions from a specific point of view. The question of how the nature of the connection between grave goods and the deceased should be perceived is the point of departure in the analysis of various theoretical standpoints in this chapter.

¹⁰³ This was convincingly demonstrated by Härke (1990; 1992) through the unexpected relation between graves with weapons that were generally perceived as 'warrior graves' and the analysis of the associated skeletal remains on the basis of which an active 'warrior status' in life was considered impossible.

approaches. Hence, both the past of the deceased and the interred objects disappeared into the background in the mourner-centred models.

Another consequence of these now commonly accepted standpoints is that the discussion on the possible use of personal possessions in mortuary practises is perceived as old-fashioned. It became a general understanding that the presumed historical proof for the inalienability of personal possessions should be interpreted differently, in a broader context.¹⁰⁴ However, despite the rejection of the historical evidence for this perception of material culture, grave goods are often still, more or less implicitly, regarded as personal possessions, especially in the catalogue-like publications of early medieval cemeteries, which often do not incorporate modern interpretative research. In general, the modern debate has resulted in various interpretative models that share a standpoint which is the opposite of the one in the previous approaches: objects in graves are mainly considered to have been selected by the burying group for strategic purposes by which several aspirations of social groups are negotiated during ritual performances.

The short-comings of the mourner-centred approaches are not yet firmly grounded in a debate. However, some interpretative models tend towards a re-evaluation of the role of the deceased individual in the (archaeological) outcome of graves, although from a different perspective than the early dead-centred models. These modern dead-centred approaches explicitly incorporate the concept of human-based agency in early medieval archaeology, by which an effort is made to bring the influence of the lived life of the deceased (negotiation of personhood in life and death) on burial practises into scope again, next to the active role of the survivors. The re-appreciation of the role of burial objects in society prior to their burial is a consequence of these new perspectives on burial rites. The two models that will be discussed as examples of modern dead-centred approaches in early medieval mortuary archaeology can be identified as the onset of a reaction to the limitations of the theoretical standpoints in the now generally accepted mourner-centred approaches.

Nearly all the theoretical standpoints in recent mortuary archaeology of the early medieval period are captured in the following analysis of a selection of mourner-centred and modern dead-centred models. The discussion of these models concentrates on their interpretative framework in relation to the implicit and explicit references to the connection amongst the grave goods, the dead and the living, including the reflections on the influence of the lived life of the deceased, the role of these objects in these lives and in society and if and how this is reflected in the graves. The aim is to identify cultural categories of grave goods on the basis of their relation to both the dead and the living in order to generate a basis for discussions that require consideration, especially in the chronological debate. Whether each of these interpretative models has to be considered exclusive, or whether their complementary use or rejection needs to be considered options for the development of theoretical thinking in early medieval mortuary archaeology will also be explored.

2.2 Social stress and the competitive display of grave goods

Halsall discovered some interesting patterns regarding the grave goods distribution in the sixth- and seventh-century cemeteries of Lorraine (north-eastern France).¹⁰⁵ These patterns form the basis of his interpretative model.¹⁰⁶ First, the associations of grave goods with the gender and age of the deceased

¹⁰⁴ It has already been mentioned how historical documents were interpreted incorrectly with regard to furnished burial (see note 97).

¹⁰⁵ Halsall 1995; 1996. The cemeteries that were analysed are: *Ennery 'Les Trois Arbres'* (mainly sixth century, 82 graves), *Altheim 'am Knopp'* (mainly seventh century, 116 graves), *Berthelming 'Alt Schloss'* (seventh century, 24 graves), *Bettborn 'Bienenzaun'* (seventh century, 11 graves), *Bouzonville 'Au-dessus du four à chaux'* (seventh century, 32 graves), *Güdingen 'Fronfeld'* (sixth-seventh century, 8 graves), *Hayange 'Forêt d'Haméwillers'* (seventh century, 64 graves of which 17 grave goods assemblages have survived), *Moyeuvre-Grande 'Kleiner Vogesenberg'* (seventh century, 23 graves), *Walsheim 'am Dorf'* (seventh century, 13 assemblages) and *Wittersheim 'von dem langen Zaun'* (seventh century, six graves). The model was tested against the evidence from cemeteries outside the *civitas* of Metz (Halsall, 1995, 110-163).

¹⁰⁶ This model also formed the basis of his article (Halsall 1996) which discussed female status and power in early medieval Gaul (central *Austrasia*).

were analysed (Table 5).¹⁰⁷ Three groups of objects could be identified on the basis of the gender of the deceased: two groups of gender-specific objects, and one group of so-called 'neutral objects', which appear in the graves of both men and women. The conclusions that were drawn from the observed correlations are that the sixth-century graves of men were generally more elaborately furnished than those of women, considering the number and variety of grave goods, and that more than one object of the same category was more frequently found in the graves of men.¹⁰⁸ The multiple occurrences of similar object-types in the graves of men could indicate, according to Halsall, that individual 'feminine' objects had stronger symbolism and needed less reinforcement by repetition than certain 'masculine' objects. The analysed association of object-types with age groups also revealed a strong correlation, especially in the sixth century (Table 5).¹⁰⁹

Age groups	Women (biological sex)	Men (biological sex)
0-7 (Child)	Few gender-related artefacts	Few gender-related artefacts
7-14 (Child)	No gender-related artefacts	No gender-related artefacts
14-22 (Juvenile)	Full range of female-specific artefacts	No gender-related artefacts
22-40 (Young Adult)	Female-specific artefacts, less jewellery	Full range of male-specific artefacts
40-60 (Mature Adult)	Female-specific artefacts, jewellery becomes rare	Full range of male-specific artefacts, no swords
60+ (Old Adult)	Gender-related artefacts become rare	Gender-related artefacts become rare

Table 5. Associations between gendered artefact-types and age and biological sex in sixth century Lorraine on the basis of Halsall's research in the *civitas* of Metz (Halsall 1995; 1996; see also Halsall 2010).

The seventh-century graves from this region show that the variability observed in the graves of the sixth century is replaced by a higher degree of standardisation. For example, a less clear pattern of gender and age construction by grave goods can be observed, although some general associations remained visible.¹¹⁰ It is remarkable that some objects that were specifically associated with men in the sixth century, such as knives and plate buckles, were in the seventh century also deposited in the graves of women, although it was observed that the 'decorative display' shifts from feminine artefacts to masculine artefacts of which the elaborately decorated iron plate buckles, characteristic objects for the seventh century, are a good example. Halsall suggests that this decorative display served a renewed material construction of gender, which was expressed differently in the sixth century. This is a short outline of the grave goods patterns of the sixth and seventh century in this specific region. For this chapter, it is more interesting to formulate Halsall's theoretical position that stands at the basis of his interpretative model.

Theorisation on the meaning of the deposition of grave goods should, according to Halsall, be the major topic of concern for early medieval archaeologists.¹¹¹ The socio-political instability of the sixth century forms the background for the proposed model, in which some core elements can be identified as the foundations of Halsall's theoretical position. Halsall assigns an important function to the temporary display of grave goods for a significant audience. The selection of grave goods was bound to obvious

¹⁰⁷ The overview of the correlations between grave goods assemblages and gender and age was obtained by statistical procedures. The results were also tested against the available determinations of the biological sex of the deceased. Not many differences were observed between the cultural construction of gender (determined by the objects that were assumed to be 'feminine' and 'masculine') and the determined biological sex. The correlations between grave goods assemblages and age were tested with predictive modelling.

¹⁰⁸ Halsall 1995, 125; Halsall, 1996, 8.

¹⁰⁹ Significant correlations between gendered age groups and assemblages of grave goods were, for example, also found in the burial evidence from Anglo-Saxon England, see Stoodly (2000); Härke (1989, 1992b, 1997); Lucy (1997), and was also investigated by Brather for Southern Germany, especially on the basis of the evidence from the cemetery of *Pleidelsheim* (2008) and Stauch (2008).

¹¹⁰ Halsall 1995; 1996, 11-12.

¹¹¹ Halsall 1996, 12.

norms, which resulted in a certain 'grammar of display' that was understood by this audience. As such, the ritual display of grave goods is part of an "active public strategy of a family to maintain or enhance standing within the community". The relationships of power between families were in the context of funerals redefined or confirmed in a socio-political situation in which power was constantly open for competition. The competition for power can be observed in the variation of lavishness of the graves within the boundaries of the 'grammar of display'. The amount of experienced social stress relates to the importance the deceased family member had for these positions of power. The more lavish a burial, the more it is expressed how important the deceased was in order to secure or redefine these relationships. Halsall states that the importance of such a person (and thereby the degree of experienced social stress with their death) is strongly related to their age or stage in their personal lifecycle.¹¹² This hypothesis is founded on both the burial evidence (see Table 5) and historical documents.¹¹³ The most lavish graves can be found in the age category 14-22 of women and 22-40 of men, on the basis of which it was concluded that the amount of social stress, and thus the present or future power position of a family, was related to deaths in these age groups. It was believed necessary to counterbalance the experienced social stress by a temporary display of lavish grave goods, and thus status.

Some difficulties can be observed in this model, mainly because two competing 'burial strategies', although not explicitly mentioned as such, are presumed to have operated simultaneously. By assessing early medieval burials as an option for active strategies initiated by the mourners to maintain or alter their perceived social standing, it is assumed that these mourners make the decisions, depending on which message they want to convey, about the grave goods to be displayed and interred. Halsall's interpretative model is assigned to the mourner-centred approaches on the basis of this position. His model also served to discuss female power and status in early medieval central Austrasia.¹¹⁴ In this discussion, some explanations are presented regarding the correlation between the assemblages of artefacts in the graves of women and their age at death.¹¹⁵ These explanations are based, although not explicitly identified as such, on the presumed relation between objects and persons during their lifetime (acquisition and possession of appropriate objects related to stages in the personal lifecycles), and they suggest that the deceased were interred with their personal belongings. This can be exemplified by expressions such as: "That jewellery was deposited in the grave suggests that it was somehow regarded as the deceased's possession",¹¹⁶ "The material attributes of female identity appear to have been acquired at puberty",¹¹⁷ or "Thus there were clear mores governing grave-goods deposition. These mores argue that roles based upon gender and position in the life-cycle were of paramount importance in contemporary social theory".¹¹⁸

These statements are confusing because they suggest that the possessions in life are the same as (a selection of) the items with which one is buried, which seems to contradict the identification of

¹¹² Halsall 1996, 12-22.

¹¹³ The financial fines (*wergild*) that had been decreed by law to compensate (the victim and the family of the victim) for various personal injuries and of which the amount was related to various social groups such as age and gender groups. See Brather (2008, 268, Abb.11) for an overview.

¹¹⁴ Halsall 1996.

¹¹⁵ The correlations between grave goods and age in the graves of women and the explanations for the correlations are (on the basis of Halsall (1996, 12-22):

1. Women 'received' their full equipment of gender-specific items (decorative objects for dress and body) in adolescence (see Table 5). Gender roles were important to highlight or construct during burial rites.
2. With a *wergild* of 600 *solidi*, which is three times as much as other members of society and which is explicitly related to their child-bearing capacity, it is argued that women of this age group were particularly important for the family.
3. Both the visible life of a marriageable women and funerals are public in character; in both instances, dress and bodily adornment played an important role.
4. After the marriageable and child-bearing status, women were ascribed a domestic status, which should, according to Halsall, be regarded as an important status considering the continuing custom of lavish burial, although with less jewellery (gender-specific artefacts) of women in the 20-40 age group. The importance of the women, however, should be sought more in the value she represents within a family, hence the lavish burials, although this also served to maintain the family status within the community.
5. The change in grave goods deposition with females over 40 represents their declining domestic role, which was transferred to the children who were reaching majority. The jewellery was passed on to the next generation, and was therefore not buried with them.

¹¹⁶ Halsall 1996, 16.

¹¹⁷ Halsall 1996, 14.

¹¹⁸ Halsall 1996, 11.

'active mourners'. According to this line of reasoning, Halsall's theoretical position is that next to active grave goods provision by mourners, one is also buried with personal possession of which the acquisition and exquisiteness are related to stages in the lifecycle. The suggestion is that the lavishness of the burial also depends on the acquired personal property of the deceased. How a woman acquired her property and whether this was an individual process or whether the family was involved was not discussed. Halsall does mention that a link probably exists between the personal display in life and in death. His theoretical focal point, however, is on the competitive ambition of the survivors and the message that is conveyed by the temporary display of objects for the duration of the funerary rite. It is unclear in his line of reasoning whether the burial objects that served the competitive display were added to the assemblage of personal items, or whether the model is based on the transformation in meaning of these personal items during funerary practises. Is his line of reasoning in conflict, or are both burial with actively acquired personal possessions and competitive burial strategies applicable within the same interpretative model? Or should alternative interpretations of furnished burial be sought?

If the 'full received equipment of gender-specific items' was actually buried with the deceased, then the 'temporary grammar of display' would also relate to the lived life of the deceased, next to the aspirations of the survivors. Could the use of two burial strategies in one model be related to the problem that the concept of personal possessions in the Merovingian period is never fully explored? The concept of individuality was rather 'passive' in the early dead-centred models; in the mourner-centred models, it has not been a matter of discussion. The 'social desired' image of a person in order to pursue certain goals can be created during burial activities, but also during the course of life, in which the transition from one stage of being to another is surrounded by ceremonies that also included a material component. This means that the active strategy of (competitive) material display and the objects involved were not confined to burial practises, but also were, although probably differently, related to events before death.¹¹⁹ This is mentioned by Halsall when he refers to the public role of adolescent or 'marriageable' women by stressing their importance for future alliances with other families. These women would therefore "...appear in public to attract alliances with other families", whereby emphasis is placed on their physical appearance (personal display).¹²⁰ This reasoning appears to imply, although very generally, the practise of active strategies related to certain phases in a person's life to achieve certain goals. The physical appearance, for example, the desired or required objects to obtain this physical appearance of the dressed body of a 'marriageable' woman can be actively formed and manipulated according to the goals of not only the family but also the individuals themselves. However, if material display and active strategies relate to stages in the lifecycle, what is the role of these objects in funerary activities? Do they express the same, or do their meanings transform? Furthermore, are certain objects added to the assemblage, which can be considered to serve the goals of the survivors more than the dress-related objects of women and men? Or should it be concluded that the age- and gender-related objects play an active role other than in burial-related strategies, and that they were deposited with the dead for other reasons than Halsall suggests? For answers, some further thoughts on object acquisition and transmission need to be explored.

Three systems of object acquisition and transmission can apply when the acquisition and separation of objects are considered to be related to the lifecycle of persons (they do not exclude each other, but can coexist):

1. Individual acquisition, ownership, and subsequent burial with the acquired items (which implies the existence of genuine inalienable personal possessions), or

¹¹⁹ The emphasis on material culture in life in early medieval archaeology is also expressed by Theuvs/Alkemade with a reference to bodily display as an element of an elite lifestyle (2000, 411-419) and with expressions such as "...that these objects point first and foremost to [...] actively taking part in societies meaningful relationships" (2000, 412) and Bazelmans (1996; 1999; 2000; 2002), who discussed the relation of lifecycle rituals with adorned bodily display. That persons were probably not buried with all their personal possessions but with their *Festtagsausstattung* or a selection of this costume is mentioned by Mehling (1998, 83, note 231).

¹²⁰ Halsall 1996, 16.

2. Inheritance and transmission of family possessions of which each successive heir is the temporary caretaker, and has the responsibility of keeping the line of transmission intact, but who can also add items to the 'family treasure', or
3. Acquisition, temporary ownership, and eventual separation outside the structure of a family.

The first option is not supported by the schematic presentation of the burial evidence from the *civitas* of Metz (Table 5). If it was, then the full equipment of gender-related objects would also be regularly found in the graves of the elderly. This system of 'inalienable personal possessions' (individual acquisition and keeping) is, at least for the *civitas* of Metz, for now rejected as a general and persistent practise. The second and third options are supported by the burial evidence in Halsall's research area, although it must be considered as indirect evidence. The results of his research can provide some insights into the cycles of object acquisition and subsequent transmission or alienation (Table 6).

Age	Women	Men
0-14	Acquisition of some objects; some are gender-related	Acquisition of some objects; some are gender-related
14-22	Acquisition of the full range of gender-related objects	Acquisition of some objects; some are gender-related
22-40	Transmission of some jewellery items to next generation	Acquisition of the full range of gender-related objects
40-60	Transmission of the rest of the jewellery items	Transmission of swords to next generation
60+	Transmission of nearly all gender-related objects	Transmission of nearly all gender-related objects

Table 6. The relation between age and the acquisition and transmission of gender-related objects. Derived from the correlations (Halsall, 1995, 1996) amongst age, gender and grave-goods assemblages in the cemeteries of modern Lorraine (see Table 5).

The correlations between age at death and the accompanying grave goods assemblages show that the most lavish burials were given to women between the ages of 14 and 22 and to men between the ages of 22 and 40 (Table 5). If these objects are interpreted as inherited possessions that served a function in the structure of a family, then women received the majority of their gender-specific items between the age of 14 and 22 (the period of marriage and childbirth) from the women of the generation before them. Men received their full 'equipment' of gender-related objects at a somewhat later age than women (Table 6).¹²¹ When getting older, both women and men tend to lose the full range of gender-specific objects, or more correctly, were no longer buried with these items. In fact, the burial evidence from the *civitas* of Metz seems to argue in favour of the practise of inheritance; it could be interpreted as if the gender-specific items were received at a specific age (becoming an adult, getting married, having children, i.e. entering another stage in life) and were transmitted to the next generation when the individuals reached the age to receive their 'full equipment of gender-specific items'. Accepting the system of inheritance could offer an alternative or additional explanation for the reasons why the young dead were buried relatively lavishly. However, the deposition of these objects as grave goods terminates the line of inheritance, which can be regarded as a significant rupture in the transmission of a 'family treasure'.

Following this line of thought, the interment of these objects could suggest two things. First, it could suggest the diminished significance of the objects for the family. The objects became useless for certain

¹²¹ This was also observed by Brather (2008, 264-266, Abb. 10, Tab. 5). Especially his conclusions, on the basis of the cemetery of *Pleidelsheim*, regarding the grave goods provision of the elderly are interesting. Women older than 60 were rarely buried with objects, whereas men still were.

established goals or they lost their effective symbolism. Secondly, it could point to the inability of the transmission of the objects to the next generation (no suitable heirs were available). Regarding the interment of objects as such, the burial with the full equipment of gender-related objects implies a much greater disassociation of the bereaved family from the quest for power than the competition for power. Empty or less furnished graves would be a sign of successful transmission of objects and a continuous competition for power, and lavish graves as sign of failure in doing so. It is argued that the regular composition of lavish graves is related to instable socio-political times. The desire in such times to compete through lavish display contradicts the analysis of Lillios, who investigated the function of heirlooms in various forms of societal organisation. The ethnographic examples in her studies showed that when political positions are contested, people are more motivated to keep heirlooms in circulation, and vice versa, when socio-political situations are stable, there are more incentives to destroy (deposited) heirlooms.¹²² It can be reasoned, however, that when heirlooms fail their purpose in unstable political situations, this could also be an incentive for their disposal with the death. On the other hand, the basic question is whether heirlooms were selected as components of furnished burials. The discussion on heirlooms and inheritance has more aspects than suggested here, and will be elaborated in Chapter 3.

With regard to chronological analysis, it can be stated that the existence of a system of inheritance would strongly distort the chronological ordering of graves. A system of inheritance, however, does not initially correspond to the number of objects found in early medieval graves. The experienced importance of such a system would motivate the continuous transmission of objects, and it is unlikely that such a system applies to the full range of objects found in early medieval graves; rather, it probably only applies to a selection of the objects. Moreover, the full range of gender-related items can only be acquired in the system of inheritance if the previous generation transmits all of these items, which is not the case in the schematically presented burial evidence from the *civitas* of Metz. In addition, if the full equipment or certain objects were transmitted through inheritance, this would take at least two and up to four or five generations before they were deposited with the dead (a circulation of approximately 15 to 70 years is possible). The chronological studies until now reveal that this applies especially to 'common' objects such as knives and combs, and that dress-related objects in particular such as brooches involve a more restricted circulation period (although only a minority of the objects are confined to one chronological phase of 15 to 30 years). The practise of inheritance and the objects involved require further analysis and will be discussed in Chapter 3. It is probably more complicated than described above. A system of inheritance, however, is not the only option for the presented correlations between age groups and specific assemblages of grave goods, as well as the derived scheme of acquisition and transmission/loss.

It can also be suggested that the objects were acquired via means other than inheritance. Interesting for this line of reasoning is Treherne's article on a socially distinct group of 'warriors' in Bronze-Age Europe.¹²³ Although this 'social group' is identified only on the basis of burial remains ('warrior graves'), Treherne makes a distinction between *life style* and *death style*, both in which "...a specific form of masculine *beauty* unique to the warrior" is a central element on the basis of which personhood and male self-identity are discussed.¹²⁴ Individual and personal display (as a lifestyle) became important aspects of individuals in a society that evolved over the fourth and third millennium BC. The results of these changes were archaeologically observed in the burial evidence over an extensive area in Europe. Despite the local variation in archaeological remains, "...the progressive articulation of various regions into large interactive networks..." is suggested.¹²⁵ The control over circulation networks of especially prestige goods and practises (long-distance relations) were essential for the desired individual status (personal

¹²² Lillios 1999.

¹²³ Treherne 1995.

¹²⁴ Treherne 1995, 106.

¹²⁵ Treherne 1995, 107.

display).¹²⁶ For the death style (beauty in death), it is suggested that burials showed "...the body as the centre-piece of a signification system involving grave goods arranged around and upon it [...] designed to fix in the minds of the onlookers an image of the deceased'...".¹²⁷ Stress is placed on the importance of memories that were evoked during the short period of burial rites. However, the grave goods did not only receive their meaning during burial practises, but were also "meaningfully implicated in their contextual uses in everyday life".¹²⁸ The grave goods are references to feasts and reputations that were realised in life; they were not confined to mortuary practises.

In the early medieval burial record, it is possible to identify various 'social groups', amongst which are those based on gender and age (Table 5). It can be proposed that the groups of women in the age group of 14 to 22 and men in the age group of 22 to 40 show a 'life style of individual personal display', particularly in the sixth century.¹²⁹ What is remarkable for early medieval material culture from graves is not only that it shows regional variation, but also that the grave contents over an extensive area in early medieval Europe can be identified as one 'culture'. Moreover, nearly identical objects were found in regions far apart, and objects made of certain raw materials such as amethyst, rock crystal and garnets (which as raw materials can only be found in specific regions) were distributed over an extensive area. It can be assumed that individual personal display through dress and objects was related to exchange networks and depends on the extent one (or one's family) had access to these networks. This success of this access is not necessarily restricted to the upper strata of society and to prestige goods, but can also be actively pursued by all members of society and can involve all sorts of objects. Individuals or families can be more or less successful. Assuming this, the research focus should not only be on the interpretation of the material display during mortuary practises, but also on why and in which way individuals (with the help of their family members) choose a lifestyle of personal display, how this lifestyle relates to various stages in life, if this image was continued in death, if this image in death involved all the objects that were acquired in life, and if objects were added to this burial assemblage in order to create an image.

Furthermore, it can be proposed that the success of personal display was related to success to the extent one had access to exchange networks. Given that a relatively large group of the elderly were not buried with these items, which was actually a positive argument in favour of the system of inheritance, it must be concluded that objects were not kept for the majority. It can also be suggested that the individual disposal of objects that was related to the entrance into another stage in the lifecycle did not always occur through inheritance, but also through the return of the objects to the network of object distribution from which they were also previously extracted. The question remains of why an individual was buried with the full range of gender-specific objects when he or she died at the age when personal display was at stake. It can be proposed that these objects were regarded as unsuccessful and did not serve the goals for which they were acquired; a successful *lifestyle* was not obtained because of an untimely death. A story of failure was attached to these objects, a negative biography of objects was created, with the consequence that they were extracted from circulation through burial. In this line of reasoning, the assemblage of acquired objects that served a certain lifestyle of personal display should not be designated as personal possessions or family possessions, but much more as 'temporal possessions' that served certain goals and of which one chooses to have temporary ownership. Although this line of reasoning is rather speculative, it provides an alternative for the static perception of the relation between grave goods and the deceased as inalienable personal possessions.

Elite networks of exchange and gift-giving in the early medieval period are repeatedly discussed. Such networks are described especially in a ritual sense for the social group of 'warriors' or

¹²⁶ Treherne 1995, 106-111.

¹²⁷ Treherne 1995, 120.

¹²⁸ Treherne 1995, 124.

¹²⁹ The importance of objects in the lived lives of persons is already suggested in early medieval archaeology. See for example Theuvs/Alkemade (2000, 411-413, 415-417), Bazelmans (2002, 73, 81), Brather (2008, 238-252), and Von Rummel (2008, 64): "...die hohe bedeutung von Kleidung als Ausdrucksmittel persönlicher Identitäten...".

'retainers' and lords.¹³⁰ The available material culture known from early medieval graves, however, suggests that a wide variety of objects was exchanged, and that different sorts of exchange networks (gift exchange, commodity exchange, down-the-line exchange, long-distance trade, etc.) may have coexisted in which various social groups participated. The personal display expressed the access one had to these networks and offered individuals and social groups the possibility of constructing and maintaining social relations on various levels.¹³¹ It can, however, be suggested that the acquisition through exchange networks and through inheritance existed simultaneously. Some objects entered the system of inheritance, some did not, and some objects were probably selected at the moment of burial from family property, from the objects available through circulation at that specific moment (occasional objects), or were specifically acquired by the burial community to serve their ambitions. The objects in graves, and therefore the variation between the burials, can therefore also be an expression of the desired status (personal display) at certain stages of life and are not only an expression of competition during burial activities. It offers the possibility to relate exchange/distribution networks to the (individual) motivations of persons in their lived life and stages in the lifecycle, and not only to burials.¹³² This discussion elucidates that theorisation on the role of the objects in the construction of identities and relations is required for early medieval archaeology if the full extent of the role of these objects in funerary practises is to be understood. The exchange, appropriation and transmission of objects in the community of the living are the focal point in the next chapter.

Halsall's model suggests four cultural categories of grave goods: inalienable personal possessions, alienable personal possessions (temporary possessions), family possessions, and occasional objects (actively chosen objects from the material culture available that suit the burial strategy). The cultural category of inalienable personal possession is rejected on the basis of this model because it implies the individual acquisition and keeping of objects until death. The burial evidence from the *civitas* of Metz does not subscribe the general occurrence of this practise, although this does not imply that this cultural category did not exist. Personal possession, however, is a concept with multiple layers that can be perceived from various perspectives. Therefore, the cultural category of temporal possessions (alienable personal possessions) is introduced. This category is related to the lifestyle or personal display of individuals in life, which express the access to various distribution networks. The deposition of these objects with the dead may also have been used to express achievements in life. As this assumes that the elderly were also buried with such objects, it was suggested, on the basis of the burial evidence from Lorraine, that the objects were returned to exchange networks after their use or buried with the individual when an untimely death occurred. This concept of temporal appropriation can be assumed to subscribe the presented correlations between age groups and assemblages of artefacts, although some further thinking on the reasons for acquisition and deposition is required. The hereditary system, which is also, although circumstantial, substantiated by the burial evidence, can be operative next to the acquisition through exchange networks. These conclusions do not correspond to the desire of archaeologists to create short chronological phases of graves on the basis of grave goods, as discussed in Chapter 1. The actively chosen grave goods or occasional objects can be extracted from the material culture in circulation. They may also have fewer consequences for the chronological phasing of graves on the basis of similarity. This category will be further explored in the following.

¹³⁰ Bazelmans 1996; 1999; 2000; Härke 2000; Theuvs/Alkemade 2000.

¹³¹ Distribution patterns of grave finds are available, and these distribution maps offer multiple possibilities to explore exchange networks on a theoretical level. Conceptualising exchange networks and the role of individuals and various social groups other than aristocrats in these networks has rarely been a subject of research.

¹³² The question remains of how the pattern of the seventh century can be explained; does the organisation of lifecycle stages and the acquisition of appropriate objects change, or do the goals pursued at burial change? Important changes in the *civitas* of Metz in the seventh century are the transition from large cemeteries to more numerous and smaller cemeteries. Variability in grave goods diminishes and is replaced by more standardisation in the choice of the associated items in relation to gender and age; gender and age are less often 'constructed' by artefacts during burial practises. The decorative display shifts from 'female' items to 'masculine' items (some objects such as plate buckles became extensively decorated). Furthermore, the burials of women show objects (plate buckles and knives) that were specific for the graves of men in the sixth century (Halsall, 1996).

2.3 Rhetoric strategies and the use of grave goods: The symbolic construction of ancestors and claims on land

That funerals are events that create possibilities for rhetoric strategies and that at least some aspects of the archaeological remains of graves are a product of these strategies is an explicit theoretical position in the work of Theuws. This position implies that the choice of grave goods, or at least a selection of them, relied on the pursued goals of the burial community/family of the deceased, which leads to the identification of his interpretative models based on this specific point of view as 'mourner-centred'. Although all mourner-centred approaches imply certain rhetoric strategies, the definition of the burial strategies is what differentiates the models such as those from Halsall and Theuws. In Theuws' models, they are considered to serve the symbolic construction of ancestors, which suited newly formed identities and which legitimised claims on (newly occupied) land.¹³³ The remark is made that the creation of ancestors was the main objective of the funerary custom of furnished burial throughout the Merovingian period.¹³⁴ The interpretative models in which this theoretical position is the point of departure are based on a selection of the burial evidence; fourth- and fifth-century 'weapon' graves and farmyard burials of the seventh century. Next to the identification of cultural categories of grave goods and the nature of the connection between the deceased and their grave goods, it is also interesting to explore whether the formulated theoretical position applies to early medieval burials in other contexts and whether it excludes the other cultural categories of grave goods identified in the previous section. By emphasising the rhetorical strategies, a distance is taken from the traditional ethnic interpretation models, but also from the more recent models, which, according to Theuws, focus strongly on socio-political incentives (political events and power crises) but neglect the ideological component of society.¹³⁵

The article 'Grave goods, ethnicity, and the rhetoric of burial rites in Late Antique northern Gaul' aims at an alternative interpretation of the so-called 'weapon graves' of the fourth and early fifth centuries in Northern Gaul.¹³⁶ The deposition of 'weapons' in graves of the fourth century is a new element of the burial rite, which already started changing in the second century and is related to "...changing ritual repertoires in changing societies".¹³⁷ The fourth century in Northern Gaul can be characterised as a period in which 'cultures mixed'.¹³⁸ According to Theuws, this resulted in a situation in which both groups and individuals found themselves in a position that made it necessary to reflect on a new situation, which eventually led to a "...merging of ideas and mentalities...", of which, amongst other archaeological evidence, the 'weapon' graves were the result. The deposition of 'weapons' in graves of the fourth century was traditionally considered evidence of the ethnic identity of the deceased, and the proposed alternative interpretation is that the "...new ritual repertoires served to create and give meaning to new identities".¹³⁹ The analysis of the fourth-century 'weapon graves' showed that the majority contained axes, lances and/or bows and arrows (more than half consist of only an axe), and that towards the end of the fourth and first half of the fifth century, this repertoire was expanded to include swords and shields.¹⁴⁰ In order to offer an alternative interpretation for these graves, two paths of analysis are considered to be important.

In short, this is first the analysis of the burial rites in their social context by defining the triangular relationship amongst the authors of the ritual, the protagonist of the ritual (the dead), and the audience present, in which the identification of the political and ideological agendas of the authors of the rituals (the burying group) are considered to be an important aspect. These agendas are, amongst other things, expressed in the furnished graves. The rhetoric of material culture and the (adorned) body in

¹³³ Theuws 1999,; 2009.

¹³⁴ Theuws 1999, 344; 2009, 314.

¹³⁵ Theuws 2009, 289, 296, 307-309.

¹³⁶ Theuws 2009. The author deliberately placed weapons in quotation marks because numerous items from the fourth and fifth century graves that are categorised as such are considered to have multiple meanings and associations. Next to their function in combat, the axes, lances and bows and arrows can also be associated with the clearing of land, hunting and protection.

¹³⁷ Theuws 2009, 284-285.

¹³⁸ Theuws 2009, 288.

¹³⁹ Theuws 2009, 284-285, 288.

¹⁴⁰ Theuws 2009, 297-301.

funerary contexts must consequently be included in the analysis.¹⁴¹ The major line of thought is that the funerary objects and the adorned body (visible for the burial audience) suit the expectations of the burying group for the newly created ancestor "...in relation to the norms, values and ideas..." important at that moment.¹⁴² The political and ideological agendas can vary depending on region and period. In order to explain changes in burial rites, the social practises of the time and the definition of concepts, ideas, values and norms need to be defined. Theuws argues for the "...definition of concepts central to the world view of social groups...", and considers this different from the short-term social practises such as in Halsall's model (instable political situation and social stress).¹⁴³

Secondly, the separate analysis of each type of 'weapon' in burials of the fourth century in combination with the location of the burials offers an insight into the "...total range of uses and meanings...".¹⁴⁴ The aforementioned categories of 'weapons' have multiple meanings or associations of which the association with hunting and the clearing of land are considered important for their use in funerary performances. Hunting was an important aristocratic activity (elite lifestyle), and the rhetoric of the reference to hunting activities during mortuary practises has to be considered an expression of the capacity to control especially new types of claims on lands (outside the existing villa system) and thereby the legitimisation of authority. The association of axes with the clearing of land has the same rhetoric; it is the capacity to organise and control the landscape. The observed changes in 'weapon' graves in the late fourth and fifth century (fewer weapon graves and differential sets of weapons, including swords and shields) are explained by changing needs pursued by changing rhetoric; protectoral capacities became an important element for the new ancestors.¹⁴⁵

One of the main focal points in the article on the changes in settlement patterns and burial grounds in the late Merovingian period (650-750) in the southern part of the Netherlands concerns the interpretation of the seventh-century burials in farmyards. The late Merovingian period is considered to be the decisive phase in the development of the settlement organisation in the so-called Meuse-Demer-Scheldt region. The colonisation of the sand plateaus of this region started in approximately the mid-sixth century and resulted in a pattern of dispersed farmyards with a central cemetery on each sand plateau that, on average, served two to three families (phase 1: 550-650). The cemeteries of this first phase were, according to Theuws, a "...crucial element in defining the local co-resident group...", which colonised this region and the "...creation of a common cemetery would be an important symbolic strategy to define new interdependencies among the occupants of a local sand plateau...". This pattern of dispersed farmsteads changed into a landscape in which new larger 'nucleated settlements' can also be found. These settlements consisted of three to five farmsteads with graves of some of the habitants located within the boundaries of the farmyard. The central cemeteries of the previous phase were also still in use at this time (phase 2: 650-725/50).¹⁴⁶

The burials of two generations can be identified in the nucleated farmyards of phase 2: the earliest burial generation is characterised by chamber graves, an N-S orientation of the graves, and grave goods such as weapons and elaborate belt sets. The burials of the next generation are characterised by smaller graves, dug close to each other, with a W-E orientation and with fewer and less elaborate grave goods.¹⁴⁷ It is a result of these graves of the first generation that Theuws proposed an interpretative model, especially for the selected grave goods. On the basis of the finds in the earliest graves, it is claimed that at least some of these new nucleated settlements were occupied by newcomers, and not necessarily by the descendants of the occupants of the previous settlement phase of dispersed farmsteads. The main argument is that the elaborate finds from these graves know their

¹⁴¹ Theuws 2009, 294-295.

¹⁴² Theuws 2009, 295-296.

¹⁴³ Theuws 2009, 296.

¹⁴⁴ Theuws 2009, 301.

¹⁴⁵ Theuws 2009, 301-309.

¹⁴⁶ Theuws 1999, 337, 340-342.

¹⁴⁷ Theuws 1999, 343-344.

main archaeological distribution pattern in the lower Moselle area, the middle Rhine area, the middle Meuse area, and southern Germany. It is concluded that the occupants of the sand plateaus in the Maas-Demer-Scheldt region, who buried some of their dead with these finds, were newcomers from the south (although not necessarily from southern Germany).¹⁴⁸

The farmyard burials are peculiar because they did not occur in the settlement phase before 650, and only sporadically after the end of the seventh century. The lavish burials are in Theuws' view related to the occupation of the nucleated settlements by newcomers. The lavish burials of men, for example, in these newly found farmyards are interpreted as a strategy to "...create a new ancestral order in a situation where new claims on the land had to be substantiated in a symbolic sense" by the newcomers in this already inhabited region.¹⁴⁹ The other members of the community were interred elsewhere.¹⁵⁰ The grave of a 'founding father' is attributed protectoral capacities and legitimates the newly claimed rights on land. Theuws states that the men buried in these 'founding father' graves were not necessarily the heads of the family at the time of colonisation by which it becomes especially clear that the theoretical standpoint is that burials are symbolic creations.¹⁵¹ Although the entire field of associated meanings for the elaborate belts and weapons in the seventh-century farmyard burials are not discussed, it can be stated that, in light of the above discussed model of the fourth- and fifth-century graves, these objects were chosen because they were considered suitable for the creation of a specific ancestor (claims on land were made permanent and protectoral capacities were expressed). What, however, can these two models reveal about the relation between the deceased and their grave goods on a general level? How do these models apply to the whole variety of early medieval burials, and do they exclude Halsall's interpretative model?

In fact, the lived life of the deceased and the relation between the deceased and the grave goods, both in life and in death, play an insignificant role in both models. Consequently, not much can be learned about the circulation trajectories of the discussed objects, their function in society and the practise of object acquisition in life. This becomes especially obvious in the model of the seventh-century farmyard burials in which it was stated that the actual person buried did not necessarily have to be the head of the family, but rather that a burial with lavish goods was merely a symbolic creation of a 'founding father'. The self-addressed question of whether "...the persons in whose graves these objects were deposited moved from one region to the other or whether only the objects had moved..." seems to contradict this statement.¹⁵² With regard to the circulation of these specific objects, the questions that need to be asked are whether only one person (the head of the family?) had access to this circuit, whether one can speak of access to an international circuit when the newcomers are considered to have come from the south, whether these objects are not merely family possessions that travelled with the migrating families, or whether these objects were actually obtained by locals of the Maas-Demer-Scheldt region. In light of the creation of a new ancestral order by which newly occupied land is claimed, it seems plausible to assume that these objects were part of family property that moved with the colonising family from the south. The question of whether they were deliberately obtained to suit a burial rite by which a new ancestral order was created in a new environment cannot be answered. However, it can be assumed that these objects were in circulation for a considerable time before their deposition with the dead. The interpretative model for the weapon graves of the fourth and early fifth century elaborates on the same concept. In this model, however, some remarks are made on the actual person buried: it is one of the constituents of the triangular relationship (dead, survivors, audience). How the dead relate to the objects chosen on behalf of the rhetoric of the burials and how they relate to the survivors is, however, not a subject that is further analysed. The model of weapon graves, however,

¹⁴⁸ Theuws 1999, 342.

¹⁴⁹ Theuws 1999, 344.

¹⁵⁰ Besides the burials of males with weapons and elaborate belts dating in the period of 650-670/80, the farmyard burials also consisted of the furnished graves of women and the less furnished of empty graves of the next generation.

¹⁵¹ Theuws 1999, 343-344.

¹⁵² Theuws 1999, 342.

does refer to objects as expressions of an elite lifestyle, but those who bury the dead with these objects do not have to be elite members; they can merely copy an elite lifestyle. Although the associations of the 'weapons' as objects that functioned in (daily) practises are discussed, the focus is on the rhetorical significance of these associations in the funerary rite.

Whether the objects were related to the person buried is not considered a relevant aspect of the debate. Therefore, the conclusions about the connection between grave good and the deceased on the basis of these models must be that the objects that were considered appropriate for a specific burial could have been selected from different contexts (personal property, family property, material culture in circulation at the moment of death, etc.), although these contexts are not a matter of discussion. How the role and circulation of these objects in society relate to their role in funerary contexts is not discussed. The withdrawal from the traditional ethnic interpretation models resulted in a focus on objects that were chosen for rhetoric strategies in the context of burials; the deposition of personal property in graves is not a matter of debate in Theuws' line of argument. In fact, the models express that the connection between the dead and grave goods was of minor importance in early medieval funerary rites. However, it should be noted that although these strategies are beneficial for the initiators of the funerary activities, the objects, which were transformed into ritually significant objects, played a role in social life prior to their deposition with the dead. It is concluded that one cultural category of grave goods can be identified on the basis of these models: objects that were chosen from objects in circulation at the time of burial, for example, occasional objects that do not necessarily have to be connected to the life of the deceased. With regard to the chronological debate, these models suggest that the funerary objects can be selected both from material culture in their primary circulation or their prolonged circulation.

The models of Theuws and Halsall show agreement with respect to the emphasis placed on the rhetoric of the temporal display of objects, but they diverge in the presumed incentives for the performed strategies and the nature of the provoked associations. If competition for local power existed, as Halsall claims, there should be an indication of more really lavish burials, it is reasoned.¹⁵³ The small number of lavish burials is explained by the restricted need to create graves of founding fathers or of ancestors with specific characteristics. However, Theuws did not consider the age at death of the men buried with 'weapons' and the farmyard burials (for which information was probably not available). If a strong correlation exists between the age of the deceased and the 'weapon' burials in fourth-century Northern Gaul and the farmyard burials of the seventh century, the (material) identity of the persons themselves most likely complemented the discussed rhetoric of the burial rite, and should receive more analytical thought.

The contribution of the two interpretative models to the chronological debate can be sought in the attempts to disclose a material category such as weapons into their constituting elements (axes, lances, shields, etc.) and find for each of them the relevant or significant correlations and associative meanings. These associative meanings are thought to have had meaning in burial events, but they can also shed some light on how these objects were appreciated in life. Moreover, the importance of the identification of the local socio-political context at the time of the burials and the way in which these were interpreted by the social groups of that moment in order to create (new) identities is proven to be an essential component of burial analysis. Obviously the function of the funerary objects in society prior to their deposition as grave goods is an almost untouched subject in the models. The associations of individual sorts of 'weapons' (axe, lance, and arrow and bow) refer to their use in daily practises, but they are mainly discussed in the context of funerals. Extending the discussion with the circulation and meaning of the objects in society before their deposition could complement the image and meaning of objects in funerary practises.

¹⁵³ It is argued that not all of the described 'weapon' graves can be identified as lavish.

2.4 Grave goods as gifts to the deceased

King discusses gift exchange in the funerary context of the fifth- and sixth-century Anglo-Saxon world and claims that by then it is likely that donating gifts to the deceased was "...a relatively common component of the burial ritual".¹⁵⁴ King's interest in the exploration of this subject results from his fundamental question of whether the general assumption that grave goods were merely personal possessions (factual or symbolically presented as such by the survivors) is correct.¹⁵⁵ The act of giving during funerary activities is considered to be of major importance for the effects it had on the social relations between the burying group and the giver. King's theoretical position is that donating to the deceased was an element in the (re)production of social relations in order to deal with social disruption (death) as an effective strategy in the unstable socio-political circumstances in early Anglo-Saxon England.¹⁵⁶ Gifts in this sense, although officially donated to the dead, should be regarded as gifts to the survivors by which the social relationship between giver and mourners is defined as either the redemption of earlier received gifts or as a strategy to enforce a counter gift (the general acknowledged principle of appropriate giving in gift exchange cycles). The act of appropriate giving (immediate intent and effect) is for King the relevant analytical tool. He thereby dismisses the need for decoding symbolic messages of the temporary display of funerary objects,¹⁵⁷ which is an important analytical element in the majority of the mourner-centred models. In this way, what the graves show is '...an archaeological record of reproductive exchange'.¹⁵⁸ Taking it further, King suggests that a 'rich' grave could point to the identification of this burial as one member of a group who is positioned at the centre of a socially productive exchange network, which was suggested to be essential for the formation of regional identities in early Anglo-Saxon England. The changes that can be observed in the funerary remains of the seventh and eighth centuries can be explained by changes in gift exchange networks. All of these combined remarks strongly suggest a socio-political element in the act of giving in which both the donator(s) and the survivors are the actors, and King's interpretative model is consequently identified as mourner-centred. The role of the lived life of the deceased is underexposed in this model in favour of the focus on the relation between givers and survivors as symbolic receivers. One goal in King's article is to identify whether gifts to the deceased were incidences or whether it was a widespread practise so that a case can be made for mortuary gift-giving as a socially reproductive practise.¹⁵⁹ King's article continues with the demonstration of a methodology to find evidence for gifts in graves. The objects used to dress the body and other 'personal' items such as shields and spears in 'standard positions' are, for the purpose of the discussion, regarded as personal possessions. Six categories of evidence for gift-giving to the deceased are identified.¹⁶⁰

These are first the presence of incongruous possessions. They show no obvious connection with the buried and are the possessions of others. This evidence is found in the presence of objects in graves of fetuses and neonates (two months or younger) and in the presence of knives and other sharp objects in the graves of infants and very young children. For both instances it is believed implausible that the interred items are the personal possessions of the young dead. Secondly, the presence of duplicated artefacts suggests the presence of gifts, especially when found at different locations in the grave. The presence of two similar objects in one grave at different locations suggests that they can be considered different cultural categories of objects: personal possessions and gifts. This argument is based on the assumption that personal possessions involve a regular deposition pattern. Most of the objects have a limited range of usual locations in the grave. Thirdly, the location of grave goods on top or outside the coffin can be considered to be an indication of gifts. As a fourth indication of gifts, the inclusion of unburnt artefacts in cremation burials are discussed from which it can be concluded that

¹⁵⁴ King 2004, 231.

¹⁵⁵ King 2004, 215-216.

¹⁵⁶ King 2004, 216-219.

¹⁵⁷ King 2004, 217.

¹⁵⁸ King 2004, 232.

¹⁵⁹ King 2004, 219.

¹⁶⁰ King 2004, 217.

giving occurred at both cremation and inhumation rites. The fifth argument concerns the presence of upper-fill finds, finds located higher than the rest of the objects. These finds were donated after the actual burial took place. King interprets these finds as gifts from people who reached their destination later, people who needed more time to arrive at the burial.¹⁶¹ The final argument deals with indications for gift wraps such as the deposition of objects in a bucket, textile, wood or leather remains. They can be regarded as evidence of funerary gifts, although King rightly mentions that this kind of evidence is open to a variety of interpretations.

Regarding a selection of interred objects as gifts to the deceased by persons who are not part of the burying group implies that these objects had no association with the deceased person during his or her life. A sharp distinction was made between gifts and personal possessions, but, especially in light of the above discussed models, this binary opposition seems somewhat simplistic. Gifts can also be placed in the grave by the close mourners, and in this sense, they could be objects that were added to the assemblage for certain rhetoric strategies rather than the gifts of funeral attendees from far away. The question of whether personal possessions were in fact interred with the deceased is not explored from a theoretical perspective, it is merely assumed. Furthermore, the focus on gifts from relatively remote individuals or groups blurs the active role of the burial community in the selection of grave goods. King surpasses the possibility of other interpretations regarding grave goods selection, which seems to be a shortcoming and an overly simplistic representation of human behaviour.

The active role of people from a greater distance and their participation in the reproduction of social relations, however, is important to consider.¹⁶² However, is it only the result of socio-political and economic motivations? It can be imagined that it was the giver's wish to express the real or desired relationship with the deceased publicly, or that the reinforcement, maintenance or renewal of alliances with the burying group was the aim. The active role of funeral attendees should not be overlooked, but should this role only be considered for 'important' burials? The practise of giving to the dead could very well have been part of less 'important' burials and could have involved less lavish objects, although the act of giving was probably less prominent in these cases.

King's methodology offers a classification for irregular depositions, but it should be questioned whether such objects are always gifts. Objects found at 'gift locations' could have been placed there as a result of various burial strategies. Giving objects to the deceased can add up to the final assemblage of grave goods and does not reject the existence of other cultural categories of grave goods. For now, it is sufficient to be alerted that the construction of the grave good assemblages and the position of objects in and around the grave may be indications of 'primary' or 'secondary' grave goods. However, whether primary grave goods and secondary grave goods relate successively to personal possession and gifts should be explored further.

2.5 The use of grave goods as a technology of remembrance

Social or collective memory is a concept discussed at length in disciplines outside archaeology.¹⁶³ Elaborating on this concept, which is multi-layered and therefore open to variable definitions and interpretations of how it works and how it is materialised, would go too far; it suffices for this chapter to introduce social or collective memory in the archaeological discipline as the active and ongoing process of a social group in order to (re)construct and maintain the memory of their shared past in a certain way. It was a daily process, although it can be imagined that collective memories were especially negotiated, transmitted and materialised in the context of (ritualised) public events. This section will

¹⁶¹ The problem of distinguishing between stray finds and intentional placements is sufficiently discussed by King. Pottery sherds that were found in the upper fill are not included as evidence, although Hulls et al. (1984, 7) argue that finds of sherds and other broken objects in the fill possibly indicate intentionality.

¹⁶² This could be the case for 'important' burials such as the burial of Childeric, which is known to have contained objects that came from regions at a considerable distance from *Tournai*. However, not all the 'exotics' are necessarily gifts from visitors.

¹⁶³ Halbwachs (1925) introduced the concept of collective memory.

focus on the application of this concept in early medieval mortuary archaeology and how the connection between grave goods and the deceased can be seen from this point of view.

General insights into the commemorative function of funerary artefacts in the early medieval period can, for example, be found in the work of Halsall, Härke and Effros; it is not an unusual thought in early medieval archaeology that effort was exerted in the creation of a memory, especially during the event of a burial.¹⁶⁴ The temporal visibility of funerary objects (as opposed to the longer-lasting visibility of above-ground grave markers¹⁶⁵) for the burial audience and the collective knowledge of this audience for the rightful understanding of the intended message of the material display are essential for their points of view. Williams takes this subject further by producing a comprehensive amount of work that deals with early medieval funerary rites, both inhumation and cremation, in Anglo-Saxon England, in which mortuary practises as technologies of remembrance are the main hypothesis in the search for a "...new explicit theory for early medieval mortuary archaeology centring on death as a context for commemoration".¹⁶⁶ Williams considers the production and reproduction of social memory a central theme that incorporates and connects research topics, which, according to him, should shape the current theoretical debate on early medieval mortuary archaeology.¹⁶⁷ Williams also claims that the meaning of the temporal display of grave goods is translated into an overemphasis on the socio-political strategies of the living. Instead, he believes that the definition of the relation between the living and the dead through the mnemonic agency of material culture (encompassing, next to objects, the dead body, burial structures, monuments and the landscape) offers an alternative approach to the understanding of mortuary practises.¹⁶⁸ Williams' theoretical position can best be framed by his interpretation of what social memory is.

The process of social memorisation, according to Williams, is "...the selective remembering and the active forgetting of the past [...] and is therefore inherently selective, active and performative in nature..."¹⁶⁹ Memories can be preserved, created and transformed and are therefore never stable but are constructions that suit the situation at hand and "...secure and express the perceived rights, aspirations and identities".¹⁷⁰ According to him, interpreting the burial evidence as such is underrepresented in early medieval mortuary archaeology, despite it being a suitable approach to study both the uniformity and variability, but also the chronological changes in the burial evidence. It serves greater ideological goals than the temporary display of objects in, for example, Halsall's model. Although the commemoration is collective in nature and serves greater goals than the remembrance of the individual, the shifting life biography of the deceased is also an integral part of the mnemonic process.¹⁷¹ In this process of complex interactions between the living and the dead and the transformation and selective remembrance of the social person, aspects are both deliberately remembered and forgotten in order to create an ancestral identity that was distinct from the deceased's identity in life. Williams' interpretative models from this perspective can be identified as mainly mourner-centred.

The commemorative function of material culture is placed against the background of a changing society in Anglo-Saxon England. Williams claims that what was remembered is difficult to perceive for archaeologists, but that the performative and materialised process of remembrance can be investigated. This can best be illustrated by his examples of an elaborately furnished seventh-century grave of a woman and the mnemonic role of specific artefacts: brooches and weapons in inhumation rites. Through these examples, a case is made to consider grave goods, especially according to their location in the grave and the similarities and variation between individual burials, as objects that served the construction of social memory. The example of the "...wealthiest and most complex female grave ever

¹⁶⁴ Halsall 2003; Härke 2003.

¹⁶⁵ Effros 2002, 79-83; 2003, 211-213.

¹⁶⁶ Williams 2006, 19; see also Williams 1998; 2003; 2004a; 2004b; 2005a; 2005b.

¹⁶⁷ Williams 2006, 12.

¹⁶⁸ Williams 2004a, 94-98.

¹⁶⁹ Williams 2006, 2.

¹⁷⁰ Williams 2006, 2-3.

¹⁷¹ Williams 2004a, 89.

uncovered in the history of British archaeology" is used to contextualise his viewpoints.¹⁷² For Williams, the objects found in the grave can have meanings and associations on their own (expressing status, wealth, age, and gender, being personal possessions or family possessions, being gifts from the funeral attendees, being heirlooms or objects with biographies), although the assemblage as a whole is to be understood as a powerful statement to be remembered by the audience present at the burial. This example illuminates the different contexts from which grave goods could have been selected and the divergent trajectories of circulation they may have had, but stops at this point. The nature of the relation between the dead and their specific sorts of grave goods remains unidentified. The reason is probably because this is difficult to investigate in Williams' opinion, and in his discussions, the statement of the funerary activities are the major point of discussion. To explore this subject further, the specific deposition of brooches and weapons as grave goods in inhumation graves and their relation with the dead, living and memory construction are analysed.¹⁷³

Opposing the hypothesis that grave goods are a direct reflection of a person's social identity, Williams suggests "...that grave goods have a range of mnemonic roles". In addition, for both brooches and weapons, an interpretation of the identified burial patterns is offered to explore the "...relationship between [these artefacts] and the mortuary construction of social memory and identity" in which the focus lies on the active process of remembering and forgetting in order "...to create a memorable image of the dead", but also to remember the previous burials in a certain way.¹⁷⁴ The key concept in these two case studies may be identified as the presumed existence of a 'common formula' according to which funerary practises may have been performed and the possibility for the burial community to re-enact or reject this formula. Re-enactment and rejection provide the opportunity to reproduce and alter the collective memory during every burial. In the cemetery of Berinsfield, a variety of brooch types was identified.¹⁷⁵ Brooches can be considered, according to Williams, an important component of furnished burial; they were probably significant for the identities of the dead and the social group of the mourners. Despite the observed variability, a common formula regarding the location of these objects in the grave can be identified. Williams interprets these subtle differences as the result of intentional acts. He concludes that each burial was a performance on its own that underlined both differences and similarities with previous burials that were still remembered.¹⁷⁶ Deviant graves show that some adult women were denied a burial with brooches. These are regarded by Williams as individuals who were "...not afforded a role in image production" for several reasons.¹⁷⁷

The subtle differences between graves with brooches are regarded by Williams as intentional. However, the discussion of weapon deposition mentions that these subtle differences can also be the consequence of "...vagaries of personal memory, oral tradition and the consensus that was reached over what occurred in earlier funerals". Trends construct the common formula rather than explicit and 'hard-and-fast' rules.¹⁷⁸ However, Williams suggests that each burial included two elements: image production and image reproduction.¹⁷⁹ The difference between brooches and weapons, according to Williams, is that brooches are involved with the preparation of the body, whereas weapons are placed around the body and should therefore be "...regarded more as 'gifts' added during the composition of the grave..."¹⁸⁰ Mainly on the basis of a series of earlier studies on the circulation of weapons, Williams refers to this category of material culture as objects with extended biographies that were accumulated before their deposition. Nonetheless, he mainly concentrates on how they evoked memories in the act of ritual display during funerals. Different weapon combinations, for example, communicate subtle differences in

¹⁷² Williams 2006, 27.

¹⁷³ Williams 2006, 46-62, 78.

¹⁷⁴ Williams 2006, 46, 78.

¹⁷⁵ Williams used the early Anglo-Saxon cemetery of Berinsfield (Oxfordshire) as burial evidence because of the relatively comprehensive skeletal, contextual and spatial information it provides.

¹⁷⁶ Williams 2006, 52-53.

¹⁷⁷ Williams 2006, 55.

¹⁷⁸ Williams 2006, 61.

¹⁷⁹ Williams 2006, 62.

¹⁸⁰ Williams 2006, 59.

social identities. Only a minority of the burials show a very distinct appearance from the common formula, and the evidence for the mortuary construction of social memory must, for the greater part, be sought in the subtle differences between graves, which can, at first sight, be identified as similar. These analyses of brooches and weapons focussed on the creation of memories of individuals, although pattern reproduction also served some greater communal goals. The general goals are assumed to '...sustain the mortuary tradition and create links between the living, the recently dead and possibly concepts of ancestry and ancestors through the use of grave goods in the funeral'.¹⁸¹ Regarding these conclusions, no clear-cut conclusions about the process of grave goods selection, their connection to the deceased, and their role in the community before their deposition as grave goods can be drawn. In short, the creation of memories is regarded as a rather manipulative act by which it can be concluded that Williams considers the grave goods more as objects that were strategically selected by the mourners, although he does not regard the burial of personal possessions as impossible. Objects, not even dress-related ones, were not necessarily connected to the dead, but could have been so.

Williams' theoretical concept can, especially regarding the nature of the aspirations of the burial community, be compared to Theuvs' models. Whereas Williams made an effort to create a model that relates to the various sets of graves goods over the course of time, the advantage of Theuvs' model is that the reasons for the choice of specific objects (axes, lances, arrows) are more specifically explained. Both researchers tried to capture burials as strategies that reproduce the collective experience of the community. In which way can the material components of such considerations be integrated in the chronological debate? It can be concluded that burial strategies, such as active remembering and forgetting, are likely to apply to the entire set of objects, but that the objects were chosen from various contexts. Active strategies were certainly an important component of rituals. However, they focus on transformation, and not on how the objects expressed identities before their transformation. Williams does mention the mnemonic meanings that distinct objects may have had as a result of their exchange, curation, treatment, use in daily life and in connection with the body. He also mentions that considering this variability in meaning is essential for the study of early medieval mortuary practises.¹⁸² How this can be explored, however, was not a subject of debate in his models. Williams incorporated the role of the life biography of the deceased into his theory, although still as an abstraction, and as an identity that was transformed during burial practises. Mentioning this aspect, however, can be seen as the first sign that the life of the dead and the role of objects in society, aspects that were neglected in mourner-centred models, become of interest in the modern dead-centred models.

2.6 The agency of the dead and the living

Agency as a theoretical concept has a prominent position in archaeological thinking.¹⁸³ In short, it deals with the ability of individuals to purposefully act within the experienced constraints of societal structures.¹⁸⁴ The ongoing debate on the degree of freedom, possibilities and consciousness of individuals in relation to these constraints is framed in the so-called agency-structure debate.¹⁸⁵ Agency theory includes a wide variety of definitions and applications in archaeology, and a clear consensus does not exist.¹⁸⁶ It has been argued that agency theory should not be regarded as a theory, but merely as a coordinating concept and a basic principle for the development of a variety of theories that can be named otherwise.¹⁸⁷ The common purpose of archaeologists using human-based agency theory is

¹⁸¹ Williams 2006, 62.

¹⁸² Williams 2006, 39-42.

¹⁸³ See for example Dobres/Robb (2000) and Gardner (2004).

¹⁸⁴ The works of Bourdieu (1977) and Giddens (1984) are considered to form the foundation of agency theory in the social sciences.

¹⁸⁵ Gillespie 2001, 74. The link between actors and the structure of society was first explored by Giddens (1984) and was denominated as structuration theory.

¹⁸⁶ See Dobres/Robb (2000, 3) and Dornan (2002) for an evaluation of agency theory in archaeology.

¹⁸⁷ Dornan 2002, 304 (especially elucidated by her citation of Ortner).

"...putting people back into the past".¹⁸⁸ Despite the variation in definition and application, some central concerns can be formulated for archaeologists.

The main challenge is to deal with the concept of individuality and its relation to society in the context of the study of archaeological remains and/or historical sources. Agency theory can be considered to form a bridge between the archaeological theories that focus on society and those that focus on individuals.¹⁸⁹ Both the definition of agency and the concept of the individual are a matter of debate in archaeology, and for each model in which these concepts are incorporated, it needs to be identified how they are perceived and what the limitations of the available datasets are.¹⁹⁰ Although individuality remains a difficult concept for archaeologists, for the analysis of funerary remains, agency theory has the advantage of bringing the lived life of the deceased and the choices mourners make in relation to this individual back into the analytical awareness, aspects that are almost avoided in the mourner-centred models, as discussed above. In these mourner-centred models, agency can mainly be understood as the collective motivations of the initiators of burials; the agency of individuals, or, archaeologically more appropriate, the concepts of personhood or identity, and how they relate to conservatism and change in burial activities are rarely discussed. This is mainly due to the analytical focus on the burial community as a group with certain goals and aspirations. Grave goods are forced into the understanding of funerary practises as ritualised communal activities. However, grave goods did not occur out of nothing at the moment a group member passed away; they meant something in the daily life of the community and individuals. How the variety of early medieval funerary objects materialised relationships in society outside the funerary context and how they relate to the deceased in question, have consequently, with a few exceptions such as the circulation of weaponry,¹⁹¹ rarely been discussed until now. Nonetheless, the specific burial evidence (individual graves with a variety of associated objects) seems to offer possibilities for this line of research.

An explicit attempt towards the incorporation of agency theory in early medieval mortuary archaeology can be found in two interpretative models. Thinking on the active relations between the dead, material culture and the living found its entrance in the work of Williams and Cannon, although they elaborate on the concept of agency differently. How can their theoretical position towards the selection of funerary objects be identified, and how do these two models identify the relation between objects and the dead? Do these models actually add a new dimension to the interpretative debate in early medieval mortuary archaeology?

Cannon is known for his work on mortuary analysis and has applied his ideas on gender-based agency on, amongst other examples, the Anglo-Saxon burial evidence.¹⁹² Cannon defines agency as "...the socio-culturally mediated but individually motivated capacity to act purposefully in such a way as to create archaeologically discernable change in prevailing modes of mortuary practise", although it can also refer to "...actions that maintain prevailing practise or to actions that bring about unintended consequences..."¹⁹³ Cannon, in his analysis of chronological changes regarding the burials of men and women in a variety of historically and archaeologically known mortuary practises, focuses on the agency of women and especially on "...a deliberate creation of variation perceived as beneficial to the responsible agent".¹⁹⁴ According to Cannon, the role of individual agents (women) as conscious "initiators of change" in mortuary customs is related to the role of female individuals, who are capable of setting fashion trends in motion, but the women who follow these trends also come into scope. Although

¹⁸⁸ Robb 2001; Knapp/van Dommelen 2008, 15.

¹⁸⁹ Gillespie 2001, 73-75.

¹⁹⁰ It is obvious that the individual, acting, and societal structure are all complicated concepts that are, especially in the context of agency theory, extensively discussed (for this discussion in the archaeological context, see Dornan (2002), Gardner (2004) and Knapp/van Dommelen (2008)). This discussion will not be repeated, as a consensus will never be reached; for now, the use of agency theory in two models in early medieval mortuary archaeology is explored.

¹⁹¹ Bazelmans 1996; 1999; 2000; Härke 2000.

¹⁹² Cannon 2005, 41-65. The other case studies involve the burial evidence from Victorian England, the Seneca of New York State (sixteenth and seventeenth century), and early Bronze Age Central Europe and Denmark. For the first two examples, complementary historical sources were available.

¹⁹³ Cannon 2005, 41-42.

¹⁹⁴ Cannon 2005, 41-42.

no strong case can be made, as discussed below, that these women were (partially) responsible for their own funerals, the suggestion of this possibility and the attention that is paid to the role of personal display in life, which is of influence on the material display in death, are the main reasons to identify this model as a modern dead-centred approach. The role of the survivors in funerary practises is not dismissed. However, both the dead and the concept of individuality (opposed to the socio-political agendas of social groups) are introduced in early medieval mortuary archaeology through this article. A shift away from the focus on a group of survivors as the main designers of the material component of burials can be observed.

According to Cannon, fashion is a structuring element in burial practises in which individual expressions can be observed. This opinion implies that individual agents can be held responsible for the creation and transformation of patterns of mortuary treatment. This perspective relates to the search for women as initiators of change. Fashion undergoes different stages in which the styles of objects and clothing change; the process of fashion is therefore regarded as a useful interpretative tool for the explanation of variability and change in mortuary practises.¹⁹⁵ In the development of fashion, certain individuals take the lead (the so-called fashion-conscious individuals), and these individuals should be identified as the responsible agents for continuity and change in mortuary customs. The social standing of these individuals can be read from the degree to which their choice of fashion is followed. In an earlier article, Cannon described the archaeological visibility of cycles of mortuary change in relation to the adaptation of exclusive expressions.¹⁹⁶ To identify the individuals responsible for the process of change, Cannon states that an "examination of differential rates of change in practise among identifiable groups, such as those based on gender" is required. This methodological principle is, next to other examples of burial practises, applied to the Anglo-Saxon burial evidence.

This burial evidence, as Cannon describes, does not represent 'ideal archaeological contexts' for the application of his model. This makes it difficult to establish the rate of changes between the burials of men and women.¹⁹⁷ The burials of the historical examples show differences between the burials of men and women. However, these differences are rather an elaboration of the funerary objects. In Anglo-Saxon burials they form different sets of objects. The agency of women in these historical examples can be described as a result of the 'fashion consciousness' of women and their desire to mark or furnish the graves of men according to what is considered 'fashionable'. After some time, the men follow the practises of women from which it is concluded that the women did set an example for their own burials. The grave goods in the burials of women and men of Anglo-Saxon England, however, also served the construction of cultural gender; men and women have distinct sets of grave goods.

To identify 'gender-based agency' in archaeological contexts such as Anglo-Saxon England, manipulation of the approach such as followed for the burials from Victorian England and the Seneca cemeteries is required. The agency of women cannot be observed in the Anglo-Saxon burial evidence, as it can in the changing burial practises of these two examples. A different kind of gender-based agency for this specific mortuary practise is therefore proposed by Cannon. He thinks that women may be responsible for "...their own material representation in life as much as in death".¹⁹⁸ Although the survivors are always the ones who make the final decisions about the objects that are interred, it can be suggested that if they had to choose from the items that were associated with the deceased in life, the agency to change burial fashions is within the power of the deceased as much as that of the survivors, if not more. This argument is based on the correlation of the most elaborately furnished graves with the age category of 20 to 40, which, according to Cannon, implies that these objects were the personal

¹⁹⁵ Cannon used the identification of the stages, as proposed by Sproles (1985, 56). The stages are defined as: introduction, leadership in adoption, increasing social visibility, conformity within and across social groups, social saturation, decline and obsolescence.

¹⁹⁶ Cannon 1989.

¹⁹⁷ The ideal archaeological context for the application of Cannon's model would be burials that are well dated according to a refined chronology, consistently sexed by biological indicators, and show clear evidence of differential mortuary treatment for women and men. It is clear that these requirements are not met for the Anglo-Saxon burial evidence, neither are they for the early medieval burial evidence on the continent.

¹⁹⁸ Cannon 2005, 57.

possessions (because it points towards a system of inheritance) of the deceased.¹⁹⁹ The changes in grave goods provision can be sought in the ability of women to add new items to their inherited possessions.²⁰⁰

Cannon's remark on the importance of the material representation in life supports the suggested option that the lifestyle (personal display) of individuals was an essential element of social life, as discussed above.²⁰¹ Again, the important questions that need to be answered are: who are the responsible agents who influenced a certain public appearance, why changes in these appearances occurred, and what are the reasons for one to be buried with the set of objects that served their personal display in life? From Cannon's line of reasoning, it can be extracted that burial with personal possessions was the consequence of an absence of heirs. This subject will be explored further in Chapter 3. However, regarding funerary objects or a selection of them as elements of personal display in the life of various actors, opens new research perspectives on the function of material culture in social life in which agency theory can be a useful analytical tool.

Regardless of these conclusions, it should be questioned whether 'fashion as a process' is a useful concept to explain change in early medieval burial practises.²⁰² Is the explanation that new practises are a result of the initiatives of fashion leaders and became widespread thereafter sufficient? Cannon does not elaborate on the concept of fashion, which appears to be a modern concept behind which different theoretical positions on production processes, modes of distribution, the mutual influence of groups and individuals, marketing and communication strategies, etc. can be considered. Although the burial evidence does show the introduction, rise in popularity and subsequent disappearance of objects and combinations thereof, it is difficult to apply a modern concept such as 'fashion' to the early medieval period, and as a consequence, define the initiators of change in burial practises as 'fashion-conscious individuals'. It can be argued, as Cannon does, that women were more active in the way objects were appropriated and used as prestige markers in society,²⁰³ but to relate this to a 'greater awareness of prestige forms' and fashion-conscious individuals is merely an observation of the existence of opportunistic actors, rather than an explanation of variation and change. Moreover, the importance of stages in the lifecycle of persons and the way in which the transition from one to another was materialised become underexposed in a fashion-conscious world, as is the need to sustain and transmit material symbols of age, stage in the lifecycle, gender, access to exchange networks, status, prestige, etc.

Williams introduced the mnemonic agency of the dead body and bones into the analysis of mortuary practises in early medieval England, especially in relation to cremation rites.²⁰⁴ This work can be seen as the instigation of the shift from the mourner-centred interpretative framework ("...mortuary practises as a field of discourse for the living..."), to models that combine the agency of both the dead and the living.²⁰⁵ Williams critique on the mourner-centred models is that the role of the dead and the dead body in relation to survivors and material culture is considerably neglected. According to Williams, the dead body has the possibility to "...affect the actions and perceptions of the living", and as such, becomes "...a focus for personhood and remembrance..."²⁰⁶ Williams also refers to the influence the living can have on the way in which they are treated in death (through instructions or financial provisions). Regardless, the focus in his work lies on the agency of the corporeality of the deceased and

¹⁹⁹ Cannon 2005, 61. Personal possession does not have to equal family possession (inheritance), as argued in the discussion of Halsall's model. In fact, in the traditional models, personal possessions are considered to be inalienable personal possessions, not family possessions.

²⁰⁰ Cannon 2005, 61.

²⁰¹ See note 128.

²⁰² In fact, Siegmund also uses rapidly changing fashion and fashion consciousness as an explanation for the 'observed' change in burial assemblages (see Chapter 1). However, it should be questioned whether fashion consciousness is a valid explanation for change in early medieval society.

²⁰³ In early medieval archaeology, this appropriation of prestige markers is especially related to men (lords and warriors).

²⁰⁴ Williams 2004b.

²⁰⁵ Williams 2004b, 264, 266.

²⁰⁶ Williams 2004b, 264.

its associated artefacts, structures and places in relation to the agency of the living.²⁰⁷ The dead body, in Williams' line of argumentation, can best be understood as an 'object' with a biography, which has the ability to influence the way in which it is treated and experienced by the memories it evokes during its transformation in burial rites. This transformation of the body is especially apparent in the process of cremation. This article mainly concentrates on the dead body, although some opinions about the relation between the dead and material culture are expressed. Williams thinks that the selection of artefacts served the construction of a temporary and idealised image of the dead. It does offer some insights into the way the lived life of the deceased plays a role in funerary practises, but the subject of how the funerary objects connect with the dead is not further discussed. Although the lived life of the deceased is considered a subject of research, the analytical focus is still very much on the experiences in the context of, in this case, cremations. Williams' model can be considered a transitional one between the mourner-centred and modern dead-centred approaches.

Williams and Cannon approached the concept of agency differently. In Cannon's model, it can be identified as human-based agency, whereas in Williams' model, it is object-based agency. They both make an effort to move beyond the mourner-centred approaches by trying to incorporate the lived lives of the dead into the debate. The perspective of Cannon was that the material display in life has its effects on the material display in funerary activities; Williams concentrates more on the construction of memories of the deceased during funerary activities. Although this will be a manipulated or idealised image, the achievements of the deceased in his life will certainly have an influence on the construction of these memories. Agency theory offers possibilities to explore the relation amongst material culture, individuals and social groups in the community of the living. However, for early medieval archaeology, this is only possible when material culture from graves is considered an integral part of social life and not only as objects that functioned in the context of funerals. Modern dead-centred models focus more on society and its constituents (the relation between actors and material culture) and not exclusively on burial practises, as is foremost the case in the mourner-centred models. This, however, can be investigated from various perspectives which are not yet explored to their full extent.

2.7 Conclusion: Five cultural categories of grave goods and their consequences for chronological analysis

The early medieval funerary rite can, as a result of the above performed model analysis, be characterised as an active process in which past, present and future meet, and whereby the survivors, funeral participants, the dead and material culture actively interact. It appears that the majority of the interpretative models focus on the future aspirations of the mourners. With regard to the burial remains, a shift in analytical position from the unambiguous relation between grave goods and the deceased (grave goods are the deceased) to the ritual significance of grave goods and the transformation of their associated meanings during rhetoric strategies and/or processes of active remembering and forgetting was observed in the interpretative debate. A trend towards the contextualisation of grave goods can also be observed. Aspects such as grave structures and the location of cemeteries, as well as the changing (local) socio-political backgrounds of the time, became integrated into early medieval mortuary archaeology. Recently, again an interpretative shift, but now from the focus on the socio-political and ideological agendas of the burial community towards the incorporation of concepts of agency and personhood, applied both to the survivors and the dead, can be observed. Through this shift, not only the ritual role of objects and the intentions of the survivors (expressed aspirations) are considered important characteristics of the funerary process, but also the lived lives of the dead and aspects of the shared past of the community become of interest. These viewpoints especially open a path to discuss the role of objects not only in the funerary process, but also in society prior to the ritualised context of

²⁰⁷ Williams 2004b, 265-267.

funerals. Both the early dead-centred and mourner-centred approaches did not explore the role of material culture in life. This was not explored in the traditional dead-centred models because the general conviction was that burial objects were the inalienable personal belongings of the dead. This implies a static relation between persons and material culture, and not by the mourner-centred models because the concept of burial with personal possessions was considered outdated and did not seem to offer more analytical possibilities than the one-dimensional reconstructions of societies. The analytical expansion of the debate was sought in considering burials as arenas for rhetoric strategies and the strategies of active forgetting and remembering. It can be concluded, however, that for chronological analysis, not so much the meaning of material culture in the context of mortuary practises is of interest, but rather the way objects functioned in society before their transformation and deposition as grave goods. The way objects materialised various social relations prior to their deposition offers insights into the relatively complex trajectories of circulation. The nature of the archaeological evidence (the broad variety of early medieval objects is archaeologically most prominently available as burial evidence) directed the analytical discussion of the last few decades towards the ritual meaning of objects in the context of funerals. It can be assumed, however, that the objects found in graves played a prominent role in social life outside the contexts of funerals, as much as they had in the funerary context. The mourner-centred models, however, concentrated mainly on the transformative nature of burials. Funerary rituals are of major importance for a community in terms of social reproduction and transformation. Nonetheless, it can be questioned whether the majority of the visible archaeological remains, and especially the objects that relate to the dressed body, played such a prominent role in these ritual processes, as suggested in the interpretative models of the last few decades. How objects constructed and materialised identities and social relations in other contexts outside the funerary rite is rarely discussed for most sorts of objects. The discussion of the models serves to illuminate the interpretative shift over the last few decades, but mainly to investigate the connection between the grave goods and the deceased, of which the result is framed in a list of five categories of grave goods.

These five cultural categories of grave goods are: alienable personal possessions, inalienable personal possessions, family possessions, gifts to the deceased, and occasional objects (selected from the available material culture in circulation at the time of death and burial). These categories do not have to exclude one another; they can all be represented in a single grave. The identification of these categories serves to elucidate the connection (or absence of connection) between the dead and their grave goods and offers some insights into the role of these objects in society before they entered the transformative funerary rite. The traditional models considered grave goods to be personal possessions, which resulted in a relatively static view of ancient society. The mourner-centred models were a reaction to the flaws of this interpretative construct. Consequently, the concept of personal possession was removed from the analytical discussion, although in some of these models, a selection of the grave goods is implicitly considered to be personally connected to the deceased. The strongest argument for the deposition of personal possessions can be found in the correlation between certain assemblages of grave goods and age groups. From this association, it was concluded that material display served some goals in the lives of the deceased, and that it is possible that this association was maintained in the grave. Whether these objects were perceived as 'personal possessions' in Merovingian times remains open for debate, as does the question of why these possessions were deposited in graves. However, a connection between the dead and especially dress-related objects is reconsidered as an option. The consequences for chronological research depend on the way 'personal possessions' are conceptualised in the early medieval period. Three options (which do not necessarily exclude one another) and their specific chronological consequences can be considered. The distorting influence of burial with genuine inalienable personal possession is minimal when the set of objects was collected throughout a lifetime and when the collection represents this time dimension. This category of inflexible inalienable personal possession was dismissed on the basis of the burial evidence from the *civitas* of Metz. The burial evidence from other regions can reveal different images, which underlines the importance of investigating the correlations between age groups and assemblages of objects for each cemetery

separately. Unfortunately, this is not always possible. However, considering the assemblage of grave goods that served the material display of persons during important stages in the lifecycle more as family possessions of which subsequent persons could have been the responsible caretakers seems more appropriate than regarding these objects as inalienable personal possessions.²⁰⁸ The practise of inheritance seems to be substantiated by the burial evidence in Halsall's model. It remains questionable how many generations were involved in the transmission of family possession, and why this line was terminated by deposition in a grave. If this line of transmission of comparable objects was terminated at different points in time, a serious chronological distortion results. Family possessions can remain in circulation over two generations (approximately 30 to 40 years), and possibly even longer. It is possible, however, that the practise of inheritance applies only to a selection of objects, rather than the entire assemblage of objects that served the 'material display of a person'. Next to this consideration, certain other important questions require reflection. When and why did this practise of inheritance start? What was the incentive for the transmission of family possessions, and for how many generations did it fulfil the goals? Why were heirlooms deposited in graves? These questions will be explored in the next chapter.

Temporary individual ownership (alienable personal possession) has a more alienable nature than the consecutive temporary ownership of family possessions. This cultural category is not explicitly discussed in the models. Nonetheless, some remarks and thoughts suggest the possibility of such a category and serve to illustrate that the material component of early medieval life can be far more complicated than suggested by archaeologists for the majority of the material culture from this period. It is an interesting option to view the deposition of assemblages in graves as the materialisation of a lifestyle that expressed, amongst other things, the access one had to exchange networks, and it can also help to perceive why and how the distribution of the wide variety of objects was organised throughout Merovingian Europe. Perhaps an active circuit of exchange provided such items, or people travelled to search for these objects themselves; these remain points of discussion. It may explain, however, why objects from relatively distant regions were deposited in graves and what the incentives were for the existence of such an exchange circuit (which not only existed for the most exclusive objects discussed in the models of elite gift exchange). Considering the relation between material display as a lifestyle and various exchange networks offers interesting analytical possibilities for the active role of individuals, social groups and the distribution, exchange and transmission of material culture in society apart from funerary practises, although the majority of early medieval material culture was found as grave goods. However, the basic question remains unanswered: Why were objects that materialised identities and social relations buried with the dead? This will also be discussed in the next chapter. Next to these three categories of 'possession', two other cultural categories of grave goods were extracted from the models. These are the gifts from funeral attendees and the objects that were selected from the available objects at the moment of death and burial, the so-called occasional objects. When these objects are extracted from objects in their primary circulation, chronological distortion is reduced. The probability of the last option is also further explored in the next chapter.

This chapter discussed the binary opposition between grave goods as personal possessions (passive) and grave goods as strategic objects (active), concluding after the analysis of various interpretative models, by stating that such a binary interpretation of grave goods provision probably does not correspond with the cultural reality of the early medieval period and that a range of other categorisations in-between these two existed. The nature of the archaeological evidence directed the interpretative models to overemphasise the ritual meaning of grave goods during mortuary practises. Without dismissing the importance of the funerary ritual process and the active participation of survivors and material culture in this process, the grave goods appear to have played a more prominent role in life than can be extracted from the mourner-centred models. Various reasons may explain why the objects

²⁰⁸ See Effros (2002, 43) who argued that family or collective property is a more appropriate concept for the Merovingian period than individual property, which has been the interpretative concept for a long time.

of the living were buried with the dead. However, the material component of the social interactions between the living becomes underrepresented when these objects are analysed solely in the context of funerary rites. Regarding early medieval objects from graves as elements of an actively pursued lifestyle and materialisations of various social relations opens up various analytical opportunities for early medieval social life outside the funerary context, although on the basis of funerary objects. This focus especially serves the chronological debate; the accurateness of (short-phase) chronologies depends much more on knowledge of the circulation processes of these specific objects, and far less on knowledge of their ritual meaning in funerary rites. This suggests that the circulation of objects in relation to the lifecycle of individuals but also as materialisations of social relations before their selection and deposition as grave goods is an addition to both interpretative debate and the chronological debate. It is a discussion that connects both debates, as the next chapter will discuss.

Chapter 3

Cultural Categories of Objects, Their Circulation, and the Implications for Chronological Analysis

The previous chapter dealt with cultural categories of grave goods that were identified on the basis of the presumed connection between the deceased and their associated grave goods or the context from which the grave goods were selected. The interpretive models on the basis of which these cultural categories of grave goods were identified emphasise the ritual role of the funerary objects, but they also provide some suggestions regarding their 'life' before deposition with the dead. An insight into the variation of circulation processes of these objects is an essential addition to the chronological debate. This chapter therefore deals with cultural categories of objects, which will be identified on the basis of their specific circulation in society before their selection as burial objects. The rate of circulation is predominantly determined by the modes of object distribution and the decisions that are made regarding the transmission of objects after their acquisition and appropriation. The rich variety of material culture from early medieval cemeteries and the local to supra regional distribution patterns of the deposited object-types suggest that a complex system of various forms of distribution existed. However, as it was concluded in the previous chapter, for the past few decades the theoretical focus has been on the relation between ritual strategies and material culture in the funerary process. This was due to the nature of the archaeological evidence: the variety of early medieval objects has predominantly been found as burial objects. The role of material culture in the world of the living has consequently received little theoretical reflection, except for some specific and exclusive objects. This chapter will explore the statement that the remainder of the funerary objects were also subject to relatively complicated trajectories of circulation (exchange/distribution, acquisition, use and transmission) before they were deposited as grave goods.

Knowledge of the average rate of circulation of various object-types is mainly obtained through the analysis of the grave finds with chronological methods. The accuracy, however, of the created chronological sequences of early medieval graves and grave goods was questioned since it was argued that the possibility of deviant rates of circulation that are related to the cultural dimensions of early medieval life and the engagement of people with material culture should be considered (see Chapter 1).²⁰⁹ Various contexts of object acquisition, use and transmission influence the rate of object circulation, as will be discussed below. One of these contexts, a marriage and the customs (mutual obligations, gift exchange and right of succession) that surrounds it, has already been discussed extensively by textual historians of the early medieval period. This discussion, and especially the material component of the marriage customs, will serve as an example to illuminate the discrepancy between the cultural assumptions that underlie the short-phase model in the chronological debate of archaeologists and the examples in historical sources that provide suggestions for contexts of object exchange, acquisition and transmission.

The reliability of a chronological seriation depends on the least possible deviation between the 'primary circulation period' and the period in which objects were buried with the dead: the 'primary

²⁰⁹ Based on the assumption that objects were not produced for funerary practises, but had a 'life' before their deposition as grave goods.

circulation period' needs to be represented in the funerary remains in order to obtain reliable chronological results. This is, in fact, one of the assumptions behind chronological methods with a statistical component. Various circulation trajectories can be categorised, which illustrate that deviant circulation processes are possible. The identification of the associated objects is in some instances straightforward and in other instances not so much. The objects of which the deviant circulation can be identified in the burial evidence without many problems are:

1. The very exclusive objects that are rare in the burial evidence and are presumed to be curated or passed on for a considerable time: The objects that functioned in the context of ceremonial gift exchange or 'ceremonial heirlooms'.
2. The objects for which the primary circulation period had already ended for a considerable time: the so-called antiques, survivals, relics or *Altstücke*, from pre-Merovingian periods.
3. The objects from relatively distant regions, the so-called 'exotics', which were subject to various modes of distribution and consequently obtained a prolonged circulation before their final deposition as grave goods.

The objects that were subject to complex circulation, but whose prolonged or deviant circulation is more complicated to identify on the basis of the burial evidence alone are:

4. Various objects (from exclusive to mundane) that were to be passed on for some time before their deposition in a grave, but which are not discussed as such in early medieval archaeology. For now, they are identified as objects of various forms of exchange, as gifts and as heirlooms. However, their specific characteristics and the incentives for their curation and prolonged circulation will be explored in this chapter as an opposition to the general opinion that they are inalienable personal possessions.

These four cultural categories of objects are identified on the basis of their complicated circulation. The first three categories, however, are relatively unproblematic for chronological analysis on the basis of statistical methods: they can, for the majority, be identified on the basis of their specific characteristics. The first category refers to objects that are already repeatedly theorised as objects with a biography or inalienable objects in both archaeology and anthropology. The fourth category incorporates several cultural sub-categories of objects, although the complete list will not be established and discussed here in detail. This fourth category (with sub-categories) requires theorisation from an anthropological and historical perspective: the objects can be associated with various choices that relate to their exchange and transmission, but their variation in circulation is more difficult to identify in the burial evidence.

The statement that the majority of the Merovingian grave goods fall within this last category, and, as an implication of this statement, that especially the underrepresentation of reflection on the relation between people and the majority of the material culture from graves is the major shortcoming of the chronological debate, will be explored in this chapter. The objects of the second and third category are less difficult to identify in the burial evidence, but they also need to be placed in the discussion of variation in circulation processes. Theoretical thinking mainly focussed on the most exclusive objects and circulation in the upper strata of society. This discussion in early medieval archaeology, complemented with anthropological perspectives on the processes of exchange/distribution, acquisition and transmission and their relation to funerary practises, will introduce the backgrounds of prolonged circulation.

3.1 General outline of the function, maintenance and termination of prolonged circulation

Considering material culture as a component of social life underlines that objects have a role in the materialisation of various relations and implies that various processes of exchange and transmission existed. Such processes generally prolong the circulation of objects. The aim of this chapter is to provide examples of occasions in early medieval life that were formalised through the exchange and transmission of goods. Does the discussion of these examples offer sufficient evidence to replace the

category of inalienable personal property (which implies the absence of transmission) with a range of cultural categories of objects on the basis of various circulation trajectories? How can these circulation trajectories be identified? Should the persistent category of inalienable personal property be maintained, but just as one in the list of other categories? Finally, what are the consequences of these conclusions for the chronological debate?

3.1.1 Objects with a prolonged or complex circulation: Various sorts of circulation and 'heirlooms'

Objects with a prolonged circulation have already been discussed in early medieval archaeology. Long-life objects are generally considered to have accumulated a life history through their frequent exchange and transmission or lengthy curation. The most exclusive early medieval objects, such as elaborately decorated swords and scabbards, but also other weapons and some examples of jewellery, have been discussed as objects with a biography in several studies.²¹⁰ It is generally acknowledged that these objects circulated through complicated cycles of ceremonial and reciprocal gift exchange as an important component of an 'elite lifestyle', and as such, obtained a long-term circulation with associated meanings or life histories. These objects are rather exclusive and scarce. The majority of the early medieval burial objects are not that exclusive and archaeological evidence for the extended circulation of more mundane objects also exists. These examples of objects with a prolonged circulation, however, are scarce in the burial evidence. Their extended circulation is difficult to interpret in the same model of elite ceremonial gift exchange. However, not much has been published on their role in society and funerary practises other than that they were 'heirlooms'.²¹¹

The variety of objects from furnished burials cannot be sufficiently covered with the cultural category of objects that were components of ceremonial gift exchange in the upper strata of society (one might refer to them as ceremonial or collective heirlooms), the category of more mundane objects with an obvious prolonged circulation (the scarce 'heirlooms' without any further specification of the social group in which they were transmitted), and the category of objects which were assumed to have a circulation of approximately one generation (inalienable personal property); it is suggested here that these categories cover only a small selection of the burial objects. This chapter will explore whether the majority of the material culture of the Merovingian period was subject to the processes of exchange and transmission, which represents a cultural category of objects in between these three examples, and for which, as a result, the variation of circulation periods is less obvious in the burial evidence. How should this category be defined, what was the function of the objects for the social group in which they were transmitted, what do the associated objects represent, and how can they be identified in the burial record? A category is therefore proposed that may consist of various sorts of objects that are not necessarily very exclusive or rare, but for which it was believed important to maintain their transmission over generations in the social context of family groups.²¹² They are from now on referred to as 'family' or 'private heirlooms'. This group of objects is perceived as a group that functioned differently than the already extensively discussed swords, weapons and other exclusive objects that were part of ceremonial gift exchange. They are obviously not the 'inalienable personal possessions', and it is presumed that they are more present in the burial evidence than the scarce references to evidently old specimens picture them to be.

At first sight, it seems that the identification of a category of objects from the funerary record (objects that are not kept) of which it is presumed that their continuous transmission over several generations was aimed at (objects that should be kept) does not correspond. Whether the burial of both

²¹⁰ Bazelmans 1996; 1999; 2000; Theuvs/Alkemade 2000; Härke 2000.

²¹¹ These examples are scarce and this observation seems to corroborate the commonly shared opinion that objects were generally not subject to inheritance customs (see Chapter 1 and 4). The evidence for this opinion, however, can be approached from a different perspective as this chapter will discuss.

²¹² Membership of a family group is considered to be of major importance in the early medieval period, and it is assumed here that this awareness was an important incentive to create and transmit objects that represented the 'family identity'.

ceremonial and family heirlooms in early medieval times was experienced as a definite or negatively appreciated rupture with the existing line of transmission, as it would be interpreted from a modern perspective, can be questioned.²¹³ The proposed addition of family heirlooms to the categorisation of objects on the basis of various forms of exchange and transmission in order to illustrate that the majority of the Merovingian burial objects experienced a prolonged circulation before their deposition is explored in this chapter. If a positive conclusion regarding the applicability of family heirlooms for the Merovingian period is reached, the incentives for both the continuous transmission and termination of this transmission and how this relates to funerary practises, will be discussed. For introduction and comparison, the general background of the continuous circulation and the end of circulation of the special objects of ceremonial gift exchange or collective heirlooms are examined from an archaeological and anthropological point of view.

3.1.2 General incentives for continuous and terminated transmission of ceremonial or collective heirlooms: Do they apply to the variety of heirlooms?

The life histories of objects and the role of such objects in society are discussed in both anthropological and early medieval archaeology.²¹⁴ The discussions that relate to these often scarce and exclusive objects in both disciplines can be compared on a general level. The meaning of objects with a prolonged circulation is in anthropological literature often incorporated into discussions of alienable and inalienable wealth, power, the concept of the social life of objects and gift exchange-based societies.²¹⁵ On the basis of a selection of anthropological literature,²¹⁶ it can be concluded that the special objects that involve long-term transmission are generally referred to as collective heirlooms (of various social groups, including families) in the sense that they are identified as objectifications of ancestral and supernatural links which give the successive owners/caretakers a specific position in the constant manifestation of the individual or group in relation to others; the ancestral identity is considered a social and political force in the present.²¹⁷ An important characteristic of these heirlooms is the strong ambition to keep them. Detachment from their origins/original owners should be avoided, which is sometimes expressed as the need to keep them out of circulation. The ability to keep the objects is regarded as the manifestation of "...the power to hold oneself or one's groups intact".²¹⁸ Objects with a prolonged circulation are in a discussion of inheritance practices in families referred to as the objectifications of memories through an active process of forgetting and remembering in the process of socio-cultural practices that animate the objects and generate and transmit knowledge and value.²¹⁹ They have a social value, which "...is not related solely to their intrinsic exotic worth, but also to the value that it has obtained over the years in relation to specific individuals, to families or to other social groupings".²²⁰ They are regularly displayed, mainly during ritualised events. Very special objects are individually named and their public display evokes associations of their accomplishments or line of successive 'owners'.²²¹

Inalienable property that was transmitted from one generation to another in a specific social group is identified as corporate or collective property. Personal objects are considered to be alienable possessions, which means that they are individually acquired objects that are not linked to a collective

²¹³ An interesting discussion, related to this point of view, is introduced by van Haperen (2010). She suggests that the re-opening of graves within the period of a few generations after burial should not be seen as the retrieval of the valuables for economic purposes (grave robbery), but that other social processes provide a better explanation of these activities.

²¹⁴ The starting point of this discussion is generally referred to as the work of Appadurai (1986: The social life of things: Commodities in cultural perspective) and, within this volume, Kopytoff (1986: The cultural biography of things: Commoditization as a process).

²¹⁵ See Bazelmans (2000) for an overview of influential anthropological works with regard to ceremonial gift exchange, which also incorporate discussions of the concepts of alienability and inalienability.

²¹⁶ From the vast corpus of works on this subject, the studies chosen are those of Weiner (1985), as she offers a general discussion of alienable and inalienable wealth, of Lillios (1999), since the described ethnographic examples form the basis for archaeological modelling, and Weiss (1997), who provides an ethnographic example of the meaning and transformation of object transmission through inheritance in the specific context of family groups.

²¹⁷ Weiner 1985, 212.

²¹⁸ Weiner 1985, 210.

²¹⁹ Weiss 1997, 164.

²²⁰ Woodward 2002, 1040.

²²¹ Weiner 1985, 217.

identity. As a consequence, the 'collective' feels no need to keep them after the owner's death.²²² Within the discussed ethnographic examples of Lillios, a difference between personal property and collective property is identified, together with the different biographies of these two categories of objects after death of the owner or caretaker.²²³ It appears that the two categories of property (collective and individual), although they are defined differently for each ethnographic example, occur in all, but in a relatively differential degree, evolutionary states of social organisation (bands, tribes and chiefdoms). In societies where inherited rank does not exist, personal property is destroyed at death and rarely becomes collective or familial property by inheritance. In other organisations of society, collective property is more present. This means that more incentives exist to transform personal property into collective inalienable property.²²⁴

This general outline of the anthropological discussion can be compared with the discussion of the objects of ceremonial exchange in the early medieval period on which, especially the reciprocal exchange between lords and followers (the social group of a *Gefolgshaft*), is theorised. They are generally discussed as exclusive objects, primarily swords and weapons, which served to shape and maintain identities and social relations in the aristocratic sphere. As such, they accumulated a set of associations and meanings in the course of their 'life' through their continuous exchange and use by consecutive owners or caretakers. An essential characteristic of this group of objects is that their exchange is related to mutual obligations between the participants, and that the object in question cannot be (symbolically) detached from the giver; it even occurs that the objects, after a considerable period, return to the giver or the descendants of the giver.²²⁵ The accumulated set of associations of these objects refers to their mystified origin (production), their original owner(s), their consecutive line of caretakers and to certain events in which they participated. It is also stated that these objects show analogies with the life of a person (birth, life and death) and that they have individuality (sometimes they are named, as it is known for some swords in the early medieval period²²⁶) and power of their own. Such objects are generally considered to strengthen the status and power of a very restricted group of caretakers, but they were also necessary to constitute a person in successive life-cycle transformations.²²⁷

It is noteworthy that the role of these exclusive objects as structuring elements of early medieval life (of men) and society are extensively discussed on a theoretical level. This contrasts other early medieval grave goods (of both men and women), which in fact form the majority of the burial evidence. It is for this reason that the role of object transmission in families will be explored in the following sections. Are the incentives for this transmission and the role of the objects in the creation of family identities comparable to the way ceremonial heirlooms and inalienable wealth functioned such as described in the anthropological and archaeological examples? First, also for reasons of comparison, the termination of the line of transmission for these exclusive objects will be examined in the context of these early medieval and anthropological examples.

The functions of 'heirlooms' prescribe that they are objects that should be kept. Furnished burials confront archaeologists with the intentional 'destruction' of objects with a relatively prolonged circulation. Examples of the destruction of 'heirlooms' can provide insights into the motivations for doing so, and more importantly, into how the burial of objects with a prolonged circulation can be understood. The intentional destruction of such objects must imply that profound changes in the situation in which the 'heirloom' had its role occurred. The destruction of such a valuable, however, can be perceived differently than its burial with the dead. As Weiner stressed, "...the burial of certain objects manifest

²²² Curasi et al. (2004) theorised on the incentives that transform individual possessions into inalienable family possessions.

²²³ Lillios 1999.

²²⁴ Lillios 1999, 240-251.

²²⁵ The detailed outline of these discussions can be found in Bazelmans (1996; 1999; 2000), Härke (2000) and Theuvs/Alkemade (2000).

²²⁶ Bazelmans 1999, 151-152.

²²⁷ Bazelmans 2000, 353-371; Bazelmans 2002, 73, 78-81.

their ultimate inalienability", although a problem arises: they can no longer be displayed publicly or inherited.²²⁸ The removal of heirlooms, either by intentional destruction or burial with the dead, is explicitly discussed by Lillios. She presented an evolutionary model for the creation, circulation and disposal of heirlooms in relation to the development and maintenance of hereditary rights on status and power, on the basis of ethnographic examples.²²⁹ In summary, Lillios states that the competition between systems of ascribed status (status attained by inheritance) and systems of achieved status (status attained by certain personal successes) in a society is the incentive for the creation, maintenance (transmission) and destruction or deposition of heirlooms. Heirlooms are regarded by Lillios as objectifications of memories that express the ancestral legitimation of the power of a group or individual. They are desired in a situation where a system of inherited rank is competing with an institutionalised system of achieved rank. With the rise of the success of inherited rank, a new ideology of inherited social difference had to be sustained. Hence, the possessions of a person were more likely to be inherited and become 'symbols of ancestry' than in a situation without inherited rank. If a system of inherited rank is firmly established, the need for the symbols of ancestry and power become less urgent, and heirlooms can be removed from circulation by, for example, their deposition in graves. However, if the institutionalised system of ascribed status (inherited status) is threatened by the rising status of persons with communally appreciated achievements, heirlooms as symbols of power can become important again.

Regarding the burial of the early medieval ceremonial heirlooms (the exclusive objects that were exchanged and transmitted as a component of an 'elite life style'), it is stated that of all the swords/scabbards that were in circulation, only a selection ended their earthly circulation by deposition in a grave.²³⁰ Early medieval swords are known from both grave depositions and river depositions, although their circulation could also have ended otherwise.²³¹ These relatively few swords were consciously taken out of circulation, which ended the accumulation of inherent associations and meanings, although they could survive in the memory of certain groups for some time.²³² Some decades ago, Redlich tried to explain the rare occurrence of swords in early medieval graves in Frankish Gaul. The explanation was sought in the ownership of swords; they were owned by lords and given in 'loan' to their followers. Germanic law, according to Redlich, refers to the inalienable character of personal possession that had to be buried with the owner after death, which explains why few swords were deposited in graves.²³³ Härke describes that some weapons ended their circulation by ritual deposition whereas others remained in circulation as heirlooms.²³⁴ The deposition of weapons in graves is also explained against the background of the changing power positions of local aristocratic groups in the period during which Roman control diminished.²³⁵ Burials of men with swords transformed them into protective ancestors, which were required in this socio-political climate.²³⁶ The low number of weapons or sword burials suggests that an exchange system in which swords were ritually passed on existed during the same period in which they were sporadically buried; an exchange with the ancestral world was felt necessary for only a few of these men.²³⁷

The symbolic construction of ancestors should therefore not be regarded as an act that implied the destruction or loss of objects, but rather as the creation of 'sacred heirlooms'. With regard to the burial of objects as a form of ancestral or sacred exchange, some resemblances can be discovered between the anthropological literature, which focuses on the effort generally made into keeping inalienable possessions for the collective, and the models of Halsall, Theuvs and Williams in the previous

²²⁸ Weiner 1985, 219.

²²⁹ Lillios 1999, 255-257, Fig. 1.

²³⁰ Theuvs/Alkemade 2000, 464.

²³¹ In a church treasury, or in the treasures of kings and aristocrats (Theuvs/Alkemade 2000, 402).

²³² Theuvs/Alkemade 2000, 426.

²³³ Redlich 1948, 179.

²³⁴ Härke 2000, 381-386.

²³⁵ Theuvs/Alkemade 2000, 402, 453.

²³⁶ Theuvs/Alkemade 2000, 455, 466-467.

²³⁷ Theuvs/Alkemade 2000, 461.

chapter. The analogies relate to the ancestral connotations, the objectifications of memories and the material display of power and status. In anthropological literature, the focus is on the exchange between the living, or the temporary extraction from circulation. This is significant for the creation, meaning, maintenance and function of ceremonial/collective heirlooms or inalienable possessions. In these archaeological models, the act of ritual object deposition in graves is described as an activity that creates a comparable state of being of the objects. This act can probably be compared to the desire to extract objects from circulation, such as discussed amongst anthropologists, in order to prevent alienation from their origins/owners/caretakers. Halsall focussed on the local instability of power positions and the message of the deposition of lavish grave goods to maintain or alter these positions by the burying group. This can be assumed to be a family or otherwise closely connected group for whom future power positions were at stake. The objects express status in relation to others. In other words, they represent the family identity, but are not 'kept' as tangible family property in the world of the living. The objectifications of ancestral links are an essential point in Theuws' work. The objects that were buried with the dead became symbols of the ancestral legitimation of power and land ownership; the objects served to create an image (protection, claims on land) that matched with the required ancestor. This model was applied on a selection of early medieval graves, and did not have the ambition to interpret the general act of object deposition with the dead. It can be stated that these objects are the ultimate, inalienable (family) heirlooms; one might refer to them as 'sacred heirlooms'. The models of Williams, which emphasise the strength of the process of active remembering, also need to be mentioned in this respect. The display of objects in funerary activities, as he extensively discussed, evokes a process of active forgetting and remembering in which the funerary objects form the material component.

It seems as if the strength of the social processes that are involved with the preservation and display of heirlooms in the negotiation of status and power (the main characteristics of inalienable wealth in the anthropological examples) are, although differently, bound to funerary activities according to Halsall, Williams and Theuws. These burials are, in fact, the situations in which 'heirlooms' in the sense of the anthropological examples are created. They refer either to the existing or desired power of a family, or they create required memories of a collective past, and therefore current and future identities, and they symbolise ancestral links. These objects are the ultimate (sacred) heirlooms. Their burial represents the ultimate act of preservation: They are held apart from the world of the living, thus from people who can interfere in their obtained status of heirloom and what it represents. The possibility of losing the objects is diminished because they are out of circulation, but surviving as a memory. Burial is an alternative option for the creation of heirlooms. It is a symbolic empowerment of a family that creates a point of reference for future family members. However, is this how the majority of Merovingian burials should be understood?

The concept of inalienable property or wealth in anthropological studies and exclusive exchange in early medieval studies (ceremonial heirlooms) primarily served to discuss objects with a prolonged circulation as objects that distinguished social groups or individuals (whom should not be seen as individual owners, but more as consecutive caretakers²³⁸) from others; the keeping and the display of 'heirlooms' are consequently often related to group identities and the maintenance of (fragile) hereditary rights on power and status.²³⁹ The majority of Merovingian grave goods were in the traditional dead-centred models (see Chapter 2) considered to be inalienable personal possessions, which relate to the self-acquired or alienable personal property in the anthropological discussions. Hence, where anthropologists conceptualise personal possessions as alienable (from the 'collective'), archaeologists conceptualized

²³⁸ "Ownership is an alienable construct, entangled with rights to give and sell" (Curasi et al. 2004, 610).

²³⁹ Lillios 1999.

them as inalienable (from the individual).²⁴⁰ Both concepts, however, imply that the associated objects were not transmitted to the next generation. The opposition between exclusive ceremonial heirlooms and personal inalienable possession creates a problem for the early medieval period: It masks a category of objects in between, namely, the objects that were transmitted for other reasons than solely the maintenance or display of power positions.²⁴¹

The general point of departure regarding the circulation of objects is that the successful transmission of objects accompanied the transmission of group identities. It is stated that during the early medieval period this was of considerable importance for various social groups and networks, not only the elite networks. The moments of transmission are not extensively discussed, but some references to the material component of personal life cycle transformations point to the intergenerational transmission of group (family) possessions, especially at these events. The unexplored field of investigation for the early medieval period concerns what sorts of collectives other than elite bonds or *Gefolgschafts* can be identified in which the transmission of the object was considered equally important, the variety of incentives for continuous transmission, and how moments of transmission relate to a variety of personal life cycle transformations.²⁴²

The category of family heirlooms is introduced in order to investigate other incentives for transmission that suit the explanation of the circulation of the majority of early medieval objects from graves. The main function of practises of inheritance within a family is to secure the family identity and 'treasure' by the transmission of family property.²⁴³ It can be assumed that the moments of transmission of family heirlooms is organised around events that relate to various stages in the life cycle of family members. This is an aspect of prolonged circulation that is not as much discussed for the lower strata of early medieval society and which also includes women as both the initiators of object transmission and receivers of objects. In her search for examples of items that are kept, Weiner refers to objects that are permanently kept out of circulation by rulers in order to keep them separate from ordinary people. These objects in particular attain a high degree of sacredness.²⁴⁴ These objects are closely connected to a ruling family, and can therefore be identified as family heirlooms. Families from the lower strata of society can identify with these rulers and associated objects. The ruling family has a responsibility towards the extended collective for the maintenance and rightful transmission of these special family heirlooms such as the regalia of kings and queens. However, even if such an extended responsibility is absent, the maintenance and rightful transmission of the 'family treasure', regardless of its contents, can be equally crucial for families who belong to other levels of society.

Summarising, three sorts of inalienable possessions can be distinguished on the basis of the anthropological and archaeological examples: sacred heirlooms, ceremonial heirlooms, and family heirlooms. The ceremonial and family heirlooms are subject to ambitions of transmission, which result in prolonged circulation. It is suggested that the transmission of family heirlooms from one generation to another is organised around transformations in the personal life cycles of family members. This serves to

²⁴⁰ This discrepancy reflects the difference in the research data of early medieval archaeologists and sociologists/anthropologists: the appearance of the individual dead for early medieval archaeologist and the community for sociologists/anthropologists.

²⁴¹ Exceptions are the application of anthropological accounts in early medieval archaeology of the exchange of objects in the context of life cycle rituals which, together with the associated objects, serve to compose and decompose persons (see Bazelmans 1996; 1999; 2000; 2002).

²⁴² Nicolay (2005) discussed the material correlates of the life-cycle transformations of men who served in the Roman army, and made in this context a distinction between phases of military use and social use of military equipment. After serving their time, veterans could choose to return their equipment to the army or take it with them. Ritual deposition of (parts of) the equipment symbolised the transformation from soldier to civilian. The objects in graves that are associated with military service are, according to Nicolay, the personal possessions of the deceased which expressed his status as veteran (Nicolay 2005, 179-234). This specific account of life-cycle transformations and associated material culture, however, illustrated that the objects became personal *memorabilia* which only sporadically became heirlooms. The circulation of these military objects, as a consequence, is for the majority limited to one generation. This contradicts the account of family heirlooms which, as it will be argued further on in this thesis, are also thought to be connected to individual life-cycle transformations.

²⁴³ Various references in early medieval writings can be found that refer to the safeguarding of property and not to regulating their deposition with the dead, as Effros observed (Effros 2002a, 49).

²⁴⁴ Weiner 1985, 211.

safeguard family property and identity at all levels of society.²⁴⁵ The first two categories are extensively discussed, also in early medieval archaeology. The category of family heirlooms received less theoretical contemplation in early medieval archaeology. It is proposed here that a considerable number of the objects in Merovingian graves may have been subject to intergenerational transmission in families before their deposition.

The historians of the early medieval period discussed family property and the right of succession considerably, but they scarcely extended this discussion to material correlates, especially to those studied by archaeologists of the same period. Is it possible, with the help of the anthropological and historical discussions, to find a place for this category of objects in the interpretative debate in early medieval archaeology? How can the variation of the associated circulation trajectories be observed in the burial evidence? However, first: In which way should the objects with an obvious observable prolongation of circulation in the burial record, the pre-Merovingian antiques and the exotics, be placed against this discussion? Are they an addition to the list of the three sorts of heirlooms or should they be placed within one of these?

3.2 Complicated circulation, obvious archaeological evidence

The antiques from pre-Merovingian periods and relatively exclusive 'exotics' can be eliminated from chronological analysis without many problems; however, some complications must be considered. The discussion of their role in mortuary practises serves to illuminate that various processes of exchange, acquisition and transmission existed, and that the relation between the deceased and material culture can take different forms for various types of objects.

3.2.1 Antiques and exotics

Antiques in early medieval graves are the objects from pre-Merovingian periods; are they heirlooms, or should their acquisition and deposition be perceived as a different cultural process? Antiques were probably accidental finds or deliberately recovered from ancient sites and were, for a diversity of reasons, reused as grave goods in the Merovingian period. The majority are objects of the Roman period, although objects from other periods are also known, such as fragments of the so-called *La-Tène* bracelets that are regularly found in the graves of women as the contents of purses. The use of antiques in early medieval graves is a well-known and widespread phenomenon.²⁴⁶ Examples are the regular use of Roman beads and altered coins in strings of otherwise early medieval beads. With regard to dress-related objects, it was observed that they were used according to their original function, such as brooches, but they were also altered or carried, as some kind of token or amulet, in purses. Complete Roman pottery and glass vessels are relatively fragile, and their presence as complete or nearly complete specimens in graves could be an indication of two possible processes. Objects from Roman graves were reused in early medieval burials after they had been found by 'accident'. However, the late Roman specimens from the fourth century could have also been curated for a considerable time and as such become objects with a 'biography', whether they functioned as heirlooms in a family unit or in another sphere that motivated their curation and transmission. A sharp dividing line between material culture of the late Roman period and the beginning of the early medieval period is impossible to draw. Therefore, the dating of the objects in relation to the date of the grave in which they were found is essential information for their identification as antiques according to the definition above (see the sections on pottery and glass in Part II of this thesis).

²⁴⁵ The relation between acquiring or receiving objects and various stages in the life cycle was discussed by Bazelmans (1999, 172-188), but this life cycle involved becoming a warrior. Various other life cycles and stages in the life cycle can be considered, which probably also had a material component.

²⁴⁶ Mehling 1998, 11. For a discussion of the pre-Merovingian antiques from the Vrijthof and Pandhof cemeteries, see the sections on pottery, glass, coins and beads in Part II of this thesis.

Old objects, mainly Roman, and their function and meaning in early medieval funerary contexts have been discussed, but less attention is paid to their role in the lives of their early medieval 'owners'.²⁴⁷ Mehling gives a summary of the interpretations of antiques in early medieval graves over the last decades and concludes that they were generally handled as an isolated category of objects and that they are especially interpreted as objects with magical or amuletic qualities. The main questions posed in the works on antiques concern the different interpretations of their origin, their discovery or acquisition, their associated meanings, their association with certain social groups and the purpose of their final deposition as grave goods in the early medieval period. How do these objects relate to the cultural categories of grave goods as defined in the previous chapter and the sorts of heirlooms as listed above? Considering their acquisition, appropriation and associated meanings is one way of approaching these questions, as is some discussion on their meaning as reused objects in funerary contexts.

Antiques could have been found by accident as stray finds, but also through digging in the locations of ancient graves and settlements, of which the finds could have been accidental but also deliberately sought. Mehling also considers the acquisition of antiques by inheritance, gift exchange and commercial trade, although he regards the accidental and intentional finds the most convincing options.²⁴⁸ Eckhart and Williams reject (although not completely) the suggestion that these objects are heirlooms. They argue that if they were, objects from the fourth century would frequently appear in fifth-century graves and late Roman objects would be more commonly recovered than older Roman objects. However, for Anglo-Saxon Britain, this is not the case. The re-use of these objects appears in graves from the fifth to the seventh centuries.²⁴⁹ Mehling observed that antiques were already deposited in the fifth century, but that this was a frequent practise in the sixth century that diminished in the seventh century.²⁵⁰ The antiques are mainly from the Roman period.²⁵¹ The late Roman antiques, according to Mehling, could have been acquired by inheritance, but archaeological and historical evidence is difficult to find and the transmission of antiques remains a questionable practise, except perhaps for some objects of extraordinary wealth.²⁵²

The majority of the antiques, both in the Anglo-Saxon and Merovingian cemeteries, were found in the graves of children and adult women.²⁵³ Mehling showed that some of the antiques are gender-specific, such as beads, keys and fragments of bracelets, which were mainly found in the graves of women. Complete glass vessels, however, seem to be restricted to the graves of men. The analysis of their association with age groups showed that the majority of the antiques were found in the graves of children (0-12 years) and adults (20-40). In the group of children and adolescents (13-18/20), most of the antiques were found in the graves of women, thereafter (especially after the age of 35) antiques became more prominent in the graves of men.²⁵⁴ Mehling suggests that the antiques in the graves of early adult women may be related to the danger of dying in childbirth. Antiques may have been appreciated as amulets with protective capacities. The meaning of antiques for both the living and the dead, however, needs to be discussed more profoundly.

An interesting point made by Eckhardt and Williams is that the lack of a biography ('objects without a past') was an essential characteristic of antiques. Knowledge of their production, exchange and former social context is absent. These are considered to be important aspects of the early medieval heirlooms (see the section above).²⁵⁵ The only associations are the place and circumstances of their discovery. The find context (settlement, hoards, graves) is significant for their appreciation, and the event of uncovering such finds must have, according to Eckhardt and Williams, entered the collective

²⁴⁷ Mehling 1998; Eckardt/Williams 2003.

²⁴⁸ Mehling 1998, 72-86.

²⁴⁹ Eckhardt/Williams 2003, 148, 155-156.

²⁵⁰ Mehling 1998, 35-37, Abb. 5, note 115.

²⁵¹ Mehling 1998, 23-26.

²⁵² Mehling 1998, 82-84.

²⁵³ Eckhardt/Williams 2003, 160-161; Mehling 1998, 37-51. Mehling mentions some exceptions (*Iversheim* and *Basel-Bernerring*) where more men than women were buried with antiques.

²⁵⁴ Mehling 1998, 42-43, Tab. 6.

²⁵⁵ Eckhardt/Williams 2003, 159.

social history and influenced their use, meaning and deposition as grave goods.²⁵⁶ Eckhardt and Williams view the uncovering of ancient graves and sites in the context of socio-political and religious strategies; Mehling believes that the finds of antiquities were mainly unintentional.²⁵⁷ He therefore focuses more on the use of antiques, which may, according to him, vary from functional recycling to aesthetic and religious (amulets that protect) use. Although these are all interesting options, the relationship between age and gender and the sorts of antiques, in combination with their specific 'non-biographical' character, can offer some interesting insights if one acknowledges that these objects could have also served as the personal display of people in life.

The predominant association of antiques with girls and young adult women (20 and older), and with older adults and elderly men, as observed in the majority of the cemeteries that Mehling analysed, can provide some clues for their use in the lives of these people. It can be stated that on the basis of this information, the dress-related objects were not experienced as essentials for the personal display of women in the age group for which the display of the 'full equipment of gender-related items' was important. They were not incorporated into the collection of objects that were transmitted at important life cycle rituals. This suggests that when the acquisition of family heirlooms or a certain public display was less urgent, objects such as antiques were desired for some kind of individual appropriation for which 'objects without a past', as Eckhardt and Williams proposed, were desirable. It can, for now, be proposed that antiques were not associated with the personal life cycle transformations, and that fewer incentives existed for their transmission after their appropriation as antiques.²⁵⁸ Although these remarks are speculative, they indicate that it can be interesting to explore the relationship between certain categories of objects and stages in the life cycle of persons more profoundly. This subject requires further research, but it is suggested that careful administration and analysis of the antiques in graves, and the search for meaningful correlations of different sorts of antiques with gender and age groups are indispensable. The function of the antiques can, for a considerable number of objects, be extracted from their location within the graves. Are, for example, antique brooches used to replace a contemporaneous brooch, or is the item carried in a purse therefore signifying something different for the person in question? The connection between exotic objects and the person buried and/or the burial community raises a similar set of questions.

Both antiques from pre-Merovingian periods and objects that were regularly found in one region and appear in cemeteries in another somewhat distant region, could have been perceived as exotics. In addition, objects made of materials such as amber, amethyst, and garnet can be found in cemeteries at a considerable distance from the sources that provide these raw materials. For exotics, it can be assumed that a form of distribution/exchange was required in order for them to be deposited in graves located some distance from their original production site or natural source. These objects could have been circulating within the 'new' community for some time before their deposition in a grave, or they could have entered the local community during funerary activities, as a gift from a person who attended the funeral. They could also have entered the 'new' local community through import, with a travelling craftsman, or with a travelling member of the community who returned, or with new settlers.²⁵⁹ Two essential questions need to be asked. The first involves a discussion on the place of origin of the objects (see the section on belt parts in the discussion of the Vrijthof and Pandhof grave finds in Part II). The

²⁵⁶ Eckhardt/Williams 2003, 158-160.

²⁵⁷ Mehling 1998; Eckhardt/Williams 2003, 144.

²⁵⁸ Eckhardt and Williams sought the reasons for burial with the dead in the construction and transformation of memories and identities of the deceased. According to Mehling, the antiques could have been personal belongings of the deceased, gifts to the deceased, or objects that were found during the digging of a grave that were then spontaneously deposited with the deceased. Also interesting is his remark that antiques, which were damaged or of small worth, were used to replace the (more appreciated) early medieval objects so that these could be kept by the living.

²⁵⁹ Isotope analysis provides interesting research possibilities with regard to this subject. The discussion on the distribution processes in relation to social relations and formalised acquisition processes is not only relevant for the explanation of objects with extended distribution patterns, but also for objects that know a more restricted or local distribution pattern. There are various processes of exchange and distribution. Isotope analysis can show if people had been mobile in the course of their life and how this correlates with specific objects.

second is how the different modes of exchange relate to the meaningful acquisition of objects in life. Two opposite and exclusive spheres of exchange are generally discussed: gift exchange and commodity exchange, although the existence of such a strict opposition is now regularly criticised. Huggett deals with imports in the early Anglo-Saxon economy in which the "...different mechanisms by which goods may be exchanged over long distances are examined".²⁶⁰ Exotics can be easily identified, and their distorting effects in chronological analysis can be minimised.²⁶¹ The cultural meaning of both antiques and exotics will be further explored in the section on nuptial gifts, which forms the basis for a model of continuity of transmission. Both exotics and antiques can have a place in this model, and thus the conclusion is that the pre-Merovingian antiques and exotics are artificial groups; they are regarded as a separate group by archaeologists on the basis of their exotic character, but their cultural meanings are not necessarily captured in this definition alone. Especially 'exotics' were involved in the complex processes of distribution, acquisition and transmission. On the other hand, it is suspected that the bulk of the early medieval grave goods were also involved in such processes (discussion below). This stands in contrast with the simple relationship between objects and their owners as it is imagined in chronological research. In order to illuminate this problem, the next section will deal with the concept of 'normal circulation', which will form an introduction, but also a contrast, to more complex models of exchange and transmission.

3.2.2 Normal circulation: Does it exist?

Normal circulation is a modelled concept, but it is exactly this concept that forms a sound basis for chronological methods such as seriation and the production of short chronological phases. The model applies to types of objects, not individual objects. A normal circulation period of an object type is generally represented as the so-called bell curve or battleship curve: a gradual increase in production and use that declines gradually after the peak is reached; the use of the object type can exist for a period after the production has ended (Fig. 8). The existence of such a normal circulation period of object-types and the absence of (extreme) deviant rates of circulation of individual objects is the ideal situation for chronological analysis (see Chapter 1).

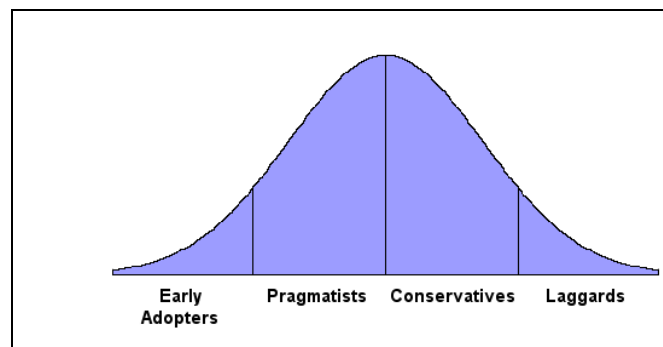


Figure 8. The representation of a normal production, distribution and circulation curve (the development of production and distribution over time).

²⁶⁰ Huggett 1988, 63. The different mechanisms mentioned are barter, gift exchange, marriage, warfare, alliance, diplomatic gifts, tribute, redistribution, peripatetic traders, prestige goods exchange, regularised long-distance trade and market exchange.

²⁶¹ The creation of distribution maps of similar or nearly similar objects, but also of objects with the same source of raw material is the most fruitful exercise regarding this subject. The origins of production do not necessarily have to emerge from such a map, but a picture of the area of distribution and associated distribution/exchange networks become visible. The creation of such distribution maps is already common practise in early medieval archaeology, but the interpretation of the emerging patterns requires further elaboration. Although the distribution maps are based on burial evidence, the living were the agents who distributed the objects. Analysing various patterns of distribution is a gateway into the interactive world of material culture and the living.

The archaeological record is always a relatively distorted derivative of this normal curve, and the intentional deposition of objects in graves in particular distorts this picture (see Chapter 1 in which the distorting effects of the complex social processes between production and deposition of objects are discussed). Some situations cause normal circulation curves of object types to be represented in the burial evidence:

1. 'Mass-production' or the regulated production of objects, especially for funerary practises.
2. The existence of a 'normal' primary circulation period of objects for which two options for their deposition as grave goods can be considered:

-The interred objects are extracted from the objects in their 'normal' primary circulation during the funerary process; these are the so-called occasional objects.

-The interred objects are self-acquired from the material culture available not long before their interment with the deceased. A rapid replacement of objects in the course of life is a general practise (see the discussion of Siegmund's cultural reasoning in Chapter 1).

The model of 'normal' circulation illustrates that the complexity of various exchange networks through which the objects were acquired and situations in which their transmission was aspired is more likely to represent cultural reality. The possibility of production for funerary purposes alone is for now dismissed as general practise.²⁶² An indirect argument was discussed in Chapter 2: Several publications incorporate discussions on the importance of adorned bodily display in life, and moreover, more than a few historical sources refer to life events in which objects played an important role. Furthermore, anthropological studies reveal that exchange or transmission was a constituting element of society. The archaeologists who display an interest in the search for refined typo-chronologies assume that the relation between the majority of the material culture from graves and persons is relatively 'simple': (dress-related) objects are acquired, become personal property, and are finally buried with their owners. Considering the abundance of grave goods and their variety, from very mundane implements to sophisticated decorative items, and numerous accounts in anthropology and history of the social components of material culture, it seems plausible to assume that the objects from graves played a role amongst the living.²⁶³ It can for now be stated that the complex processes of production, distribution, acquisition, transmission and deposition are linked with the variety of early medieval material culture. Therefore, the notions of production for funerals and a rapid replacement of the majority of the objects in a person's life are left behind, and the discussion will proceed with the occasions in early medieval life around which the exchange and transmission of goods was organised.

3.3 Complex circulation, obscure evidence: Family heirlooms or the exchange of objects between families and intergenerational transmission

The main incentives to suggest the existence of family heirlooms and to discuss them in relation to burial practises are first the observed, although not frequent, presence of old objects or Merovingian antiques (not the exclusive weapons, but less sophisticated objects) in younger graves. The opinion of several early medieval archaeologists that hereditary customs were not part of early medieval life, based on the early one-sided interpretation of the burial evidence (furnished burial implies the absence of hereditary customs), in relation to examples of contradicting burial evidence, was the second incentive.²⁶⁴

The inalienable character of individual possessions of men (*Heergewäte*: weapon gear) and women (*Gerade*: jewellery) has been widely embraced as one of the explanations for furnished burial in Merovingian times.²⁶⁵ These objects, according to a number of archaeologists, can never be transmitted

²⁶² Although a few exceptions are mentioned (Steuer 1982, 82).

Fragments of biconical pots and other sorts of early medieval pottery are known from excavated settlements. Are the shapes and quality of material the same as from the objects uncovered from graves? A thorough comparative analysis of the material from different contexts has not yet been performed.

²⁶³ Ware trace analysis provides the empirical evidence to underline this assumption (Steuer 1998, 143-144).

²⁶⁴ The contradicting burial evidence consists of the observation that the elderly were only sporadically buried with the same variety of grave goods as young adults were (see Chapter 2).

²⁶⁵ Redlich 1948, 77-180; Périn 1980, 195-196; Härke 1990, 22.

through hereditary customs. Consequently, some of the personal property must have been obtained otherwise than by the right of succession. This reasoning, however, is based on false evidence and simplifies the meaning of material culture in early medieval life. This interpretative framework is by now generally discarded as an explanation for furnished burial.²⁶⁶ However, regarding burial objects as inalienable personal possessions is still rather persistent amongst archaeologists. Of all the (legal) sources from various parts of early medieval Europe, no explicit references to the inalienability of *Heergewäte* and *Gerade* can be found.²⁶⁷ These references are known from historical sources of a later date, but they appeared useful to understand furnished burial with dress-related items in the Merovingian period.

Additionally, the burial evidence in numerous examples can be interpreted as proof that something such as the transmission of 'gender-related items', or at least some of these items, to the next generation did occur. It is also suggested that incomplete sets of, for example, weapons provide indirect evidence for the practise of inheritance.²⁶⁸ Despite these observations, grave goods are still regularly considered personal objects of the deceased, especially in chronological studies. This is probably because a solid and encompassing alternative explanation for furnished burial did not replace the earlier conviction that was based on the alleged historical references. The general conclusion of archaeologists who focus on chronology remains that a prolonged circulation of objects that are known from graves scarcely occurred (see Chapter 1 and 4). Historical references, however, to the transmission of goods through hereditary customs exist,²⁶⁹ but these are rarely discussed in early medieval (burial) archaeology or related to burial practises. Was the use and appropriation of material culture in early medieval times separated in two different spheres of practise? Was a selection of goods subject to practises of inheritance, and was another selection (the objects that are abundantly found in the graves of this period) separated from these practises? Is this the image of the material component of early medieval life that should be maintained?

3.3.1. *Mobilia* and the organisation of inheritance practises

With regard to the early medieval burial evidence from the fifth to the eight centuries, it is tempting to relate the acquisition and transmission of the majority of dress-related objects and weapons to inheritance practises within families. The main reason is that these objects were buried with persons of specific age groups that are especially associated with marriage and reproduction and are relatively absent in the graves of the elderly. The act of transmission, however, is in contrast with the presumed inalienability of the personal items that were buried with the dead.²⁷⁰ Does this correlation between age groups and dress-related objects point to the conclusion that grave goods were subject to intergenerational transmission, or should it be interpreted otherwise?²⁷¹ Is it a solution to consider these objects as inalienable from the (family) group for which an individual is the caretaker for a limited period and for which especially the moments of transmission to the next generation are crucial?²⁷² However, why then were these objects buried with this specific caretaker? Should the conclusion be maintained that most of the moveable property was rarely subject to inheritance in the early medieval period? Indirect arguments against the existence of such practises are that if it was a common custom that

²⁶⁶ Jacob/Mirbeau-Gauvin 1980; James 1989, 34-35; Effros 2002a, 25-32; 2003, 76-79; Terrien 2007, 122-123.

²⁶⁷ Jacob/Mirbeau-Gauvin 1980, 7-8.

²⁶⁸ Härke 2000, 384.

²⁶⁹ La Rocca/Provero 2000, 232-233.

²⁷⁰ The correlation as demonstrated by Halsall in early medieval Lorraine (see Chapter 2) is demonstrated for several, but not every cemetery. Although other correlations have also been observed, for the majority of the cemeteries the relation between specific grave goods assemblages and age groups has not been investigated.

²⁷¹ In Chapter 2 the option of temporary appropriation (alienable personal possession) of objects was proposed as an alternative. This remains very speculative, but it illuminates that the correlations do not, by definition, direct to the practises of inheritance. The burial evidence only offers indirect evidence for such interpretations.

²⁷² It was already expressed by Effros (2002, 31, 43) that 'inalienable' property in early medieval times should be interpreted more as inalienable from the family circle than from the individual. Furthermore, a distinction between possession and ownership is useful. An object can be possessed by an individual, but does not necessarily have to be owned by him (Curasi et al. 2004, 610).

persisted over multiple generations²⁷³ and the main goal of such practises was to keep the objects in the situation where they functioned (in the family), the burial evidence would show less abundance and variety through time than it actually does.²⁷⁴ However, other situations can also be considered. On the basis of some accounts of possession (of elite members) in historical documents, it can be argued that women and men had not only one set of 'gender-related items', but multiple sets. The remainder of the sets could have been transmitted as family heirlooms, after the deceased was buried with one of them.²⁷⁵ Does it do justice to the burial objects in Merovingian graves to distinguish them from the practises of inheritance? The practise and function of inheritance in the early medieval period requires some exploration, especially regarding *mobilia*.

The main evidence for the existence of inheritance practises or family heirlooms is written wills; their major function is to safeguard the possessions for the future.²⁷⁶ The Roman custom of writing down wills disappeared in the earliest phase of the early medieval period. This period is characterised as one of "...formation and experimentation related to efforts to perpetuate status through continuity of possession".²⁷⁷ The Merovingian period hardly knew wills in their proper sense, and the few that did survive dealt mainly with the right of succession of landed property.²⁷⁸ Some exceptions that were also concerned with 'items of adornment' are named, but these wills were compiled by members of the upper strata of society.²⁷⁹ However, this does not imply that during this period other people than elite members were not concerned with safeguarding their moveable property for the future.²⁸⁰

Next to wills, hereditary customs with regard to moveable property can be inferred from law codes. The investigation of the law codes of various Germanic groups (*leges barbarorum*) in which the rules of inheritance are written down can shed some light on the context of use and the transmission of movables in the fifth, sixth and seventh century. For now, this will be illustrated with the example of one important occasion in life: the connection of a couple, and therefore two families, through marriage. This relationship is formalised, amongst other things, with the exchange of various goods of which the property rights and rights of succession are written down in the *leges*. Whether these practices of inheritance in families involved, next to landed property and money, *mobilia* such as have been discovered from graves, seems to be a logical assumption, although explicit references to the character of the transmitted goods are scarce. This assumption will be explored in the following section. The presumed personal and inalienable character of the grave sets that were especially formed by dress-related objects shall be tested in this discussion.

3.3.2 The regulated exchange and transmission of goods in the context of marriage

Several historians of the Early Middle Ages specifically focused on the rules and customs that surround marriage, and also incorporated anthropological perspectives on this meaningful union, which resulted in a discussion of especially the transactions and agreements between the two families from the bride and groom.²⁸¹ The available law codes of the early middle ages, which are carefully analysed and compared regarding the structure of families, rules that surround betrothal, legal marriage and legal inheritance are those of the Lombards (seventh-eighth centuries), the Burgundians (fifth-sixth centuries), the Salian

²⁷³ It can also be suggested that the transmission of objects was a strategy in the Merovingian period that only worked for a relatively short period of time, thus persisted only over a limited number of generations.

²⁷⁴ The shift from burials with grave goods, which resulted in "...immaterial memory..." (the memory of, amongst other things, the grave goods, because no external sign of the dead was left) to "...leaving a permanent testimony of the dead with the aid of the written word" from the eighth century onwards changed the use of the items that were formerly placed in the grave. "They became precious gifts to the church or to family members, underlying the continuity of status and function of the family itself" (La Rocca/Provero 2000, 232).

²⁷⁵ La Rocca/Provero 2000, 249-259; Härke 2000, 384-386.

²⁷⁶ Although wills are also regarded as strategic devices and not always as "...death-bed dispositions of property" (Nelson 1995, 94-95).

²⁷⁷ La Rocca/Provero 2000, 229.

²⁷⁸ Nonn 1972. This article offers an overview of the written wills from the Merovingian period. It appears that the majority of them are concerned with the right of succession of landed property.

²⁷⁹ Effros 2002a, 25-28.

²⁸⁰ La Rocca/Provero 2000, 228.

²⁸¹ Drew 1988; Hen 1995; Le Jan 1995; Reynolds 2001.

Franks (fifth-sixth centuries) and the Visigoths (sixth-seventh-eighth centuries).²⁸² These people lived or settled within the borders of the Roman Empire during the period in which Roman control ceased and was gradually replaced with another form of social organisation. Contact with the people who were familiar with literacy and legal practises was one of the main incentives to write down the laws that had already been practised for a considerable time. However, up to then, they were only memorised by a specific group of persons who spoke justice when necessary (called *rachimburgi* amongst the Franks).²⁸³ As it will appear, agreements between families in the case of an upcoming marriage and inheritance rules were mainly concerned with the protection of occupied lands as family property.²⁸⁴ That the protection of other sorts of property was also believed necessary can, however, be assumed. It can also be claimed that in situations where families owned limited landed property, the expressions of status and identity and the practises of inheritance found a place in the possession and transmission of movables.²⁸⁵

The discrepancies between the aforementioned law codes with respect to this subject are not the matter of debate here; they concern only details.²⁸⁶ The focus lies on all the lines of gift exchange and transmission that can occur, the goods involved, matters of rights on property and the rules or customs of inheritance. The core questions are whether *mobilia* were exchanged as nuptial goods, how these were initially acquired, whether they were appreciated as personal or family property, whether the rules of inheritance apply to these *mobilia* (which would extend their circulation period), and whether these customs would prevent them from being buried with the dead. Conversely, could the conclusion be that inheritance rules did apply to land and not to the majority of the *mobilia*, which explains why so many of them were deposited with the dead? Was the material component of social life as uncomplicated as some archaeologists suggest; someone receives his/her material equipment, keeps it as inalienable personal possession throughout his or her life and is consequently buried with it?

It can be stated that marriages are essential for families because these unions assure their continuation, and it is the general basic requirement for the reproduction of society. It also implies the continuation of life (children), and therefore marriage is a requirement to safeguard the transmission of both material (all sorts of goods and land) and immaterial (prestige, knowledge, reputation, status, etc.) capital. This contract between a man and a woman and between their families is generally surrounded with a ceremony that includes the exchange of goods. This exchange implies that the gifts had to be acquired or were already in possession of the gift givers, that the gifts were kept after giving, and that at a certain point a choice had to be made regarding their transmission. This was a crucial moment at which their circulation would either continue or end (Fig. 9). What were the decisive occasions when the proposed circle of acquisition, giving, keeping and transmission was either continued or disrupted? Who were the participants who made these decisions?²⁸⁷

First, which persons were involved in the exchange of goods that accompanied a marriage? Four parties can be identified in the law codes: the groom-to-be, the bride-to-be, the father (representative of the family) of the bride, and the father (or family) of the groom. At the moment of betrothal, the groom-to-be makes a gift to the father of the bride-to-be, the so-called *dos*, *wittimon*, *pretium* or *meta/metfio* (bride price). This gift formed a contract that secured the individual's commitment to the wedding. In some instances, it also served to compensate the family of the bride for their investment in

²⁸² Drew 1988. Drew translated these law codes and analysed them with regard to these specific subjects. Other codes from this period are those of the Alamanni, Ripuarian Franks, Bavarians and Anglo-Saxons.

²⁸³ Drew 1988, I, 33-34; Drew 1991, 20-21, 33. For a more detailed discussion of the transformation from Germanic law customs into written versions, see Reynolds 2001, 66-70.

²⁸⁴ Extensive lands were not available to every family. The division of land amongst heirs of small landowners would have disastrous economic consequences, and it can be assumed that other solutions were practised when situations of inheritance occurred. See also Steuer 1982, 103.

²⁸⁵ Steuer 1982, 103; Nelson 1995, 86.

²⁸⁶ See Reynolds (2001) for a detailed discussion of the comparisons of various law codes regarding betrothal and marriage, and Hen (1995) for an account of the Merovingian marriage as an example of one of the personal life cycle transformations in this period.

²⁸⁷ The following account is composed on the basis of Drew's analysis of the aforementioned law codes (Drew, 1988, IV-VIII).

her and for the loss of the father's *mundium* (the exercise of legal representation) over the bride-to-be (and consequently the loss of the control over her future children and property). The father of the bride obligated himself, with the acceptance of these gifts, to give the girl away for marriage on the agreed date. If the marriage did not take place within two years after the betrothal, the groom-to-be had to pay compensation and the *dos* was kept by the father (family) of the bride. The father gave the *dos*, or part of the *dos* together with his own gift, also referred to as *faderfio*, *nuptiale pretium*, or *donation nuptialis*, to his daughter when the wedding took place. The actual type of gift is unclear; it could have consisted of family possessions to which the bride was entitled as a legitimate heir, or a compensation for her loss of the right of inheritance, but it could also have been a gift to the couple in order to secure their economic independency. The Visigothic bride, as an exception, received no gift from the father. This was compensated by the fact that she would always be a lawful heir of her parents/family, even after her marriage. In the analysis of the Burgundian marriage, it is mentioned that the gift of the father was 'real or personal property', and that the bride price was paid in money.²⁸⁸

Next to these exchanges, there is also the gift presented from the groom to the bride after the wedding night, the so-called *morgengabe* or *morgengaba*. In Burgundian law, it is mentioned that the groom decided on the magnitude of this gift and that it, together with the gift of the father, formed the 'ornaments' of the woman. This became her separate property which she could dispose of freely.²⁸⁹ The wedding ceremony is in fact the transfer of the *mundium* from the father to the husband (and his family) of his daughter. Most of the laws mention that the possessions of a woman were administered by her husband, but for the three sorts of possessions, the *dos*, the *faderfio* and the *morgengabe*, different rules apply. These came into scope when the marriage bond came to an end by either an untimely death of one of the spouses or by divorce. Who is the rightful owner of the goods, or who are the rightful heirs?

Inheritance rules in the Merovingian period appear to owe their existence mainly to the desire to regulate the inheritance of landed property; they mainly prescribe the line of legitimate heirs. References are infrequently made to the independent property of women, which in Lombard law, is explicitly mentioned to be the *metfio*, *faderfio* and *morgengabe*. However, whether this concerns objects as they are encountered in the graves of this period, and whether inheritance rules apply to these movables, is unclear.²⁹⁰ Only in Burgundian law is explicit reference made to ornaments and clothes as the private possessions of a married woman. These were passed on to daughters after her death when no will was made to decide otherwise, or to the sons when female heirs were absent.²⁹¹ In Frankish law, it was recorded that the gifts from the husband and the father of the bride remained her property. The husband had no right to use these gifts for his own benefit, and they were passed on to her children after her death. However, the gifts are referred to as gifts of money.²⁹² The other rules of inheritance in Frankish law explicitly refer to the transmission of family land.²⁹³ Only the Visigothic wife administered her own property. Furthermore, in Lombard law, the girl/woman was not allowed to alienate her movables without the approval of the one who held her *mundium*.²⁹⁴ Hence, differences, although not profound, with regard to the property rights of women and the line of legitimate heirs, can be found in the discussed laws. It can be stated that inheritance was a component of life in Merovingian times. The specific content of the property and how specific goods relate to the *dos*, *faderfio* and *morgengabe* remains substantially obscure. Can it be assumed that the movables, such as the dress-related objects from graves, formed part of the property to which the right of succession applied?

In Drew's analysis of the law codes regarding inheritance practices, it becomes clear that no explicit references are made to specific objects. Occasionally furniture such as the bed are mentioned,

²⁸⁸ Drew 1988, V, 8.

²⁸⁹ Drew 1988, V, 9.

²⁹⁰ Drew 1988, IV, 61, 64.

²⁹¹ Drew 1988, V, 11.

²⁹² Drew 1988, VI, 5.

²⁹³ Drew 1988, VI, 6.

²⁹⁴ Drew 1988, IV, 17.

but for the majority, explicit references concern money, slaves, cattle and land. Implicit references that could point to *mobilia* are references such as 'the ornaments of a woman' and 'personal/separate property', from which it might be concluded that various objects, other than the ones explicitly mentioned, were involved. Santinelli, however, is of help here. She listed two sources in which the matrimonial exchange of jewellery from husband to wife was explicitly mentioned. These concern the *dos ex marito* in the *libelli dotis*. The objects mentioned are bracelets, gold earrings, finger rings, jewellery, dresses/garments, gold and silver jewellery, and not further specified, gold and silver.²⁹⁵

Although this is not hard evidence that the same sort of objects formed part of the matrimonial gifts in the remainder of Merovingian Gaul, it is reasonable to assume that at least a selection of the objects that are found in graves throughout Merovingian Gaul could have been involved in matrimonial exchange. The gift of such objects disappears, at least in the sources mentioned, in the ninth century.²⁹⁶ After that, the majority of the gifts in the *libelli doti* consist of land, which is more effective in the provision of an economic existence and economic security for the future. It seems that in the ninth century the *morgengabe* was replaced by the *dos* (the marriage gift from the husband to wife), which had to consist of both movables and land.²⁹⁷ Perhaps it is expressed that the majority of the gifts, especially for the aristocrats, consisted increasingly of land than movables after the Merovingian period. Of importance here, however, is that the portables that were explicitly (in these sources) exchanged as components of matrimonial customs are the same sort of objects that were also deposited in graves in the Merovingian period. By the time such gifts disappeared, furnished burial, as it had been practised in the Merovingian period, also disappeared. Does this observation point to an interpretation of burial with personal possession? Again, it must be stated that the concept of personal possession should probably be perceived differently than as passive ownership. Although a connection between individuals and objects existed, people were probably aware of the fact that certain objects had the possibility to transcend their own lifetime. This may have been an incentive to search for ways of regulated or appropriate transmission to safeguard the objects for the future. In order to shed light on whether objects that are for archaeologists predominantly known as grave goods could have been subject to various forms of exchange and that the continuity of transmission can possibly be imagined for the Merovingian period, the next sections will deal with the acquisition and transmission of nuptial gifts as an example.

3.3.3 Marriage gifts as examples of continuous object transmission

The question not yet addressed is how the goods that were given as *dos*, *faderfio* or *morgengabe* were initially acquired by the givers. Were they bought, were they already family heirlooms, or did something else occur? The abundance of objects in graves, from various parts of the Merovingian world, makes it plausible to suspect that vibrant networks of distribution/exchange, over both short and long distances, were operating. It can be imagined that grooms-to-be or their families were forced to actively seek access to these networks for the provision of brides and their families with gifts (Fig. 9). The custom of materialising the nuptial agreements was probably one of many forces behind the continuing and widespread existence of distribution/exchange networks of a variety of objects.

The ownership of the matrimonial goods that were gifted to women changed not only upon their death, but also during their life. Given that no explicit references are made to *mobilia* and what happens with them in the course of the receiver's life (in the following examples, women are the receivers), a list of options, composed on the basis of the inheritance rules analysed by Drew in a selection of the law codes, is proposed. After the premature death of her husband, a woman could be obligated to return a selection of the gifts to the family of her late husband in order to pay off the *mundium* that was

²⁹⁵ Santinelli 2002, 260-261, *Tableau* 1. The texts in which these objects are mentioned are the *Formulaire d'Angers* (end of the sixth and seventh century) and the *Formulaire de Tours* (middle of the eighth century).

²⁹⁶ Santinelli 2002, 260-261, *Tableau* 1; Nelson 85-86, see note 13.

²⁹⁷ Nelson 1995, 85-86, note 13. She makes the remark that in the Carolingian period the difference between *morgengabe* (for the heirs of the bride) and *dos* (for the heirs of the groom) was still made by the Salians and the Ottonians.

transferred to them (Fig. 9. The gifts return to their origins). Part of the goods, which for the majority of the law codes were considered to be her private or separate property, stayed with her. It can be assumed that this property, at least for some part, consisted of (valuable) objects such as Santinelli observed on the basis of the *libelli dotis*. Given that goods were given to the bride to secure her economic position after the death of her husband, it can be suggested that the decision to return the objects to the network of exchange/distribution (possibly in exchange for money? ²⁹⁸), was an option.²⁹⁹ If this was common practise, a continuous circulation of objects existed. These options apply to the situation in which the woman survived her husband. After her death, however, it had to be decided what happened to her 'property'. Therefore, the third line of transmission is the one through inheritance. In the law codes analysed by Drew, inheritance rules apply to the nuptial gifts made to the bride, although it remains obscure whether they also applied to other goods than acquired land.³⁰⁰ The rightful heirs could be the parents, children, or other relatives up to the seventh degree.

These three options for transmission result in a continuity of exchange and transmission. However, the objects known from the graves of women cannot be overlooked. Were these the objects that were once acquired as marriage gifts or in their life as married women? Or do these objects stand apart from the objects that were subject to the practises of exchange and inheritance? At least a selection of the marriage gifts or goods that were received at other occasions in life most likely became deposited in graves. The final questions are why this alternative was chosen, why they were turned into grave goods and not transmitted, and whether they had already been transmitted for a considerable time. Some solutions will follow below.

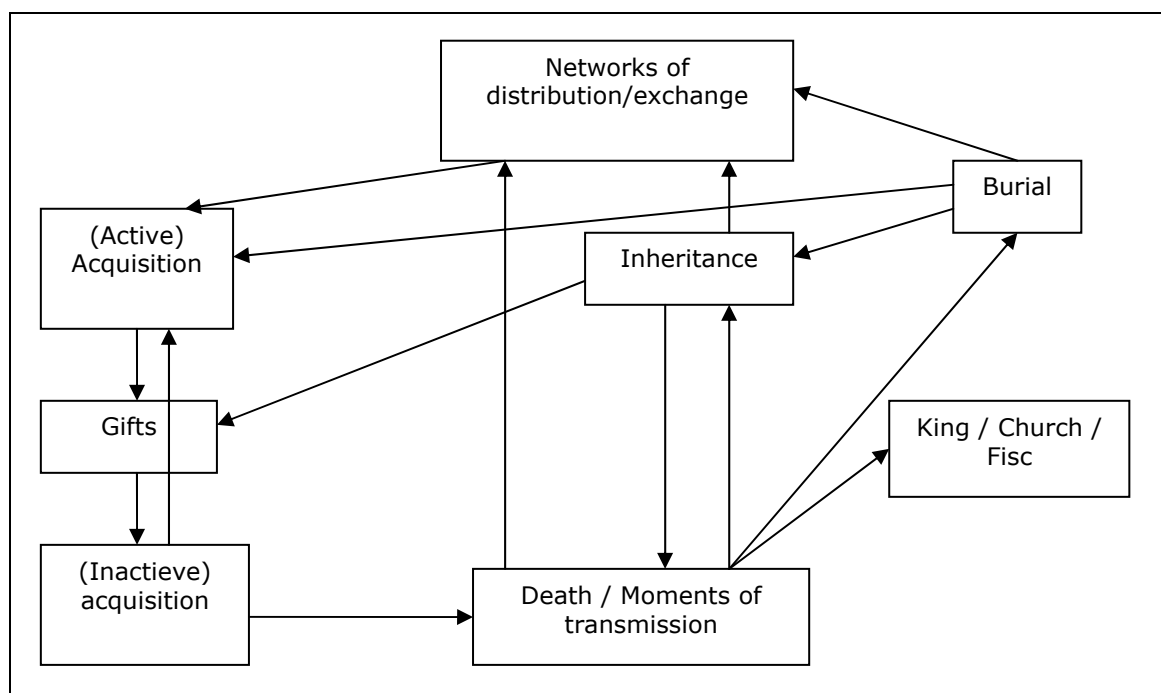


Figure 9. The continuous circle of the transmission of objects and options for their removal.

²⁹⁸ This is extremely speculative, although it can be considered as an option and does not have to be an anonymous act such as it would be in modern commodity exchange.

²⁹⁹ Ethnographic examples are available for this specific practise. A present-day example is the abundance of silver ornaments of women in Oman. The ornaments are received as bride price from the husband's family. They become the bride's personal property, which she is allowed to sell in times of need. Therefore, these objects are not supposed to be extracted from the family heirlooms of the groom's family; they were commissioned by a silversmith (Mols 2009, 135). Such objects can be identified as 'alienable personal possessions' (see Chapter 2).

³⁰⁰ It can be assumed that the right of succession of landed property applied only to the more fortunate, and that the transmission of property in the lower echelons of society only concerned the *mobilia*.

First, one of the main conclusions of this discussion, in which marriage served as an example of a moment in which goods were exchanged and transmitted, is that material culture is an important component of social life, also in early medieval life. The inalienability of individual property is a rather elementary concept on the basis of which the role of objects such as dress-related items in early medieval life can be perceived. Consequently, it is not a sufficient explanation for the burial of these objects with the dead. The concept of a family group was more important than the concept of individuality in early medieval life.³⁰¹ It is therefore stated that the individual acquisition and ownership of possessions was of minor importance compared to the responsibility for family property. Specific moments in the personal life cycle, not only marriage, served as occasions to transmit parts of the family treasure to the next generation. Although historical sources were dismissed as proof of the individual ownership of objects, it is still a very persistent way of considering grave goods. It can be concluded that various moments of exchange and transmission can be conceived, and that these trajectories question the static picture of newly produced material equipment, which remained in the possession of their receivers for an 'eternity'. Given that the inheritance rules in law codes do not explicitly differentiate between the goods (land, cattle, slaves, contents of the house and movables) and do not clarify whether the *dos*, *faderfio* or *morgengabe* consisted of movables, the proposed continuity of transmission is based on indirect evidence. It can be stated that the inheritance rules were mainly geared to regulate land ownership, especially for the families who owned considerable acreage, and not to the transmission of *mobilia*. Some reasons can probably be conceived as to why the legal ownership of movables and the right of succession had no explicit place in the law codes. The question of why numerous objects furnished the burials in the Merovingian world remains a difficult one to answer. On the basis of the proposed continuity of intergenerational transmission in family groups, the most obvious conclusion for the object deposition with the dead is that no legal heirs were available. However, if legal heirs were to be found up to the seventh degree of relatives, as it was written down in the law codes, this seems rather unlikely. Could other incentives have existed for the transmission of movables than solely their transference to the next generation in order to keep them as family wealth?

3.4 Cultural transmission as the incentive for the continuity of object transmission and possible reasons for terminating this continuity

Land was obviously an economic resource (although land ownership also symbolises wealth and status), for which there were strong motivations to transmit this property to the next generation as family wealth, and probably also some of the movables. Regulated inheritance safeguarded economic resources for the family. However, should all the *mobilia* be interpreted as such? Movables may have been appreciated as economic resources or symbolised economic wealth. The burial of movables that represented economic resources is difficult to understand. It can be suggested that copiously furnished burial was the display of an 'abundance' of wealth: if the survivors kept the valuables, it could raise suspicions about the need to keep them, which could be interpreted as a sign of economic weakness. This is probably one of the elements that resulted in the richly furnished burials of aristocrats, although the burial of these objects can also be a 'theatrical performance'; the economic need for the objects is concealed by performing a proper, or perhaps extraordinary, burial. After some time, the objects could be retrieved again from the grave (Figure 9).³⁰² However, these explanations are very speculative and also present a very economic perspective on the material component of life and the burial of these objects. Can the act of burial with objects also be a clue to consider movables as something other than economic provisions?

Next to symbols of economic prosperity, they can also be the symbols of something else, which will be illustrated here with the help of the, already for many purposes applied, concept of 'objectified

³⁰¹ Jacob/Mirbeau-Gauvin 1980, 8; Le Jan 1995.

³⁰² See the work of Van Haperen (2010) in which the many dimensions of the re-opening of graves (formerly referred to as grave robbery), other than the traditional economic dimension, in the Merovingian period itself are discussed.

cultural capital'³⁰³ of a family, combined with the related concept of 'cultural transmission'.³⁰⁴ Every detail of the concept of 'cultural capital', as it was developed in sociology to analyse modern, Western society, cannot be applied to ancient societies. Nonetheless, its specific interpretation and alteration in combination with the backgrounds of cultural transmission offer an alternative perspective on some aspects of the acquisition, appropriation, use and transmission of objects in the Merovingian period. Essential in both concepts are social distinction (reinforced by objects) and the ambition to transfer knowledge, accomplishments, prestige, etc. (family culture or identity) to the next generation at certain effective moments: it is proposed here that the life cycle transitions of family members are suitable events for cultural transmission.

Since objects that symbolise the cultural capital of a family served to communicate identity, status and prestige, their alienation from the family would be prevented and moments of rightful transmission were crucial. The variety of portables from Merovingian graves were suitable to form the objectified cultural capital of a family; they could be displayed, they could be vehicles of various meanings, they expressed a family identity, they were part of a material 'tradition' that was understood by other families, and they therefore served to visualise and negotiate family identities (which also includes economic, social and political status/power). The safeguarding of the cultural capital (family heirlooms) was more subject to private family motivations and success. Consequently, the law did not encompass regulations with regard to the transmission of these *mobilia*. Their maintenance and transmission as symbols of the cultural capital of a family was a private, although very important and at specific moments publicly displayed, family matter. The transmission of such objects, however, poses problems. It is acknowledged that especially "...the moment of intergenerational transmission, when a group passes an object forward, is dangerous".³⁰⁵ It is proposed that the transmission of such objects was motivated by the desire to maintain, display, and transmit the family identity, and it expresses the desire to keep the group intact in the future. The question remains as to what were the moments of transmission in the early medieval period. Marriage was discussed as an important moment in the life cycle of individuals, and it was accompanied by the exchange and transmission of specific goods. Other moments in the life cycle development of family members were most likely also appropriate event during which movables were transmitted to the next generation.

A new line of research regarding material culture from graves could comprise the study of the range of objects that structured family identities and the lives of their members. Important aspects are the intergenerational transmissions of a variety of objects that relate to women and those that relate to

³⁰³ Cultural capital is a concept developed by Pierre Bourdieu (1977), which served to explain how class society (in the modern Western world) is maintained, and especially how the highest classes strive for continuous social and cultural exclusion. Cultural capital consists of three interrelated categories: embodied cultural capital, institutionalised cultural capital and objectified cultural capital. Specific tangible objects objectify the cultural capital of a social group. The concept of cultural capital cannot be applied in every detail on an ancient society such as the Merovingian, but it does illuminate that social groups have a group identity (cultural capital) for which the ambition exists to maintain it, and thus to transmit it to the group members of the next generation. This intergenerational transmission of cultural capital is accompanied by suitable objects that represent the group identity. The ambition for intergenerational transmission is referred to here as 'cultural transmission'. The moments of transmission involve not only the transmission of objects, but also the complete corpus of cultural capital (knowledge, behaviours, etc.). The next generation has to 'understand' the relation between the group identity and the associated objects, which makes the moments of transmission dangerous. It is expressed that "The cultural capital objectified in material objects....is transmissible in its materiality" and, "...but what is transmissible is legal ownership and not (or not necessarily) what constitutes the precondition for specific appropriation, namely, the possession of the means of 'consuming'..." the specific objects (Bourdieu 1986, 50). The key questions for the early medieval period regarding cultural capital and transmission are: Which social groups were important, how was their group identity expressed, how was this materialised with specific objects, and around which events was cultural transmission organised? The remainder of this chapter deals with the social group of families and especially with the transmission of the objectified cultural capital of a family: the family heirlooms.

³⁰⁴ The concept of cultural transmission has been used especially in scholarly research of evolutionary behavioural change (a good example is the sub-discipline of evolutionary anthropology). In this thesis, the concept is used to explore the intergenerational transmission in family groups over a relatively short period. The focus is on the desire of a family group to keep its identity intact for which intergenerational cultural transmission can be identified as a suitable mechanism. This can be exemplified with citations of Mesoudi (2008), who discussed cultural transmission as a mechanism to explain archaeological data. Cultural transmission according to him is: "the process by which information is passed by means of social learning from individual to individual", and, to illuminate the role of objects in this process, "Culturally transmitted information may be stored [...] in artifacts" (Mesoudi 2008, 91).

³⁰⁵ Curasi et al. 2004, 610.

men, as well as the variety of moments of acquisition and transmission that are related to other moments in the life cycle than marriage, which, as discussed above, had a considerable 'economic' component.³⁰⁶ This discussion of the material component of cultural intergenerational transmission (family heirlooms) captures the range of objects of both men and women, which do not necessarily have to be the exclusive objects that were discussed in relation to the so-called ceremonial heirlooms.

A string of beads, for example, predominantly associated with women, can be a composite of antiques from the Roman period, a range of glass beads of different colours and shapes, beads made of natural materials such as amber, amethyst and rock crystal from remote areas (exotics), and they can also include various pendants of precious metal attached to them. In addition, early medieval 'antique beads' (objects with a prolonged circulation) occur in strings of beads. Beads can be part of a string, but they can also be sewn onto a cloth or kept as an assemblage in a purse or box. An assemblage of beads has a composite character; effort can be put into the accumulation of the ensemble, but an ensemble can also be redivided into individual beads/pendants. Consequently, they can represent the (components of) people who transmitted or exchanged them.³⁰⁷ For some archaeological examples, it is argued that individual beads from graves are evidence of them being 'objects with biographies' attached to the string to which they previously belonged.³⁰⁸ Especially the beads of a natural substance can be compared to their experienced mythical origin, which was often ascribed to swords in the early medieval period (see the discussion on ceremonial heirlooms) because they are from a distant and probably unknown provenance. The integrated relics from the Roman period, both beads and coins, can also have these characteristics. All these characteristics are suitable for them to form the cultural capital of a family. They can be easily displayed at appropriate moments, parts of them can be transmitted at appropriate moments, and others can be kept.³⁰⁹ A string of beads, based on the burial evidence, is predominantly associated with the burials of women, and are most regular for the finds in the graves of children. All these arguments make it a plausible category of objects that suit the intergenerational transmission of gender-related items in a family related to various moments in the life cycle, not only to marriage, for which each subsequent caretaker is responsible.³¹⁰ It is proposed that the majority of Merovingian grave goods knew continuity in transmission for which the incentive was to pass on the symbols of a family identity.

Objects with a prolonged circulation that have accumulated meanings and symbolism and are associated with early medieval women have rarely been investigated. The same can be said about the more mundane objects that are 'masculine'. In the legal codes, references to these objects can rarely be found. These objects could have been symbols of a family identity for which the transmission is important for the preservation of this identity and of which the acquisition and transmission is organised around various moments in the life cycle. The transmission and acquisition at these moments is discussed in early medieval archaeology for members of the aristocracy, especially the young men who became warriors.³¹¹ The exchange of goods in relation to life cycle rituals is in this sphere discussed as acquisition moments that composed the receiving person, and perhaps decomposed the giver. This could at the same time symbolise the appropriate cultural transmission of family treasure and identity. It is clear that such customs are not explicitly mentioned in law codes. The question remains as to why these movables, which formed the cultural capital of families, were buried with the dead. Two options are proposed here, but both require further investigation. The first deals with the absence of appropriate heirs, and the second with the decline of effective symbolism.

³⁰⁶ It is mentioned that women were important actors regarding the transmission of movables to the next generation within the family (See for example Herlihy 1995, 84-49 who investigates the role of women in the context of families and therefore considers "... the role of women in passing property down the generations, through inheritance customs and marriage settlements").

³⁰⁷ Graeber 1996, 4-5; Straight 2002, 11-13; Fowler 2004, 40.

³⁰⁸ Woodward 2002, 1043-1047.

³⁰⁹ It can be interesting to investigate whether not a string as ensemble, but specific types of beads show a correlation with certain age groups.

³¹⁰ See, for example, the various moments in the life of a woman in present-day Oman: From birth on, she receives jewellery at various ages (Mols 2007, 140-142)

³¹¹ Bazelmans 2002, 78-81.

Successful cultural transmission is endangered when appropriate caretakers are not yet available. This is especially the case when the untimely death of an important temporary caretaker of family capital occurred. The child of a woman in her twenties, for example, may be too young to be an appropriate heir, or a child (such as the burials of children with string of beads might express) may have been too young for the appropriate transmission of the beads that were appropriate acquisitions for her age. The burial of these objects may prevent the alienation of the cultural capital from a family at a moment when the successful transmission was in actual danger. The absence of responsible caretakers could explain why young women and men were buried with the wide variety of objects found in graves. The actual transmission of the objects to legitimate heirs was probably not at stake, but the accompanying aggregate of knowledge that they symbolise was because suitable moments to transmit their movables had not yet occurred. In this case, the eventual re-opening of the graves could point to the postponed transmission of the cultural capital.³¹² Empty graves of persons in this age group could consequently be an indication of successful transmission. However, another option can also be considered.

It can be imagined that symbolism lost its effects as rapidly as the changes that occurred in the local socio-political environment. The appropriate heirs required different symbols to distinguish themselves from others, but transforming the objects into economic resources could still be loaded with negative associations. Therefore, their burial with the current caretakers was chosen as the best option, rather than their transmission to the next generation. The objects that lost their effective symbolism were kept until death. However, this remains rather speculative, and the reasons why people were buried with objects remain open for discussion, since this is probably the most challenging question for early medieval archaeologists. Regarding the funerary objects not only as grave goods with a ritual meaning but also as components of social life prior to deposition offers the opportunity to investigate a variety of aspects of social life.

This means that the concepts of inheritance and personal property are usable in the context of object transmission and burial. However, they are not merely terms, but rather concepts with multiple layers that require further exploration of what they really meant during the Merovingian period. Personal property was more closely associated with temporary ownership. The acquisition of this 'property' was related to the life cycle developments of family members. It was also accompanied by a responsibility for the future preservation of a family identity, and therefore with the responsibility for the successive transmission at the right moment again. Inheritance was not only a custom used to protect economic capital; something else was at stake, exemplified here by the concept of cultural capital and cultural transmission within families.

If cultural transmission was organised around life cycle transformations, which implied active transmission or receiving, it could mean that the line of transmission was terminated with an untimely death. Therefore, the line of transmission of certain sorts of movables may not persist over an equally long period of time as the very exclusive ceremonial heirlooms³¹³ or economic resources such as land. Very old objects rarely appear in the Merovingian burial evidence, but the continuity of transmission, as described above, could have comprised less time: perhaps two to four generations (approximately one hundred years). In the Merovingian period, a period of approximately three hundred years, lively circles of acquisition and transmission may have existed. This presents a picture that differs from the static representation of inalienable personal property, which is still in common use amongst the archaeologists who are engaged with chronology. It is not suggested here that a final image of the role of material culture in Merovingian society is constructed, or that the final solution for furnished burial is offered. The discussion merely serves to illustrate that the relation amongst individuals, social groups and material culture was a complicated matter in Merovingian times, not only for the aristocratic members of a

³¹² Härke 2000, 390.

³¹³ Despite the fact that it was observed for these heirlooms that, although appreciated as objects with a life history, their origins could not be traced back more than two generations (Bazelmans 2000, 371).

Gefolgschaft, for example. It illustrates that this subject offers interesting research possibilities when the wide range of objects that are known from funerary contexts are used to discuss social life outside this context. Focussing on transmission as a crucial act in the reproduction of families and therefore society implies that moments of transmission were important and thus also dangerous. Furthermore, it illustrates that the continuity of circulation was subject to a variety of situations, and that the circulation of various objects could have been prolonged for more than one generation.

3.5 Conclusion: Cultural categories of objects on the basis of exchange and transmission and the consequences for chronology

Two spheres of exchange that resulted in prolonged circulation in the early medieval period were first identified in this chapter: the first applies to the ceremonial and reciprocal exchange of exclusive objects that materialised the alliances between elite members (they are here referred to as ceremonial heirlooms), the second to exchange between and in families, which formalised nuptial agreements and in which men were the initiators/givers and women were predominantly considered receivers (the objects materialise bonds that have an 'economic' character; the transmission of a selection of the objects (or land) secure family wealth/property for the future and secure the economic position of future widows). A third sphere of exchange was proposed, namely, the cultural intergenerational transmission of movables in families for whom the initiators and receivers can be both men and women, and which were primarily not related to safeguarding economic wealth (although the objects may symbolise status). Although this cultural transmission may have been organised around marriages, other moments in the life cycle also offer these opportunities. The fact that the transmission of gifts from mothers to daughters or mother-in-laws to young brides, or from fathers to their sons, was not mentioned as generally regulated customs in early medieval law texts does not mean that it did not exist. It is proposed that the transmission of the majority of the portables was more a matter of private decisions, not governed by explicit rules of inheritance; that they were less associated with 'economic' provisions, such as at least a part or majority of the *dos*, *faderfio* and *morgengabe*, and the safeguarding of economic wealth. They were probably more closely related to the transmission of objects that symbolised family identities (Table 7). Identifying movables as objects that were subject to a form of cultural transmission, as opposed to only safeguarding economic wealth, explains why property rules are rare in the law codes with regard to *mobilia*; general regulation would be ineffective or inappropriate if their transmission was perceived as a custom that relates to life cycle rituals and was subject to the private choices of families. The fourth sphere of exchange is the transmission of objects to the ancestors (sacred heirlooms). However, this specific form of exchange falls outside the reasoning in this chapter because it does not contribute to the discussion of continuous transmission amongst the living and therefore prolonged circulation.

Cultural categories of objects on the basis of exchange/transmission	Cultural categories of grave goods (contexts of selection)	Burial strategies (transformation of meanings)	Remembrance of graves
Ceremonial heirlooms	-Inalienable group (family) possessions -Gifts to the deceased	-Active forgetting and remembering	Permanent state of ultimate inalienability (sacred or empowered family heirlooms)
Family heirlooms: economic resources	Alienable personal and family possessions	-Symbolic construction of ancestors	Temporary state of ultimate inalienability
Family heirlooms: objectified cultural capital	Inalienable family possessions	-Display of status/prestige/wealth	
Sacred heirlooms	Occasional objects?		

Table 7. The cultural categories of grave goods and the objects they incorporate, the burial strategies that transform the object associations, and the ultimate remembrance of the grave.

The discussion in this chapter of various forms of exchange and transmission elucidates that the variability of movables known from graves was more often subject to prolonged circulation trajectories than generally assumed. On the basis of the frequent occurrence of various objects in graves, it can generally be stated that people in the Merovingian period found themselves in situations in which the option for interment with a wide variety of objects with the dead was normal in contrast to other periods. Their identification as inalienable personal property made archaeologists assume that a simple trajectory of individual acquisition, appropriation, keeping and eventual burial with their owners represented the material component of early medieval life, which is a rather static and one-dimensional representation. Furthermore, a complementary point of view that divides material culture into objects for which transmission was a general practise and in objects that were inalienable personal property seems an artificial solution. It was suggested that the family identity had a higher priority than an individual identity. The moments of cultural transmission were organised around the life cycle transformations of individuals, but these individual transformations were imbedded in the transformation of the family as a whole.

Although the concept of inalienable personal possession proved to be rather persistent, in various chronological analyses of cemeteries (see Part II), it is observed that a considerable amount of the object types were deposited during a period that lasted more than one generation. Even though modern chronology claims that graves can be dated to relatively short phases, the established circulation periods of only a selection of the grave goods are restricted to such short time periods. The dating of graves to restricted chronological phases obscures the various circulation periods of the object types. This chapter argues that at least a selection of the grave goods functioned in a system of cultural transmission in families. A transmission that, however, did not last for centuries such as the continuous transmission of the most exclusive objects, regalia, etc. could last. It involved objects that were not very exclusive or scarce. Cultural intergenerational transmission had variable outcomes and resulted in a variety of relatively prolonged circulation for comparable objects. The variability in circulation is thus also considerably obscured by statistical methods that are based on object types, rather than individual objects. The conclusion is that the practise of the regularly occurring transmission of objects is nearly impossible to extract from the burial evidence; both arguments for and against can be defended, but the discussion of exchange and transmission of goods between and in families showed that cultural reality was considerably complicated. Accepting this point of view, however, has consequences for chronological analysis. If the regular existence of such practises is accepted as a component of early medieval life, then certain observed anomalies such as extensively furnished graves of the elderly, but also of the very young, require consideration.

Theorising on object circulation in the early medieval period is an essential component of the chronological debate and offers various research directions to explore early medieval life in the context before burial. The relation between material culture and social groups outside the funerary context is rarely investigated and only with regard to a selection, that is, the most exclusive objects. Therefore, in contrast to the categorisation of cultural categories of grave goods in Chapter 2, this chapter aims to list (although not a comprehensive one) the cultural categories of objects on the basis of their role amongst the living, especially on the basis of exchange and transmission. Archaeologists who study Merovingian mortuary practises are confronted with the intentional, although it may be temporarily, ending of the circulation of objects. One of the most intriguing questions relates to the motivations that made people bury a wide variety of objects with the dead. It is sometimes stated, on a general level, that the rare presence of objects in graves points to active hereditary processes, and conversely, that an abundance of grave goods suggests that such processes were not a common practise. This statement is probably related to a modern perception of heirlooms. The interment of objects with the dead from a modern viewpoint equals their 'destruction'. It expresses that there was no need to keep the objects in the existing situation, whereas heirlooms, in their broadest meaning, are associated with the act of continuation, both of the objects themselves and their associations. Therefore, the ambition to keep collective or ceremonial heirlooms in circulation may have persisted over a longer time than for family

heirlooms. The family heirlooms, as discussed in this chapter, apply to the widest variety of material culture, not only to the very exclusive objects, and an abundance of such objects of cultural intergenerational transmission would make the aim for short chronological phases considerably problematic.

This chapter mainly dealt with hypothetical variations in the rates of circulation, although detailed models in relation to specific sorts of objects were not provided. The aim of the discussion was not to cover all the modes of exchange and transmission, but rather to illustrate that the simple representation of the relation between objects and people, constructed by the archaeologists involved in chronological analysis on the basis of the burial evidence, is one-sided and can be considered more complicated. In other words, it is contested that the individual appropriation and maintaining was the only relation between people and objects such as weapons and dress-related items. Given that the material culture is rich and diverse, the related processes of production, distribution, acquisition, exchange, use, keeping, transmission and disposal are also comparably rich and diverse. Understanding the material culture of the living is an underrepresented subject of research in early medieval archaeology, but it is necessary if one wants to understand the role of ritualised events such as burials in which these objects played a relatively active role. For that reason, this chapter did not focus on providing a comprehensive image of the cultural categories of objects on the basis of circulation, but rather on the complexity and variety of spheres in which material culture served certain goals. An extensive list of cultural categories of objects on the basis of transmission can be obtained by theorising on the materialisation of the various stages of the life cycle of both men and women, not only regarding marriage, as in this chapter, combined with theorising on incentives for both the continuity and disruption of transmission. The circulation periods of objects are only known from the chronological analysis of burial evidence. Part II of this thesis will show how researchers perceive the circulation periods of object types in a selection of these studies (selected on the basis of their suitability for the analysis of the grave goods from the Vrijthof and Pandhof cemeteries in Maastricht), how this relates to the foregoing discussion in this thesis, and how the available knowledge of the circulation periods of object types should be valued on their contribution to the analysis of the grave goods from a cultural perspective.

Conclusion to Part I

The burial evidence from the Merovingian period instigated the development of two scholarly debates from which it is concluded that they interacted only sporadically. Chronological research on the basis of grave goods has developed over a lengthy period into a debate that concentrates on the ultimate refinement of chronological types and phases. Currently, burial phases as short as 15 years are proposed, although it is observed that this degree of refinement does not enjoy general agreement. The interpretative debate on early medieval mortuary behaviour, which has shown considerable development over the last few decades, has not integrated reflections on Merovingian burial chronology, although it has also been modelled on the basis of the main archaeological evidence of this practise: the abundance and wide variety of grave goods that were deposited with the dead.

The meaning of the objects in the context of funerary rites was the main focal point in this debate. The two debates developed separately, but they can be compared by the absence of one domain of research: the role of material culture among the living, and thus the role of material culture (from which grave goods were eventually selected) outside the funerary context. The participants of the chronological debate rarely reflected on the concept of individual property and the related subjects of individuality and personhood, although they rely on the, often implicit, assumption that the grave goods were the inalienable personal possessions in the lives of the deceased. On the other hand, the interpretative debate of the last few decades in Merovingian mortuary archaeology has focused on the meaningful actions of the survivors in the ritual act of burial. This has resulted in a theoretical focus on the meaning of object deposition at the expense of the role of the rich corpus of material culture in situations prior to death and burial. Theorising on this aspect of early medieval life in particular is essential for the chronological debate, and it forms the discussion in Chapters 1 to 3 of this thesis in which a broader cultural perspective on Merovingian burial chronology, different from that which is currently practised, is proposed.

The general 'cultural perspective' of the majority of the researchers who have been involved in chronological analysis makes the assumption that the grave goods formed the inalienable personal belongings of the dead. The role of material culture in society is consequently perceived as relatively static and one-dimensional. Objects are received at a specific moment in life, are kept as inalienable personal possession, and finally, when death occurs, the owner is buried with his or her material life companions. That the majority of the participants of the chronological debate acknowledge this assumption was illustrated by citations of researchers who have a prominent position in the chronological debate, and it is further exemplified with the studies that form the basis of the chronological analysis of the grave goods from Maastricht (see Part II). Although this specific 'cultural perspective' is convincingly deconstructed by a number of early medieval archaeologists, another satisfactory explanation for furnished burial, which has gained comparable acceptance, was unable to replace it until now. It is often still a point of departure in chronological analysis, although not based on any solid arguments. This is probably due to the fact that another point of view would corrupt the chronological debate as it has been shaped. Actually, burial with personal possession is the only assumption that can underlie solid chronological schemes on the basis of resemblances in grave goods

assemblages, especially involving short phases. A relatively rapid rate of circulation (of approximately one generation) of the objects would be represented in the burial evidence if people were buried with the possessions they acquired individually.

Some variables, however, which are also important from this traditional standpoint, are overlooked. Cultural aspects such as the age/stage in the life of object acquisition, the age at death and the prolonged circulation of objects influence the similarities between the final assemblages of grave goods and therefore on the chronological phases in which the graves should be dated. Steuer initiated this discussion of cultural variables and the problems of chronological research, but his point of view did not gain a prominent place in the chronological debate. On the basis of Steuer's discussions, it was illustrated that not only can resembling assemblages date in different chronological phases, but also that dissimilar assemblages can date in the same chronological period. Although the examples that were used to demonstrate this are very modelled and hypothetical, they do raise the awareness that various cultural variables require consideration and that they can add a theoretical dimension to the chronological debate.

The main questions regarding this theoretical dimension concern whether inalienable personal possession is a concept that should be maintained for the Merovingian period and whether it is an acceptable model for the understanding of furnished burial. Considering grave goods as personal possessions implies that individuality was materialised and thus that a perception of individuality had a place in early medieval life. How people perceived themselves in relation to others and the world around them is a distinct discussion. However, it is one that cannot be avoided for the early medieval period if scholars, especially those who are involved in the chronological debate, persist in the conviction that personal possession was a major component of social life in the Merovingian period. The exploration of how personal possession is specified in the interpretative models in early medieval mortuary archaeology has resulted in the identification of various layers regarding individual ownership. Consequently, various connections between the dead and their grave goods and contexts from which grave goods are selected (cultural categories of grave goods) can be proposed.

The earliest interpretative models, in which furnished burial with inalienable personal possession was the main concept, are identified as dead-centred models: the status of the deceased made the grave what it was. The interpretative models thereafter, which were developed during the overall scholarly paradigm shifts, obviously rejected the forgoing models to such a degree that the concept of personal possession almost completely vanished as a relevant topic of research. These models are identified as mourner-centred models, as they focused predominantly on the agendas of the survivors. The dead and the influence of their lived-lives on burial performances became nearly insignificant components of the discussions. Consequently, the investigation of possession and individuality as components of early medieval life did not appear on the scholarly agenda. The reluctance for a thorough investigation of this concept is probably the reason why a one-dimensional vision of personal possession and burial practises can still be found as an implicit assumption in various chronological publications of Merovingian cemeteries.

Despite their common denominator, considerable differences can be observed between the mourner-centred models. The majority of these interpretative models focus on a selection of the burial evidence: either on one performance (giving to the dead), on one limited period (the fourth and fifth or the seventh century), on specific graves (burials of men in settlement grounds), or on a specific category of objects (weapons). However, some of the models offer concepts that provide a more general level of interpretation: they portray burials as strategies of remembrance, as rhetoric strategies that create a community of suitable ancestors, and burials as arenas for competitive display (strategies of power). The general ideas are that the meaning of material culture is transformed during burial activities, that grave goods did not reflect the identity of the deceased as a mirror of life, and although scarcely explicit, that the objects could have been a pragmatic choice of the burying group from the available material culture at that moment (the so-called occasional objects). No explicit thoughts regarding the role of the objects

in society before their interment with the dead can be found in the mourner-centred models. Insights into the variety and nature of these roles in the community of the living are, however, essential for the development of a more profound cultural perspective on burial chronology.

The modern dead-centred models provide some tools for the investigation of the material components of social life. These models are identified as dead-centred models not because they focus on the representation of the identity of the deceased, as the early dead-centred models predominantly did, but rather because they attempt to incorporate the individual as an active agent into social life and mortuary practises. Although this has not yet been comprehensively explored for the Merovingian period, it can be observed that not only the lived life of the deceased, but also the role of objects in early medieval society are becoming subjects of interest. Historians of the early medieval period already explored the many dimensions of social life, but they scarcely incorporated its material component into their research. The burial remains from the Merovingian period can become a rich source for the investigation of social life and its material component when it is accepted that grave goods have both a 'dead-centred' and a 'mourner-centred' component. The processes of production and distribution can be related to the active processes of object exchange, acquisition, transmission and disposal. This dimension of material culture from the Merovingian period complements the already elaborately shaped discussion of the final transformation of meanings of objects and their exchange with the supernatural world in the funerary context.

The analysis of the interpretative models, both the mourner-centred and modern dead-centred models, which cover nearly all the interpretative directions in Merovingian archaeology, have resulted in five cultural categories of grave goods. Furnished burials with a variety of objects have for a long time been explained by the deposition of inalienable personal possession. However, the many dimensions of the concept of individuality and personhood in the Merovingian period have not been thoroughly explored. Alienable personal possessions and temporary ownership of family possessions are therefore introduced as additional categories of personal possession. The category of gifts to the deceased relate to decisions made by mourners, as do the occasional objects that served various strategic performances of the survivors. The associations and meanings of the three categories of personal possessions were created and transformed through rhetoric strategies and the processes of active forgetting and remembering during the funerary rite. The role of these objects in society prior to their deposition with the dead requires further investigation for a better understanding of funerary practises and especially, as it was argued, for consistent chronological analysis.

This specific investigation was initiated with the identification of cultural categories of objects with prolonged circulation on the basis of various processes of exchange, acquisition and transmission. These cultural categories of objects provide insights into the variation in the circulation of objects in Merovingian society, and they contribute to a cultural perspective on burial chronology. The elite bonds of lords and followers were substantiated not only through the reciprocal exchange of swords, but also other weapons and other exclusives; this resulted in a prolonged and meaningful circulation of these objects. They are identified in this thesis as the first cultural category of objects on the basis of exchange and transmission and are referred to as 'ceremonial heirlooms'. Early medieval society did not only consist of elite networks, and it is also presumed that the social relations in the lower strata had a material correlate, which are translated in this thesis to other cultural categories of objects on the basis of prolonged circulation.

The majority of the furnished burials from the Merovingian period are peculiar and interesting from a modern point of view, but they do not display the wealth that was encountered in, for example, the graves of Merovingian kings and queens or other members of the upper class. Although these persons had a public role and their public appearance and way of doing things affected others, it can be assumed that in high society other ambitions and incentives regarding the continuity of object transmission (and thus prolonged circulation) played a role. In this thesis, the focus is on the customs of the lower strata, of which the majority of the graves from the Vrijthof and Pandhof cemeteries are the

archaeological remains. Identifying various social groups and their associated customs of object transmission is an interesting addition to the field of research in Merovingian archaeology. Textual historians of the early medieval period thoroughly investigated the social group of families and the related subject of betrothal and marriage, which was surrounded with regulated customs that prescribed mutual obligations containing a material component. The account of the exchange and transmission of objects in the context of marriage arrangements serves to illustrate an alternative point of view for the static concept of inalienable personal possession. The existence of a cultural category of objects such as 'family heirlooms' was explored in this context.

The occasion of a marriage is for all strata in society an important device for social reproduction. A union through marriage is universally surrounded by the exchange of goods (immovables, movables, money), and it can be supposed that this was also the norm in the early medieval period. Historians explored the institution of early medieval marriage extensively on the basis of law codes in particular. The *leges barbarorum* describe the construction of a legal marriage, the exchange of goods that formalise and symbolise the 'transaction', and the rights of succession of the marriage connected spouses and their (legal) children. Explicit references to movables such as the objects that are known from graves are scarce in the legal texts: the exchanged goods seem to have involved land, money, cattle, slaves and household goods. These goods can be named the 'economic capital or economic heirlooms' of a family: inheritance rules served to safeguard these economic resources for the future line of a family and to secure the economic subsistence of a woman in the case of the untimely death of her husband. Although explicit references are scarce, it can be assumed that a selection of movables formed part of this 'economic capital', which was transmitted as economic wealth to the next generation, although probably not all of the movables.

It is suggested that the wide variety of Merovingian grave objects is not covered by the categories of 'ceremonial heirlooms' and 'economic family heirlooms'. Another sort of object transmission can exist outside the context of formal regulation. This is probably the reason why explicit references to the right of succession of movables are not a vast component of historical sources such as law codes. Merovingian society was a non-egalitarian society in which family groups constituted important social units. It is proposed that a collective such as a family group had the ambition to maintain their group identity. Therefore, it was not only necessary to transmit economic wealth, but also a 'family identity' (the complete aggregate of status, prestige, accomplishments, the memory of a shared past, etc., which distinguished them from other families) through a mechanism that might be referred to as 'cultural transmission'. This is a form of transmission that is reinforced by appropriate objects. This material correlate is elucidated by the term 'objectified cultural capital', and it forms the third cultural category of objects on the basis of the proposed model of ambition for continuous transmission.

These three cultural categories of objects (ceremonial heirlooms, 'economic' and 'cultural' family heirlooms) based on exchange and transmission show that the connection between objects and people was not as simple as the participants of the chronological debate pictured it: as inalienable personal property that was buried with the owners after their death. This conclusion, however, leaves one fundamental question open for debate: Why were objects that were subject to an ambition for intergenerational transmission buried with the dead? Their deposition with the dead terminated (at least temporarily) the line of transmission as it had existed previously. Several options for the burial of heirlooms in graves can be proposed.

Objects that formed economic resources are the least likely to be buried with the dead, and this is most likely the category that is the least represented in the burial evidence compared to the other two categories. Successful cultural transmission involves not only the ritual transmission of objects (the right moment of transmission), but also the rightful appropriation of the associated meanings. The moment of transmission is therefore a dangerous one. It is an option to consider the deposition of objects in graves as the absence of possibilities for the successful cultural transmission of both 'ceremonial heirlooms' and

'cultural family heirlooms'. Successful cultural transmission in families was framed in the various life cycle transformations of the family members. The burial of objects can, from this point of view, be interpreted as the impossibility to transmit the objects to the next generation. The correlations between grave goods and age offer, with this point of departure, possibilities to investigate personal life cycle developments in early medieval society. Additionally, it can be imagined that in a rapidly changing socio-political climate, as in the period between the fourth and eighth centuries, effective material symbolism probably changed equally rapidly, and that burial was a solution for an appropriate disposal of these objects. However, this option is rather speculative.

Nonetheless, both options illustrate that family heirlooms were partly composed of a family's objectified cultural capital for which the ambition existed to keep them in circulation through a mechanism of intergenerational cultural transmission. Death occurred at a young age relatively frequently, which made continuous successful cultural transmission difficult. This actuality results in various circulation periods for comparable objects. It is proposed that the ambition for the rightful transmission of the exclusive objects of elite bonding (ceremonial heirlooms) was more persistent, and that their prolonged circulation probably considerably exceeded those of family heirlooms, although this statement requires further thought. The consequences are that for the majority of the early medieval grave goods, a prolonged circulation of approximately two to four generations occurred. However, this circulation period varied considerably for comparable objects, which makes chronological analysis on the basis of similarity problematic.

Solutions for the understanding of furnished burials will always be proposed. The line of reasoning in this thesis aims to show that the chronology of grave goods relies much more on the discussion of their use in the community of the living than on the discussion of their meaning as funerary objects alone. If the complexity of the materialisation of social life is acknowledged as a general component of early medieval life, then the underlying assumption that the similarity of grave goods assemblages is a sound basis for ongoing chronological refinement requires reconsideration.

The grave goods from the Vrijthof and Pandhof cemeteries in Maastricht (the Netherlands) were only scarcely published up to now. Some decisions had to be made regarding their contribution to the chronological reconstruction of the Servatius complex. Viewing the majority of the grave goods as the inalienable personal belongings of the dead implies that their circulation does not exceed much more than a generation. Personal belonging as a concept is much more layered if the acquisition, appropriation, use and transmission of objects are considered. Personal property does not refer solely to personal inalienable ownership, but more to temporary ownership. Individuals are consecutive caretakers of family property, and they have a responsibility for the continuity of the line of intergenerational cultural transmission. The consecutive transformations in the personal life-cycles of family members were probably the appropriate moments of intergenerational cultural transmission. A (considerable) selection of the burial objects from the Merovingian period can be seen as a material correlate of this cultural transmission.

The focus on burial phases, which are in some instances limited to a period of 15 years, disguises the variation in circulation that can be present in one grave. The conclusions for the chronological debate are that it is more interesting to explore this variability and that it is hazardous to restrict burials to short chronological phases on the basis of their similarities. Especially insights into various circulation processes and their backgrounds should be considered as the major contribution of chronological research to the interpretative debate: the analysis of the variation in circulation offers another perspective on social life, and consequently a cultural perspective on burial chronology. This variation in individual graves, in contrast to the presentation of the restricted phases of burials, will be illustrated in Part II, in which the finds from the Vrijthof and Pandhof cemeteries are also published.

Part II

Chapter 4

The Typo-chronological Analysis of the Grave Goods from the Vrijthof and Pandhof Cemeteries in Maastricht (The Netherlands) from a Cultural Perspective

Only a small selection of the results from the excavations of the Vrijthof (1969/70) and Pandhof (1953/54) cemeteries has been published up to now, and the integration of the various components of the archaeological evidence in a single overview never came into being. The analysis of a complicated archaeological dataset, such as that from the Servatius complex, generally starts with the analysis of the chronological and topographical development of the site. The grave goods are one component of the evidence that contributes to this reconstruction. The main goal of the foregoing chapters was to illustrate that chronological analysis of grave goods from a cultural perspective results in the reconsideration of the accuracy of chronological methods and the pursued chronological refinement. This had already some effect on the chronological analysis of the finds from Maastricht, and maybe it has more profound consequences for future grave goods analysis. The pursued chronological phasing of the graves and grave goods from Maastricht is the analytic focal point in this chapter, and the results of the chronological analysis are published hereafter. Further research is required in order to connect the identified cultural categories of grave goods and objects with the actual burial evidence. The creation of distribution maps of the various finds in Merovingian Gaul, or independent data, as for example provided by physical anthropological research, can contribute to insights in this connection. Although skeletal remains were recovered from the cemeteries in Maastricht, and the dataset of the two cemeteries is considerable and unique, for solid significant statistical correlations between grave goods and a variety of biological features it appeared to be too fragmented and disturbed, and as a consequence too small to create a solid statistical research basis. Other analysis, such as isotope analysis, was only performed on a small sample of the skeletal remains, and general patterns cannot be identified yet. The application of the cultural perspective on the chronological analysis is therefore limited to the formulation of a number of research questions in relation to the results of the analysis of the skeletal remains and with some examples of variable circulation in isolated graves. These research questions can only be exemplified with the burial evidence from the Servatius complex, and they serve as an illustration for the study of chronology from a cultural perspective.

The cultural perspective in the chronological debate was in the preceding chapters formulated as the reflection on the connection between grave goods and the deceased and the associated circulation trajectories of the objects. Chronological methods as a practical exercise also have an analytical background, which, in short, relates to the structure and meaning of the created classification schemes and the establishment of chronological phases, short or long, on the basis of these schemes. In chapter 1 the basic assumptions of the process of seriation as a chronological method and their relation to the presumed accuracy of the achieved chronologies, especially chronologies that consist of short phases, were discussed. How, then, should chronological analysis be performed with regard to the theoretical drawbacks of chronological methods, and especially the pursued chronological refinement? The datasets of the Vrijthof and Pandhof cemeteries do not meet the requirements for a state of the art seriation or topo-chronological analysis, and an independent typo-chronology of the graves and grave goods for Maastricht or its hinterland cannot be obtained on the basis of these cemeteries alone. Existing typo-chronologies (which were for the majority obtained by seriation) have to form the basis for the **first** chronological analysis of the two cemeteries. The selected typo-chronologies are independent schemes;

they are created for one cemetery or a group of cemeteries on the basis of a distinct chronological method (seriation and/or topo-chronology). The suitability of the selected typo-chronology schemes for the chronological analysis of the finds from Maastricht will be discussed, as will the underlying assumptions of the produced typologies and the length of the absolute chronological phases i.e. in this part the theoretical backgrounds and the cultural perspective of a number of chronological studies are investigated. The conclusions, together with the conclusion to part I, contribute to the final choices with regard to the chronological phasing of the grave goods from the Vrijthof and Pandhof cemeteries. It will appear that insights in the variability in circulation of isolated graves provide data that can connect the burial evidence with the discussed cultural categories of grave goods and objects, but these are established on the basis of circulation periods of object types that were obtained with chronological methods that focused on the dating of graves. Other methods to gain more reliable date ranges of isolated object-types have to be considered.

4.1 The Vrijthof and Pandhof cemeteries: the construction of a typo-chronology

The typo-chronological analysis of the grave goods from the Vrijthof and Pandhof cemeteries are in this stage analysed as finds from isolated burial grounds and need to be placed in a broader perspective in future analysis.³¹⁴ The cemeteries belong to the Servatius complex (Fig. 2 and 10).



Figure 10. The cemetery plans of the Vrijthof and Pandhof cemeteries (after D.E. Smal).

³¹⁴ The analysis of all the archaeological evidence from the Servatius complex will result in two volumes; the first volume includes all the features of the Vrijthof site, the second includes the Pandhof site and the graves that were excavated in the Church and which formed, at least the graves before the first stone building phase of the Church (c. 550), one cemetery with the Pandhof site.

This complex consists of the ancient construction phases of the church of Saint-Servatius and the archaeological record that was excavated in and around this church. The archaeological underground was uncovered during several excavation campaigns. The first was undertaken in 1919³¹⁵, thereafter the excavation of the Pandhof in 1953/54³¹⁶, the excavation of the Vrijthof square in 1969/70, the excavation of the 'Cloister' (1980) and the Church (1982-1989)³¹⁷, and finally the excavation of one of the small remaining undisturbed parts of the Vrijthof square in 2004³¹⁸ formed the dataset of this Servatius complex. The excavations inside the Church revealed numerous late Roman and early medieval graves with grave goods, but these could not be incorporated into the grave goods analysis in this thesis, which is restricted to the Vrijthof and Pandhof sites.

The Vrijthof site was excavated from the end of 1969 till the beginning of 1970.³¹⁹ Trenches 4, 5 and 6 revealed the early medieval cemetery (Fig. 2 and 10). The cemetery was not completely excavated; only the borders to the south and west were identified. It seems plausible to expect that the cemetery stretched to the Roman road in the north. The excavation north of the road (Excavation Maastricht Theatre³²⁰) did not reveal any burials. The cemetery could have expanded more to the east than we know. Moreover, the section between trenches 5 and 6 was not excavated due to miscommunication between the excavators and construction workers. This section was destroyed and the ground (with the finds of the graves from this section) were discarded somewhere outside the city of Maastricht. The excavation of the Merovingian cemetery in trenches 4, 5 and 6 took around three weeks, which raises some doubts about the quality of the administration of the considerable number of graves, grave goods, skeletal remains and other features. The Vrijthof cemetery knows next to a horizontal lay out also a vertical stratigraphy, which is an unusual feature for Merovingian cemeteries. The analysis of the vertical layers of graves offers possibilities for the comparison of the typo-chronological results with the vertical positions of the graves.

The original documentation of the excavation was made available. This process resulted in the final outlines of the graves, their relative relation to other graves and the final assignation of the associated grave goods and skeletal remains.³²¹ This documentation formed the basis for the typo-chronological analysis of the Vrijthof grave finds. The post-excavation processes resulted in the absence of some finds, which were recorded during the excavation. For some finds it is unknown what happened to them, for others it is known that they were stolen from an exposition in the seventies. An important source of information for some of the absent finds is the Ypey-archive.³²² A number of finds that are missing can be described, more or less accurately, and classified on the basis of the information in this archive. The missing finds which cannot be reconstructed anymore, but for which it is known that they were found in a grave, are also incorporated in the overview of the grave finds. Their description will consist of only general terms such as pottery or metal. With all the documentation available the most complete overview of grave finds was obtained.³²³

³¹⁵ Kalf 1916; Goossens 1920; Panhuysen 1991, 16.

³¹⁶ The ROB (the former State Service of Archaeology) undertook the excavation. For publications of this cemetery: Glazema/Ypey 1953; Verwers 1986; Soeters 1989.

³¹⁷ The Archaeological Service of the City of Maastricht carried out this excavation. See for publications: Panhuysen 1988; 1990a; 1991.

³¹⁸ The AAC (Amsterdam Archaeological Centre) and the Archaeological Service of the City of Maastricht carried out this excavation. See for the publication: Dijkstra/Flamman, 2004.

³¹⁹ A detailed discussion of the history of the Vrijthof excavation will be published in the first volume of the all-round analysis of the Servatius complex.

³²⁰ Hulst 1994.

³²¹ F. Theuws and D. Smal analysed the field drawings, on the basis of which they produced the horizontal cemetery plan, a Harris-matrix of the vertical stratigraphy of the graves, and the composite of each grave which comprises the definite outline of the grave and the location of the grave finds and the skeletal remains. This analytical process will be discussed in the first volume of the analysis of the Servatius complex, in which, among others, the analysed cemetery plan, the composites of the graves, and the vertical stratigraphy will be published.

³²² Ypey studied a selection of the finds from the Vrijthof cemetery and made photographs and pictures of them, which he kept in his archive.

³²³ One category of objects from the Vrijthof excavation was already published in detail: The finds of bone and antler (Dijkman/Ervynck 1998).

The Pandhof site was excavated in 1953/54, and was executed in eight trenches (Fig. 10).³²⁴ The outlines of the excavated graves were recorded, and a considerable number of the finds and skeletal remains could be assigned to a specific grave number. The finds from what was identified as one grave during the excavation were often given the same find-number and as a consequence it was in some instances not possible to reconstruct the find-location of the grave goods, although this was possible for the majority of the finds.³²⁵ The Pandhof cemetery also has a complicated horizontal and vertical stratigraphy.³²⁶ The borders of this cemetery were not established, but it is known that it formed one part with the graves prior to the first stone building phase of the Church (around 550) that were excavated inside the Church and those that resulted from the so-called 'Cloister' excavation. It is remarkable that trenches 1, 2, 7 and 8 of the Pandhof excavation produced a high number of graves and grave goods and that especially in trench 3 hardly any findings were recorded. This is a strong indication that parts of the cemetery were not recorded due to excavation strategies.³²⁷

Ypey and Glazema published the most exclusive finds from the Pandhof cemetery already in 1955.³²⁸ Some of these finds are now lost, but can be described and classified on the basis of the published photographs and added descriptions. An extended archive of the finds was also made for the Pandhof finds, in the discussion of the grave finds referred to as the 'Pandhof-archive'. For each grave (numbered by the associated find numbers of the objects of what was during the excavation identified as a grave) a description and schematic drawing of most of the finds were included. On the basis of this information, it can be determined which finds were once present but now lost or corroded to such an extent that detailed identification is now impossible (especially for some iron objects such as axes/franciscas and seaxes). Some of these finds can be described, although summarily, and classified on the basis of this documentation.

The Vrijthof and Pandhof cemeteries form the basis for the first typo-chronological analysis of the Servatius complex.³²⁹ The Vrijthof location is a distinct burial ground within this complex. The graves from the Pandhof location formed, together with the graves excavated in the Church and Servaas Cloister, one cemetery before the first building phase of the church (before 550). After 550 it remains uncertain if the choice for burial *intra muros* or *extra muros* signified a profound difference regarding how these burial locations were perceived. The comparison of the burial locations of the Servatius complex will be a research subject after all the archaeological evidence is completely available and analysed, as will their identification as specific burial grounds in comparison with the characteristics of other early medieval cemeteries.³³⁰

Some information can already be summarised (Table 8). The Pandhof cemetery consisted of more graves than the Vrijthof cemetery. The majority of the graves and grave goods of both the cemeteries can be dated in the sixth and seventh centuries, but on the basis of the available documentation it can be concluded that the Pandhof cemetery started to be a burial ground some time

³²⁴ A detailed reconstruction of the excavation history will be published in the second volume of the detailed all-round analysis of the Servatius complex.

³²⁵ The composites of the graves and the exact find location of the finds in the graves will be published in the second volume of the analysis of the Servatius complex.

³²⁶ R. Panhuysen and N. Jaspers analysed the field drawings in detail on the basis of which they produced the horizontal cemetery plan, a Harris-matrix of the vertical stratigraphy of the graves, and the composite of each grave which comprises the definite outline of the grave and the location of the grave finds and the skeletal remains. This analytical process will be discussed in the second volume of the all-round analysis of the Servatius complex, in which, among others, also the analysed cemetery plan, the composites of the graves, and the vertical stratigraphy will be published.

³²⁷ A detailed description of the excavation of the Pandhof location will be published in the second volume of the analysis of the Servatius complex.

³²⁸ Ypey/Glazema 1955.

³²⁹ One of the first research goals of the analysis of the Servatius complex was formulated as the description of the chronological and topographical development of this complex during the late Roman and the early medieval period.

³³⁰ Merovingian cemeteries can be defined on the basis of various characteristics such as their location (rural cemeteries as opposed to cemeteries such as the Vrijthof and Pandhof which are located near a religious complex, although both are also different, etc.), duration, the relative number of burials of men and women, the sorts of grave goods, the location in the landscape (a study initiated by de Haas (2010)), etc. Thorough research on the characteristics of distinct burial grounds has until now only scarcely been executed, and for now it is only possible to identify some characteristics of the Vrijthof and Pandhof cemeteries, but it remains difficult to define them as a certain type of cemetery.

before the Vrijthof location, probably already in the late third century. Some of the Pandhof graves can, on the basis of the grave goods, be dated in the late Roman period and in the transition period (globally the fifth century) from the late Roman to early medieval period.³³¹ Late Roman objects were also reused in Merovingian graves (which was a common practice in the early medieval period, see chapter 3), and the only hard evidence for the assignation of these graves (without early medieval finds) to the late Roman period is provided by the stratigraphical analysis. A considerable number of the graves from the Vrijthof and Pandhof cemeteries contained, next to the grave goods, skeletal remains (Table 8).³³²

	Vrijthof	Pandhof	Total
Number of graves ³³³	320	498	818
Number of possible graves	136	332	468
Graves with grave goods	146	152	298
Datable graves	90	104	194
Graves with skeletal remains	262	315	577
Graves with skeletal remains and grave goods	106	75	181

Table 8. Basic information on the graves, grave goods and skeletal remains from the Vrijthof and Pandhof cemeteries (see also table 11).

Both the chronological methods seriation and topo-chronology require a relatively complete and extended dataset in order to create a classification of types that occur repeatedly in a series of graves. This requirement is not met by the datasets of the Vrijthof and Pandhof cemeteries; an independent typo-chronological scheme cannot be produced for these cemeteries, and neither can they be incorporated in an existing one, since such a scheme is not available for the Middle Meuse Area, which is considered to form a distinct cultural area of which Maastricht was one of the centres in early medieval times.³³⁴ Other choices with regard to the classification of the grave goods from these two cemeteries had to be made, and the resulting typo-chronological ordering of the graves has to be seen as preliminary. The use of existing typo-chronological schemes of cemeteries in more or less distant regions was in the first stadium of research the only option for the phasing of the graves from Maastricht. The evaluation of the typologies that stand at the basis of these chronological schemes and their suitability to form the basis for the classification and dating of the grave goods from the Vrijthof and Pandhof cemeteries, but also the identification of their specific cultural perspective on chronology, is therefore the main discussion in the following sections.

The typo-chronological debate has mainly been dominated by German and French research schools and is evaluated in detail in numerous publications (see chapter 1). The publication of the cemeteries from the area of *Trier* by Böhner (1958) forms the origin of this debate. It was different from preceding publications because it introduced a distinct method for relative dating, the so-called combinational analysis.³³⁵ This method distinguished itself from the foregoing dating methods in that it is based on the complete range of grave goods. Before that, the dating of graves was mainly based on comparisons with

³³¹ The excavations also revealed graves from later periods, but these are not the subjects of investigation here.

³³² The skeletal remains were for both cemeteries analysed by R. Panhuysen and E. Smits, both of the Amsterdam Archaeological Centre (University of Amsterdam). A detailed overview and discussion of the results will be published in the first (Vrijthof cemetery) and second (Servatius cemetery) volume of the full analysis of the Servatius complex.

³³³ On the basis of the analysis of the documentation of excavation. This number is different from the records made at the time of excavation.

³³⁴ The creation of an independent typo-chronological scheme for the Middle Meuse Area on the basis of both published and excavated but unpublished cemeteries from the area alongside the river Meuse from Maastricht to Namur is a research goal for the nearby future (*Anastasis*-project (research term: 2009-2013), Amsterdam Archaeological Centre).

³³⁵ Böhner 1958.

historically dated assemblages or on just a specific selection of grave goods.³³⁶ This last method formed the basis of Werner's publication *Munzdatierte austrasische Grabfunde* (1935). His dating method was based on coin-containing graves from which the development stages of the variety of associated finds in these graves were established. These development stages (*Stufen*) were subsequently dated on the basis of the associated coins. Böhner's objections to this method were related to the selective character of the material (only these objects associated with 'coin-containing graves') on the basis of which the *Stufen* were constructed, and on the complexity of the circulation of coins and the associated dating problems. Böhner perceived the cemeteries from the area of Trier suitable for the development of a method of relative dating and for the accomplishment of a more elaborate relative and absolute chronology, which should have validity for Merovingian cemeteries outside the region of Trier.³³⁷

A typology of grave goods is the basic condition for the realisation of relative and absolute chronologies. Böhner's typology, as he mentions himself, is relatively crude. A refined subdivision would blur the general picture of the chronological change of the grave goods he wished to develop on the basis of the available dataset.³³⁸ The material diversity and the number of undisturbed graves from the cemeteries of Trier were sufficient to obtain a certain object variety for every *Stufe*. *Stufen*, according to Böhner, should be interpreted as periods during which certain object-types were used as grave goods on the basis of which graves can be dated. The lifespan of the object-types are represented in his graphical representation of the five *Stufen*. The definition of multiple object-types for all the categories of grave goods was new in the research on Merovingian cemeteries, as was the definition of five *Stufen* on the basis of the lifespan of these object-types. The period before Böhner was characterised by the dating of graves, not on the dating of the life-span of object-types.

After the introduction of Böhner's combinational method the propositions for new typo-chronological schemes and discussions on their refinement obtained a prominent position in the chronological debate (see chapter 1). The plausible degree of chronological refinement on the basis of chronological methods such as seriation, as it was discussed in this thesis, can only be grounded on chronological considerations from a cultural perspective. It is, however, generally thought that the cultural backgrounds of objects and object deposition with the dead are of little distorting influence. Apart from cultural considerations it can be stated that the definition of criteria for typological purposes is a subjective and random exercise if the choices made are not substantiated according to the formulated research goals. For chronological research it is therefore necessary to establish a typological scheme that is defined on the basis of chronological significant criteria in order to diminish the influence on the obtained chronological orderings of parameters other than time as much as possible.³³⁹ In the following it is explored to what degree the typology schemes that are used for the chronological analysis of the finds from Maastricht meet this requirement, how the chronological phases in the resulting chronological orderings of graves were created, and if in this process some thoughts were expressed which relate to the creation of chronological significant typologies, to the cultural backgrounds of the objects which were selected as burial objects, and to relatively short or long chronological phases.

4.1.1 The published cemeteries of the Middle Meuse Area (Belgium) and the Netherlands

Recent archaeological research established the cultural homogeneity of the Middle Meuse area (the area along the river Meuse from Maastricht to Namur) during the early medieval period regarding trade and artisanal production (Fig. 11).³⁴⁰ It can therefore be suspected that the grave goods from this area display more similarities with the grave goods from the Servatius complex than those from other regions. The majority of the published Middle Meuse cemeteries are based on Böhner's typo-chronology,

³³⁶ See Böhner (1973, 7-12) for an outline of the development of dating methods going back to the discovery of Childeric's grave in 1653.

³³⁷ Böhner 1958, 15-16.

³³⁸ Böhner 1958, 12-13, 16.

³³⁹ An obvious example is the separate analysis of assemblages of men and women; it was suggested that also age at death is of influence on the ordering.

³⁴⁰ Plumier et al. 1999, 4.

which is mainly due to the fact that they were nearly all published some time ago (mainly in the sixties and seventies of the previous century). Next to methodological objections with regard to the application of typo-chronological schemes from other regions, it can also be stated that this work, published in 1958, is outdated by now in terms of chronological analysis. The cemeteries of the Middle Meuse area are therefore of little use for the choice of descriptive criteria and for the dating of the finds from Maastricht, but are required for insights in distribution patterns of resembling objects in order to find additional proof for the Middle Meuse area as a homogeneous cultural region regarding material culture.

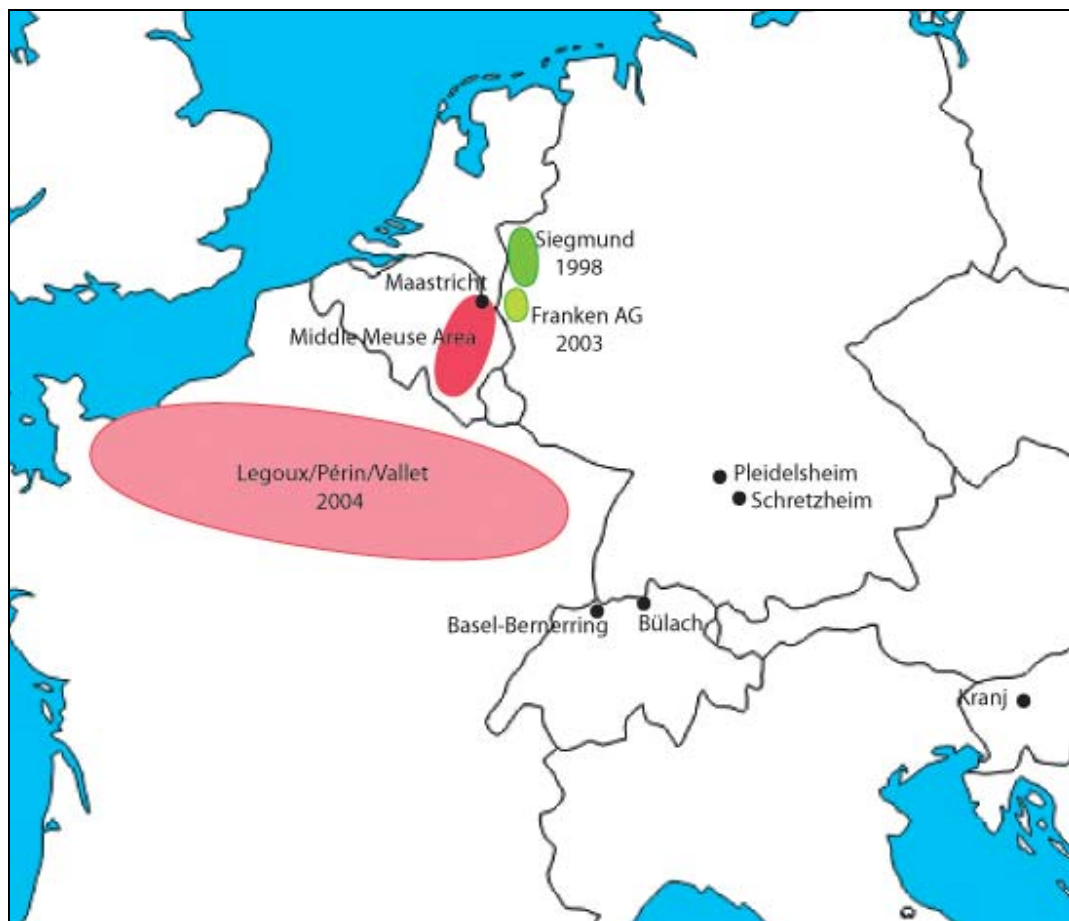


Figure 11. The research areas of the consulted typo-chronology schemes compared to Maastricht and the middle Meuse area.

A number of Merovingian cemeteries are known from what is nowadays the Netherlands, and only few have been published. It appears that the typo-chronological analyses of the published cemeteries depend on the work of Böhner, too, as it was observed for the publications of Belgian cemeteries. An exception is the publication of the cemetery of Lent.³⁴¹ Although the typology of Böhner is often used, much effort was put in an overview of numerous parallels for the grave goods. The publication as a result offers a thorough discussion of the majority of the grave finds. The last publication of the cemetery of Rhenen aimed at the reconstruction of the fifth century phase of this cemetery.³⁴² The burials of the fifth century were dated according to the Rhineland phases of Siegmund and were related to four generations (generations of 30 years; the short phases represent the subsequent generations)

³⁴¹ Van Es/Hulst 1991.

³⁴² Van Es/Wagner 2000, 116.

who formed the burying community in order to shed some light on the structure and size of the communities that were living there in the fifth century (since not much settlement evidence is known from the fifth century).³⁴³ The cultural aspects of object deposition with the dead in relation to the refinement of typo-chronological schemes have scarcely been a matter of debate in the Netherlands. The authors of the publication of Lent, however, showed considerable interest in the reconstruction of the production (centres) of the grave finds, their exchange and the distribution patterns of resembling objects.³⁴⁴ The results of their research can shed some light on various forms of object circulation and the consequences for chronologies.

4.1.2 The typo-chronologies of the Rhineland Area (Germany)

The research history of Merovingian burial chronology in the Rhineland Area is already discussed in detail in publications from the French and German language regions.³⁴⁵ The following sections involve the most recent contributions to the typo-chronological debate.

Siegmund (1998): Lower Rhineland Area

Siegmund offers a typology scheme of which the chronological significance of the defining criteria are tested in several ways and are therefore claimed to have been selected in an objective way.³⁴⁶ His research is based on Merovingian finds and sites of the so-called *Niederrhein* area (Lower Rhine Area), which includes the districts of Düsseldorf and Heinsberg (Figure 11).³⁴⁷ The creation of a complete overview of the very scattered and sometimes briefly published Merovingian finds of one restricted area was one of the main goals of this research.³⁴⁸ The period covered is specified as the Merovingian period, but the burial evidence that can be identified as 'Germanic', from 400 AD on, is also included.³⁴⁹ The study of the Merovingian period in the lower Rhine area ends with the abandonment of the cemeteries and the ending of the deposition of grave goods; in Siegmund's typo-chronological scheme this point is fixed at c. 740 AD.³⁵⁰

Other research goals were also formulated. Siegmund concludes, after a short introduction of the produced chronologies until then, that an all-inclusive and reliable basis for the chronological analysis he intends to perform for the Lower Rhine Area is not available. Typological and chronological schemes were for the majority developed on a very local level and are, as a consequence, very refined, which makes a comparison between the cemeteries and the unification of the typo-chronology schemes very difficult. On the other hand, he observed that Böhner's work, which has been, and still is, used extensively, is based on a smaller diversity and amount of material so that this typo-chronological scheme forms, among other reasons already discussed, an inadequate basis.³⁵¹ This is in fact a description of the actual research situation in the Meuse valley (to which the Servatius complex belongs). The ambition of Siegmund was to classify the finds of the Lower Rhine Area in a uniform and systematic way that was achieved, for most categories of grave goods, by using metrical characteristics and statistical procedures. Siegmund claims that, by doing so, the high degree of subjectivity in the selection of the defining criteria for typological groups is avoided and that it provides in a transparent typological scheme which is applicable on cemeteries of other regions.³⁵² The chronological significance of the typological criteria is tested with two procedures.

The various belt elements offer the first testing possibility, the so-called combinational testing.³⁵³ It is generally accepted that a crude classification of this group of finds has proven to have

³⁴³ Van Es/Wagner 2000, 116-117, table 1.

³⁴⁴ Van Es/Hulst 1991, 173-198.

³⁴⁵ See for example Périn 1980; Koch 2001.

³⁴⁶ Siegmund 1998, 17.

³⁴⁷ Siegmund 1998, 5 (*Quellenlage*: a detailed description of research area and number of finds).

³⁴⁸ Siegmund 1998, 4.

³⁴⁹ Siegmund 1998, 5.

³⁵⁰ Siegmund 1998, 5, 204-205.

³⁵¹ Siegmund 1998, 14-17.

³⁵² Siegmund 1998, 17.

³⁵³ Siegmund 1998,

chronological significance on a supra-regional scale.³⁵⁴ This knowledge is used to prove the chronological significance of the whole range of defined criteria for nearly each group of grave goods from the Lower Rhineland, but will itself also be tested in the end.³⁵⁵ The other testing method is the combination of the chronological results of the seriations with the results from the chorological analysis or horizontal stratigraphy, for which the cemeteries of *Krefeld-Gellep*, *Köln-Müngersdorf*, *Köln-Junkersdorf*, *Düsseldorf-Stockum* and *Duisburg-Walsum* were used. These were completely excavated and the development or deposition phases of these cemeteries are generally acknowledged as chronological phases.³⁵⁶ The with seriation obtained relative phases of graves are compared with the chronological phases of these cemeteries. The consistencies and discrepancies which were discovered were used to adjust and justify the achieved chronological sequence of the graves from the Lower Rhine Area.

On closer inspection it can be observed that the defining criteria for some types are tested on their chronological significance more accurately than those for other types. Siegmund's work resulted in very refined typological subclasses for certain categories of grave goods and more general ones for other categories. The category of pottery for example shows a very detailed typological scheme (especially for the biconical pots and the dishes/bowls), which is extensively tested on its chronological significance, in contrast with some other categories of grave goods, which are without evaluation only described according to the typological criteria used in previous publications.³⁵⁷ Another problem relates to the actual contents of some typological groups. It is observed that the inner coherence is questionable, especially in the type-groups for which metric criteria, such as the biconical pots, form the basis. But this can also be observed in a category such as the iron belts components with silver and copper alloy inlay, which are basically defined on the basis of decoration patterns. These decoration patterns appear to be considerable variables, and each typological groups of Siegmund contains examples with substantial differences. This poses questions to the chronological significance of such a group; obviously clear cut criteria such as the height or size of pots are not involved, but neither discussed as chronologically insignificant. If the similarity within one typological group can be questioned, should we not question the suggested accuracy of the positions of graves in a seriation? In the discussion of the grave goods from Maastricht (part II), it is regularly observed that individual objects can be assigned to a Rhineland type on the basis of a number of criteria, but that their specific characteristics become disguised as a consequence.³⁵⁸

Siegmund's ordering of graves on the basis of the chronological classification was divided in 11 relative Rhineland phases.³⁵⁹ In the description of the phases and their characteristics it is explained how the seriations of the graves of men and women were integrated on the basis of which observations the phases were distinguished from one another.³⁶⁰ The absolute dating of the phases is provided by coin-containing graves and the available dendro-chronological dates.³⁶¹ Siegmund created relatively short phases, especially for the sixth century, on the basis of the results of the seriations (Table 9). The chronological phases in the seriations show the dating of graves to one phase; the majority of the object-types are dispersed over more than one phase. The boundaries in the seriation were mainly drawn on the basis of the occurrence and disappearance of certain types together with the information of the topo-chorological analysed cemeteries.³⁶² This result is graphically represented in the '*Typentafel mit den chronologisch wichtigen Beigaben*', in which per phase only the significant object-types are

³⁵⁴ Siegmund 1998, 18. See also the discussion on belts in the analysis of the grave goods from the Vrijthof and Pandhof cemeteries in this thesis.

³⁵⁵ Siegmund 1998, 17.

³⁵⁶ Siegmund 1998, 17, 178-195.

³⁵⁷ This discussion is elaborated on in the description and discussion of the various groups of grave finds from the Vrijthof and Pandhof cemeteries in the following section of this thesis.

³⁵⁸ This is in the part on the grave goods from the Vrijthof and Pandhof cemeteries discussed where relevant. See for example the section on garnet disc brooches.

³⁵⁹ The seriations were performed separately on the graves of men and women. The 'neutral' graves were seriated together with the graves of men.

³⁶⁰ Siegmund 1998, 196-200.

³⁶¹ Siegmund 1998, 176-180, 200-203.

³⁶² Siegmund 1998, 196.

depicted.³⁶³ By doing so, a simplification of the development of grave goods deposition is presented.³⁶⁴ Some types have a circulation period which covers two or more phases, but are in this scheme represented as if they belong to one phase. This table seems to suggest that groups of objects occur and disappear suddenly at more or less the same period.³⁶⁵ Siegmund is aware of this simplification, which was already discussed in chapter 1. Nevertheless, Siegmund saw enough grounds for the construction of relative short phases and profound cultural conclusions with regard to these short phases.

Siegmund's cultural assumptions regarding the depositions of objects with the dead were for illustrative reasons already discussed in chapter 1. In short Siegmund thinks that the dead were buried with their personal belongings, but that the personal belongings were rapidly replaced in life instigated by changes in what was fashionable. This can, according to Siegmund, be concluded from the appearance of short chronological phases and the general absence of old objects in younger assemblages.³⁶⁶ It seems as if Siegmund's 'cultural conclusions' are based on the chronological results, but maybe these were already the general thoughts he had with regard to the material culture of the living. As it was argued in chapter 1 of this thesis, the exactness of the position of a grave in a seriation, even if it can be validated as a chronological seriation, can be questioned. It is therefore dangerous to create such short burial phases, especially as Siegmund did for the sixth century, and draw such strong conclusions on the basis of this specific result. Moreover, what becomes especially apparent in Siegmund's analytical exercise, the focus on the dating of graves to a specific phase, masks the underlying circulation periods of the objects that form the assemblage. This point will be further elaborated in the conclusion to part II and with the examples of graves from Maastricht, which illuminates the underlying variation in circulation periods. It will appear that Siegmund's cultural conclusions require some reconsideration.

Franken AG (2003): between the lower Rhine area and the Eifel (*Kölner Bucht*)

Despite these critical notes, the work of Siegmund needs to be acknowledged for its consequently tested chronological parameters of a considerable number of object-types. The typo-chronological results of Siegmund's work (his thesis of 1989, which includes the typo-chronological analysis in his publication of 1998) were evaluated and to some degree modified in the work of a group of researchers who collaborated in the so-called '*Franken Arbeits Gruppe Bonn*' (1991) with the aim to make the excavated Merovingian remains available (both habitation and funerary remains) of the region '*Von linken Niederrhein bis zur nördlichen Eifel*', or the *Kölner-Bucht* (Figure 9).³⁶⁷ Although published in 2003, their typo-chronological model is the unchanged model as it was already established in 1992 and which was used as the basis for the dissertations of the researchers involved. Siegmund worked closely with the members of the Franken AG, from which an article in the edited volume 'The pace of change' (1999) was a result. This article can be seen as the latest consensus between Siegmund and the Franken AG, although it was published before 2003.

The main differences between the work of Siegmund and the Franken AG relate mainly to the classification of the belts and biconical pots.³⁶⁸ The seriations were performed on the basis of the changed classification of finds. The Franken AG, in contrast to Siegmund, inserted the 'neutral' graves in the seriations of the graves of both women and men (Siegmund inserted the neutral graves in the seriation of the graves of men), what improved the statistical basis of the seriated graves of women, and on the basis of which scarce types could be combined better with a higher number of graves. The Franken AG decided to exclude the objects that date two or more phases earlier than their associated finds (the so-called Merovingian *Altstücke*), because it would influence the position of the graves in

³⁶³ Siegmund 1998, 204-205, Abb. 81.

³⁶⁴ Theuvs 2001.

³⁶⁵ Theuvs 2000,

³⁶⁶ Siegmund 1998, 200,

³⁶⁷ Müssemeier et al. 2003, 11-12.

³⁶⁸ Müssemeier et al. 2003, 13.

question in the resulting sequence.³⁶⁹ The Franken AG created 10 phases whereas Siegmund created 11, and the dating of these phases is somewhat different too (Table 9).

Siegmund (1989) 1998		Franken AG (1992) 2003		Nieveler / Siegmund 1999	
1: 400-440	40	1+2: 400-460/80	60/80	1: 400-440	40
2: 440-485	45			2: 440-480/90	40/50
3: 485-530	45	3: 460/80-510/25	30/65	3: 480/90-530	40/50
4: 530-555	25	4: 510/25-±565	40/55	4: 520/30-550/60	20/40
5: 555-570	15	5: ±565-580/90	15/25	5: 550/60-570	10/20
6: 570-585	15			6: 570-580/90	10/20
7: 585-610	25	6: 580/90-610/20	20/40	7: 580/90-610	20/30
8: 610-640	30	7: 610/20-640/50	20/30	8: 610-640	30
9: 640-670	30	8: 640/50-670/80	20/40	9: 640-670	30
10: 670-705	35	9: 670/80-±710	30/40	10: 670-710	40
11: 705-740	35	10: ±710-740	30	11: 710-740	30

Table 9. The length of the chronological phases of Siegmund (1989 and 1998) and the Franken AG (2003).

This difference is due to choices on the basis of which Siegmund established both the length of the phases and the circulation period of the types on the basis of their predominant occurrence in certain phases of the seriation. The Franken AG established the length of the circulation period of the object types from the beginning to the end of their occurrence in the seriation, but the borders of the phases in which the graves are dated are based on the most frequent occurrence of the object-types.³⁷⁰ The Franken AG is well aware of the statistical limitations, especially regarding the mixed datasets, such as those from cemeteries, on the basis of which these are performed. Although a longer circulation period was regarded as a better representation of reality, cultural backgrounds with regard to more or less long circulation periods were not expressed.

Nieveler and Siegmund (1999): The pace of change

The synthesis of the typo-chronologies of Siegmund and the Franken AG is presented in this article as the 'Rhineland typo-chronology'.³⁷¹ It is different from the publication of the Franken AG 2003 in that the 11 phases as formerly defined by Siegmund were maintained with more or less the same absolute dates (Table 9). The main characteristics of each phase are discussed in this article, and in the graphical depiction of each phase with their main chronological representatives it is possible to distinguish Siegmund's types from those of the Franken AG. The data-structure of Siegmund's seriation (1998) is tested on the basis of a multi-dimensional correspondence analysis and this forms the main discussion in the article.

This correspondence analysis is a multidimensional technique, opposed to seriation, which is a one-dimensional technique. It reveals the underlying structure of the dataset. or in other words it "...reveals the structural relationship between units/variables on the basis of their average similarity".³⁷² A seriation always produces a linear result, even if such an underlying structure is not present in the

³⁶⁹ Müssemeier et al. 2003, 13.

³⁷⁰ Müssemeier et al. 2003, 14.

³⁷¹ Nieveler/Siegmund 1999.

³⁷² Jensen/Nielsen 1997, 38.

analysed data.³⁷³ A seriation never shows the 'clusters' of graves (on the basis of their similarities) or the distance between these clusters. The linear result always suggests that there is a gradual change in grave goods repertoire, even when the structure of the data tends more towards clusters of graves with similarities, but which show considerable differences from each other. It is claimed that if the result of a seriation is the outcome of the analysis of a dataset of which the structure can be characterised as a gradual change on the basis of relative similarity, than the result of a correspondence analysis of the same data results in a nearly 'perfect parabola'. It was exactly this result that was obtained with the data on the basis of which Siegmund performed his seriations. This means that the grouping of the graves is consistent and that no other underlying structure than the gradual change in relative similarities is present. Groupings that appear in cluster-analysis indicate that other variables, such as for example differences in status, also structured the available dataset. But even if we can conclude that variables other than time are of limited influence on the result of the Lower Rhineland seriation, it can still be questioned what the chronological validity of the ordering and of short chronological phases is. A gradual change in material culture can be represented in the burial data to be seriated, but this does not mean that it guarantees the exact (or nearly exact) chronological positions of graves. Resembling graves, as it was reasoned in chapter 1, do not necessarily have to be contemporaneous.

For example, if seriations were performed on both the graves of men and women, then the result would be a diagonal line, but the correspondence analysis would show two different groupings because men and women have nearly mutually exclusive sets of objects. If we assume, for example, that the assemblage one is buried with is created or acquired in one's twenties, then similar graves could have different deposition times. Such a 'break' does not become visible in a seriation, nor in a multi-dimensional correspondence analysis. This is of course a hypothetical example, as it was already discussed in chapter 1, but it shows that even if the change in material culture from graves seems to change gradually, without obvious secondary groupings of graves, then the moment of burial is still not captured and absolute short phases would give a misleading picture of the rapidity of change in grave goods repertoires in the Merovingian period. It does show that the assemblages are relatively homogeneous, but the period in which they are created is not captured. The homogeneity of the assemblages can also be a result of a process which takes longer than only one generation. This will be illustrated below. Furthermore, if a seriation does in fact represent a gradual change in grave goods assemblages, then the drawing of lines in sequence of graves is a hazardous undertaking; it can be questioned on the basis of which observations the boundaries of the phases are established. That a change over time in material culture is captured in the seriations of Siegmund and the Franken AG, however, can be reasoned, it is only the exactness of the positions of the graves in a seriation that is questioned here.

The typologies of both Siegmund and the Franken AG can be validated as tested chronological typologies in which the general gradual change of a selection of the material culture of the Merovingian period is represented. The circulation periods of the object-types, however, are based on the position of the graves in a seriation, which can result in a misleading image. This image, however, can be perceived as more accurate than the short burial phases. These typologies are for now the most favourable for the classification of the grave goods from the Vrijthof and Pandhof cemeteries, although the specifics of the grave goods from Maastricht need to be considered. The longer dated lifespan of the objects by the Franken AG is the shortest accepted range for the final dating of the grave goods from Maastricht as will be discussed below.

4.1.3 The typologies of Northern France

Some of the studies of Merovingian cemeteries in Northern France evidently focused on methodological considerations. With the introduction of the possibility to order the graves and their contents by '*permutation matricelle*' it was claimed that an objective method for chronological analysis was finally

³⁷³ Jensen/Nielsen 1997, 37-38.

available.³⁷⁴ After that, adjustments and refinements were proposed, which eventually led to a 'chronology normalisée'.³⁷⁵ The backgrounds of this typo-chronological debate, as it took place in France, will be discussed in short here.

Périn (1980): The Ardennes and Meuse Area in Northern France

Périn offers a typological and chronological synthesis of several cemeteries which are located in a restricted area: the Ardennes and Meuse regions in Northern France (included in the research area '*entre Manche et Lorraine*' (Fig. 11)). By doing so, he introduced a new statistical method (*permutation matricelle*) in the scholarly debate in France, which equals the method of seriation, in order to obtain a relative sequence of graves in an objective way.³⁷⁶ This method results, according to Périn, in fewer uncertainties with regard to the obtained results than the topo-chronological analysis up to then performed.³⁷⁷ Périn's methodological principles are less obvious than those of Siegmund despite the title of his book (*La datation des tombes mérovingiennes. Historique- Méthodes-Applications*), which suggests otherwise. Although Périn shows thorough methodological insights in the problems of dating graves and grave goods, in the end it seems that the only consideration that was taken into account with regard to his classification scheme was its statistical workability. Périn and others published several other works with generally the same background after this publication, but the publication from 1980 records the extended methodological discussion that did not change dramatically thereafter.³⁷⁸ The complete process and considerations will not be repeated here; only some remarks with regard to the '*choix des types*' and the cultural considerations regarding the construction of relative and absolute phases will be commented on.

Because of Périn's focus on methodological issues it can be expected that the defining criteria of the typological classes would be discussed in detail, both on a practical and a theoretical level. Indeed, Périn states that the typological choices have a direct influence on the resulting chronology.³⁷⁹ The typological process is subjective, is not universal and should be experimented with.³⁸⁰ The *type archeologique* is an object-type which is defined by an optimal number of criteria that are representative for a series of objects and can change depending on the research goal pursued.³⁸¹ The problem of the *type archeologique* is that it needs to contain a sufficient number of specimens in order to show a meaningful distribution; if objects occur infrequently then a simple classification is required, and vice versa.³⁸² Although Périn is well aware of the fact that every research goal demands its particular *types archeologiques*, his main concern relates to the necessity of effective statistical groups of object types in order to obtain a sequence of graves that shows an ordering that can be divided in chronological phases. This statistical discussion is briefly about the number of objects that represent an object-type.³⁸³ Although discussed at great length, Périn's theoretical awareness did not form the basis for the construction of his classification scheme. His exercise resulted in less refined classes of grave goods than Siegmund defined for the Lower Rhine Area (Table 10). An advantage of such a typological scheme as Périn proposed, and which was later adjusted by Legoux, Périn and Vallet, is that the majority of the grave goods from other Merovingian cemeteries can be classified accordingly.

With regard to the length of chronological phases, Périn illustrates his cultural perspective with the possibility-scheme of Steuer (see chapter 1). Whereas Steuer claims that more precise dating than 50 years is questionable from a theoretical perspective, Périn thinks that the objects one is interred with are for the majority personal possessions which were gathered in the course of life. Inheritance was,

³⁷⁴ Périn 1980.

³⁷⁵ Legoux/Périn/Vallet 2004.

³⁷⁶ Périn 1980, 206, fig. 45.

³⁷⁷ Périn 1980, 129.

³⁷⁸ Périn 1980, 99-200.

³⁷⁹ Périn 1980, 119; 131.

³⁸⁰ Périn 1980, 120. The experiment is regarded as an ongoing process of changing the defining criteria of types until a workable distribution over the cemetery plan (or in a seriation) is obtained.

³⁸¹ Périn 1980, 119, 131.

³⁸² Périn 1980, 119-120.

³⁸³ Périn 1980, 131.

according to him, not a common practice, so the circulation period of the grave goods will generally not exceed the length of a lifetime/generation.³⁸⁴ Although these considerations can be compared to those of Siegmund, the length of the chronological phases of Périn exceeds those of Siegmund. Périn is in this sense more loyal to the fact that the boundaries in orderings of graves do not have to represent cultural reality, but are merely an analytical tool.³⁸⁵

Legoux, Périn and Vallet (2004): *entre Manche et Lorraine*

The publication in 2004 of Legoux, Périn and Vallet is the 'final' correction of the typo-chronology scheme that can be found in Périn (1980) and several publications thereafter (Fig. 11).

Périn (1980)			Legoux/Périn/Vallet (2004)		
ABD 1	450-475	25	PM	440/50-470/80	20-40
ABD 2	475-525	50	MA1	470/80-520/30	40-60
BCD/DE	525-550	25	MA2	520/30-560/70	30-50
DEF	550-600	50	MA3	560/70-600/10	30-50
DEFGH	600-620/30	20/30	MR1	600/10-630/40	20-40
EFGH/GHI	620/30-650/60	30	MR2	630/40-660/70	20-40
GHI/HI	650/60-690/700	40	MR3	660/70-700/10	30-50

Table 10. The length of the chronological phases of Périn (1980) and Legoux/Périn/Vallet (2004).

It is claimed that this scheme has more validity than the preceding ones since it is based on a more extended dataset (new graves and cemeteries that could be incorporated within the analysis) and the number of '*tombes-références*' has increased.³⁸⁶ It is also claimed that this typo-chronology scheme is applicable on regions outside 'between *Manche* and *Lorraine*'. The typo-chronology scheme is based on 1,200 grave goods assemblages from 70 cemeteries. Approximately 400 types are defined, which incorporate at least five to 10 examples.³⁸⁷ The absolute phases are borrowed from Ament and translated into French (Table 10). One phase is added, the pre-Merovingian phase. The main difference with the preceding work of Périn is the slightly increased length of the phases. No further comments with regard to changing perspectives of cultural reality and methodological issues can be found in this publication.

The typologies of Périn (1980) and Legoux, Périn and Vallet (2004) do not, in contrast to those of the Rhineland Area, consist of tested chronological types but of groups that were constructed especially to meet statistical requirements. This resulted in more broadly defined typological classes of which a majority has nearly a universal (Merovingian) value. The result of seriations and horizontal plotting of this classification scheme, the considerable length of time in which the objects are dated and the length of the absolute phases, however, relate better to the theoretical considerations made earlier on in this thesis. As it was argued in the discussion of the article of Nieveler and Siegmund, probably the gradual change of material culture from graves is more or less reflected in fine or less refined classifications and in the resulting seriations. This is also stressed by Périn, with the comment, which should be subscribed, that, although a relative ordering of graves is considerably certain and does represent the evolutionary

³⁸⁴ Périn 1980, 195.

³⁸⁵ Périn 1980, 248-253.

³⁸⁶ Legoux/Périn/Vallet 2004.

³⁸⁷ Legoux/Périn/Vallet 2004, 5.

change of material culture, it is the absolute dates of the phases, and therefore the dating of the types, which are less certain to reflect cultural reality.³⁸⁸

4.1.4 The typologies of Southern Germany, Switzerland and the Mediterranean world

A selection of cemeteries from Southern Germany, Switzerland and further south, from the Mediterranean area, were integrated in the analysis of the grave goods from the Servatius complex because some of the objects from Maastricht appear to have close parallels in these distant cemeteries. Such comparisons can also be observed in other cemeteries in Northern Gaul, which indicates that next to the identification of cultural homogeneous regions, as for example the middle Meuse Area and the Lower and Middle Rhine Area, other influences should be complied with. Koch presented an elaborate overview of the research history of chronological analysis in Southern Germany and Switzerland.³⁸⁹ The majority of the publications are based on topo-chronological analysis as chronological method and address methodological questions that relate to the process of classifying and dating.

The choice for the selected typo-chronology schemes from Southern Germany was based on their availability, clear and numerous parallels and the attempts of the researchers involved at more generality and comparison. The method of horizontal stratigraphy or topo-chronology, in order to obtain a relative and absolute chronology, was developed on the basis of the cemeteries of southern Germany and neighbouring regions in Switzerland.³⁹⁰ One of the most important publications, in which the methodological backgrounds are thoroughly discussed, is Koch's final publication of the cemetery of Schretzheim (Fig.11).³⁹¹

Various scholars worked on the excavation results of the cemetery of Schretzheim, excavated from 1890 to 1901, and from 1927-1934, but Koch published a complete overview in 1977. The introduction of this publication concerns the chronological divisions of the cemetery (*Stufen* 1-6 / 525-680 (125 years)), which was created on the basis of the plotted object-types on the cemetery plan. The finds were classified by pursuing the highest degree of differentiation possible for each reoccurring sort of object (that means creating as many types as possible).³⁹² No thoughts are expressed regarding the chronological meaning of the created classification. The *Leitformen* (index finds) are the finds which are restricted to one development phase or *Stufe*, in fact they define the borders of each phase. Next to these index finds Koch identified finds that are characteristic for each deposition phase, but which can appear also in other deposition phases. The creation and contents of each *Stufe* are discussed in six clearly identifiable steps. After drawing up an inventory of the index finds and typical types (showing a high concentration within the by the '*Leitformen*' bordered area) of the *Stufe*, the distribution of the graves in the deposition phases are discussed. The remaining steps are the discussion of anomalies; the graves which are located in a bordered area but which are characteristic for another deposition phase, the presentation of a list of datable graves, and the insertion of chronological relevant graves from cemeteries nearby (*Sonthheim an der Brenz* and *Niederstotzingen*). Thereafter, within the list of dated graves and their contents, Koch makes a distinction per grave between the *Leitformen*, *Langlebigeren* *Neue formen* (these appear for the first time in the deposition phase concerned, but appear also in graves of the deposition phases thereafter), and *Langlebigeren* *Ältere formen* (these appear also in the graves of the deposition phases before the phase concerned).³⁹³ The data that provided the absolute dates of each phase form the last discussion point. The absolute dates are based on the coin-containing graves and dated parallels. In the end, this resulted in a very thorough discussion of the contents of each deposition phase and each grave.

³⁸⁸ Périn 1980, 99.

³⁸⁹ Koch 2001, 26-44.

³⁹⁰ Werner 1953 (cemetery of Bülach) and 1955 (cemetery of Mindelheim); Neuffer-Müller/Ament 1973 (cemetery of Rübenach); Koch 1977 (cemetery of Schretzheim).

³⁹¹ Koch 1977.

³⁹² Koch 1977, 15.

³⁹³ Koch 1977, 35-47.

With regard to the length of the phases, Koch makes the remark that they form the average of the period of production and use of the objects. The period of use is considered to be the period in which the objects were used by the person they are buried with; Koch assumed that the majority of the grave goods represent the personal belongings of the deceased. Numerous phrases point towards this underlying assumption: *"Ebenfalls in der Jahrhundertmitte erwarb die Frau aus Grab 26 eine Cyprea...."*, and *"Wohl schon bald nach der Mitte des 6. Jahrhunderts gelangte eine Bügelfibel [...], in den Besitz der reichen Frau aus Grab 513"*.³⁹⁴ Koch assumes that extensive delay in circulation did not occur, at least not regularly, and that as a consequence graves can be dated to restricted phases without too many problems. Koch's phases have a range from 20 to 35 years (Table 11). The anomalies in the distribution groups are discussed, but not explained, only perhaps in one instance: graves of children can contain objects of which the custom to deposit them became regular some time later (when the majority of the women who acquired such objects died). In fact, these are incidences that can become visible on cemetery plans (assuming that they represent a gradual development in time), and never in a seriation; the graves of children would be placed in relation with the elder women with comparable grave goods. The cemetery starts at the beginning of the sixth century. The sixth century in Schretzheim is divided into relatively short phases (20-30 years), which have different dates than those of the sixth century in the Rhineland and Northern France.

Recently, Koch performed a seriation with the burial evidence from the cemetery of Pleidelsheim (Fig. 11).³⁹⁵ After a thorough discussion of the research history of the chronological analysis in Southern Germany, the seriation of the finds from the cemetery are discussed. They are integrated in the seriations of women and men of several cemeteries from Southern Germany, on the basis of which a new chronological phase system for the early medieval period in Southern Germany was introduced (SD phase 1-10: 430-670). Koch used the method of seriation for this cemetery because the cemeteries of the first phases of the early medieval period are not characterised by the neatly development phases as the later phases are.³⁹⁶ Koch is well aware of the fact that a classification of finds forms the basis of all chronological analysis, and that the establishment of such a scheme is subjective and is until now theoretically poorly founded.³⁹⁷ The change in material culture can be fast or slow; this, however, cannot be read in a classification. Koch thinks that the seriational ordering of graves is not only a reflection of the variable time, but that socio-economic and ethnic influences should also be accounted for.³⁹⁸ The chronological results of the seriation, but also the various grave structures and the relative richness of the graves, are plotted on the cemetery plan. It shows, according to Koch, that groups of families can be identified on the cemetery plan on the basis of these distributions.³⁹⁹ Koch thinks that the connection with a family group was displayed in the funerary rites. Whether this was the outcome of the deposition of grave goods for the after-life, or that one was buried with their objects which represented him/her in life, is not finalised by Koch. However, in these remarks we can see a careful change in opinion compared to the ones expressed with regard to grave goods deposition in the cemetery of Schretzheim.

Koch 1977 (Schretzheim)		Koch 2001 (Southern Germany)	
		SD-phase 1: 430-460	30
		SD-phase 2: 460-480	20
		SD-phase 3: 480-510	30
		SD-phase 4: 510-530	20
Stufe 1: 525/30-545/50	15/25	SD-phase 5: 530-555	25

³⁹⁴ Koch 1977, 186.

³⁹⁵ Koch 2001.

³⁹⁶ Koch 2001, 43.

³⁹⁷ Koch 2001, 27.

³⁹⁸ Koch 2001, 44.

³⁹⁹ Koch 2001, 363.

Stufe 2: 545/50-565/70	15/25	SD-phase 6: 555-580	25
Stufe 3: 565-590/600	25/35	SD-phase 7: 580-600	20
Stufe 4: 590/600-620/30	20/40	SD-phase 8: 600-620	20
Stufe 5: 620/30-650/60	20/40	SD-phase 9: 620-650	30
Stufe 6: 650/60-680	20/30	SD phase 10: 650-670	20

Table 11. The length of the chronological phases of Koch on the basis of Schretzheim (1977) and other cemeteries from Southern Germany (2001).

The most important cemeteries from Switzerland (Fig. 11) for comparisons with the finds from Maastricht are the publications of the cemetery of *Bülach*⁴⁰⁰ and *Basel-Bernerring*,⁴⁰¹ and from the Mediterranean world the cemetery of *Kranj* in Slovenia (Fig. 11).⁴⁰² It appeared that a number of grave goods from Maastricht are identical or nearly identical with the objects from these cemeteries. Their utility is not sought in typological and dating possibilities but merely in conclusions about the cultural connections Maastricht has experienced during the Merovingian period. Another interesting discussion regarding similar objects from such distant cemeteries concerns the 'origin' of the objects involved and the decision to consider them as 'exotics'. This discussion is elaborated on in the section on the exceptional bronze and silver plate buckles with fixed plate which show striking similarities with plate buckles from for example *Kranj* and *Basel-Bernerring*.⁴⁰³

The topo-chronological method, which has mainly been developed on the basis of the cemeteries from Southern Germany, cannot be applied to the cemeteries of the Servatius complex; too much is missing of the cemeteries in order to presume that a gradual development of the cemeteries can be extracted from the resulting plans. The cemeteries from South Germany are useful for generating distribution patterns of finds that resemble the finds from Maastricht. The dates of the objects are used when other dating possibilities are lacking. The exactness of such dates, however, as it was discussed above should be questioned, as it will also be discussed in the descriptive catalogue of the finds from Maastricht when the cemeteries from the southern part of Merovingian Gaul are used.

The above-discussed studies serve as the basis for the chronological analysis of the grave goods from the Vrijthof and Pandhof cemeteries. It can be concluded that in all of these works the cultural perspective that the deceased were buried with their inalienable personal property, and therefore that a relatively regular and rapid change in the grave goods repertoire of approximately one generation can be observed, is the predominant one. Therefore, when using typo-chronology schemes the use of classification schemes, the actual dating of the objects, and on the basis of these circulation periods of object-types the dating of the graves, are all separate issues. The discussion of these aspects is incorporated in the description and analysis of the Vrijthof and Pandhof finds.

4.2 Cultural categories of grave goods and cultural categories of objects, physical anthropological research and the chronological debate: a new cultural perspective on burial chronology

Burial chronology from a cultural perspective in the first place requires independent data to investigate a number of presuppositions. The cultural perspective until now has predominantly been that the dead

⁴⁰⁰ Werner 1953. (the method of topo-chronology on the basis of the chronological change of belt fittings from the graves of men).

⁴⁰¹ Martin 1976 (the method of topo-chronological analysis).

⁴⁰² Stare 1980.

⁴⁰³ See the section on the Vrijthof and Pandhof belts.

were buried with their (inalienable) personal possessions and that as a consequence a rapid change of the contents of grave goods assemblages can be observed in the burial evidence and that old objects (Merovingian antiques) are rarely present in the burial evidence. The formulation of cultural categories of objects in chapter 3 on the basis of exchange and transmission served to illustrate that the relation between people and material culture was more complicated and that the regular occurrence of prolonged object circulation before deposition is a serious option. Such premises, or such a new cultural perspective on burial chronology, require to be tested for each cemetery. The independent data that provide possibilities to investigate a number of premises are the results of physical anthropological research, and other scientific methods such as isotope analysis, but also comparisons with distribution maps of objects in Merovingian Gaul (Table 12).

Cultural categories of objects on the basis of exchange/transmission	Cultural categories of grave goods (contexts of selection)	Available 'independent' data
Ceremonial heirlooms (ceremonial gift-exchange)	-Inalienable group-(family-)possessions -Gifts to the deceased	-Biological sex / age -Other biological features -Vertical stratigraphy and intersections (independent chronology) -Isotopes (mobility) -Distribution maps of objects (mobility) -Correlations between various object features and biological features
Economic resources	-Alienable personal and alienable family possessions	
Objectified cultural capital	-Inalienable family possessions	
Sacred heirlooms (ancestral or supra-natural exchange)	-Inalienable group-(family-)possessions -Inalienable personal possessions -Gifts to the deceased -Alienable personal and alienable family possessions -Occasional objects	

Table 12. The categories of data on the basis of which a 'cultural perspective' can be investigated.

The dataset of the Servatius complex at first sight seems to offer these analytical possibilities because it consists of an extended set of skeletal remains of which it was possible to determine a diversity of biological features⁴⁰⁴ but also independent radio carbon dates and isotope analysis, and both the cemeteries know a vertical stratigraphy. The independent dating possibilities will not be the main discussion in the following.⁴⁰⁵ The central discussion regards research questions which can be thought of that can contribute to chronological analysis from a cultural perspective.

⁴⁰⁴ Dr. R. Panhuysen and Dr. E. Smits analysed the skeletal remains of the Vrijthof and Pandhof cemeteries and the detailed results will be published in the first and second volume of the full analysis of both cemeteries.

⁴⁰⁵ As it was already mentioned, information about the vertical development is available for the Vrijthof and Pandhof cemeteries, and also a sample of the skeletal remains from the Vrijthof cemetery was carbon dated. Is this information of help for the establishment of the circulation periods in Maastricht? Again it must be said that the datasets were considerably fragmented. The Harris-matrices will be published in detail in the two volumes of the full analysis of both cemeteries, but for now it can be mentioned that the matrices are not detailed enough to establish or check the circulation periods of the complete variety of object-types and neither for the object-types that are present in the established vertical sequences of graves. This information, however, is suitable to check the relative positions of dated graves on the basis of the grave finds. The small sample of skeletons that were carbon dated offer the same opportunities; their dates can support the dating of the graves on the basis of their grave goods, but for detailed information about circulation periods of objects-types the sample was too small. Because the information was not that detailed, both the vertical sequences of graves and the results of the carbon dating did not distort the datings of the Maastricht graves on the basis of objects as they are listed in this thesis (list 1).

4.2.1 Cultural categories of grave goods: the connection between grave goods and the deceased

The most important results of the analysis of skeletal remains which contribute to these aspects of the chronological debate are the biological sex and age of the identified individuals. Other information such as for example the observed fractures, the cause of death, pathology and the whole range of metric variables, will not be discussed here, but these also offer possibilities for comparisons and correlations with for example specific features of the burial evidence. Information about biological sex and age, on the other hand, make it also possible to discover certain general patterns in burial patterns and how they change in time. Such interpretations require statistical analysis. The datasets of the Vrijthof and Pandhof, separate, but also together, are, however, too small to form a sound statistical basis for this sort of analysis. First, the number of undisturbed graves is difficult to estimate due to poor excavation administration. In the second place, the number of graves with skeletal remains of which the biological sex and the biological age with a certain precision are determined, and which also contain grave goods is relatively low. An overview of the gender and age groups with associated grave goods assemblages can be generated, but the results can hardly be considered to form a basis for significant statistical analysis. The solution is to offer a list of significant research questions regarding biological sex and age in relation to grave goods assemblages in order to investigate some general correlations which relate to the central theme of this thesis: what is the nature of the connection between grave goods and the deceased and which cultural categories of objects on the basis of circulation are of influence on chronology?

Biological sex and age, gender and cultural age

It can be stated that early medieval grave goods accentuate or express gender. This is referred to as the 'artefactual construction of gender', which can be practiced in both life and death.⁴⁰⁶ The establishment of the artefactual gender is more ambiguous than the determination of the biological sex of the deceased. Publications of Merovingian cemeteries traditionally present (as can be observed in the majority of the tables of contents) grave goods as categories which are either considered to be associated with women or men, or as neutral objects (with no exclusive association with either women or men). Although this grouping is generally based on modern perspectives of the association of biological sex with certain objects (weapons are associated with men and jewellery with women), a nearly complete overlap can be observed for the estimated artefactual gender and, in the cases that it was possible to determine, the biological sex.⁴⁰⁷ Although the binary opposition is quite convincingly demonstrated by the tests Halsall performed on the cemeteries of Lorraine, remarks can be made upon the use of his crude classification of the grave goods. In this respect the groups of grave goods that are generally regarded as neutral are of special interest. Further research can elucidate whether specific features of these neutral objects, such as for example decorations on pots, can more often be associated with either men or women. Moreover, the discrepancies, although they are infrequent, between gender and biological sex can be interesting to explore somewhat further. These discrepancies are often attributed to mistakes or uncertainties in the investigation of the skeletal remains or are related to flaws in the administration of the excavation. Deviant correlations, however, can also point towards conscious choices.

There are different ways to decide which objects-types should be considered feminine, masculine or neutral. Mostly this is decided in a quite subjective way, based on preconceived modern notions about objects and their gender association, but also on general knowledge of object associations; weapons are hardly ever associated with items of jewellery. Objects such as knives, combs, finger rings, purses, and pottery and glass vessels are generally found in the graves of both men and women and are the so-called 'neutral' objects. The list of dated Vrijthof and Pandhof graves (list 1) shows what the determined cultural gender and biological sex of the respective graves are.

⁴⁰⁶ Halsall 1995, 79.

⁴⁰⁷ Halsall 1995, 80.

Significant correlations between the age of the deceased and object-types have also been observed, although, in contrast with gender, this will not for every cemetery result in comparable correlations.⁴⁰⁸ The detected correlations in various studies indicate that the age of the deceased was a social category which was also constructed with specific objects. Cultural age is probably related to various defining events in life and life-cycle transformations, but it can also be the age of the deceased as the survivors constructed it. Biological and cultural age does not have to match in the same degree as biological sex and gender. Two 16-year old women, for example, can have a different cultural age which depends on a diversity of social factors, such as for example matrimonial status and maternity. Therefore, predictive age-assignment on the basis of grave goods, in contrast with biological sex, should be dealt with cautiously. The results can also vary from cemetery to cemetery. The correlations can predominantly be found for age-groups, but exact biological ages are more difficult to obtain.

Moreover, cultural age is much more difficult to categorise on the basis of objects than cultural gender. The artefactual construction of age is already in our modern western society not unambiguous, and it is even more difficult to think of categories of objects that associate with a certain age in the Merovingian period. Jewellery can easily be perceived as feminine, but for which age categories are certain adornments considered appropriate in Merovingian times?⁴⁰⁹ Although the model is based on a small dataset, Halsall convincingly demonstrates that the detected correlation between age groups and certain object-types emerges quite consistently for the sixth century cemeteries from his research area (Table 5).⁴¹⁰ As Halsall already expected on the basis of anthropological analogy, the group of young adults receives the most extended range of grave goods. For the women, it was observed that they receive the full range of female-specific objects earlier, namely within the age group of Juveniles (14-22), but still are accompanied by them, although with less jewellery, in the following age group. For the men, the full range of gender specific objects is placed in the grave within the age category of Young Adults (22-40). These correlations, however, change in the seventh century. These correlations were found in Lorraine, but it must be noticed that these correlations are not as predictive as masculine or feminine objects are for the biological sex of the associated person.

Cultural categories of grave goods: significant research questions

The basis for the analytical possibilities is offered by an overview of the associations between biological sex, age groups and 'sorts' of assemblages of finds. Such an overview was for example offered by Halsall (see chapter 2). However, this picture has to be established for every isolated cemetery or region. Such an overview should be created separately for the sixth and the seventh century, as Halsall showed, in order to discover changing patterns. These overviews show the percentage of each age group in the cemetery, the percentage of furnished burial in each age group, the relative 'richness' of the age groups, the associated sorts of assemblages of grave goods with age groups and biological sex, *etc.* It will be clear that for the identification of significant patterns a considerable amount of data is required, which the Vrijthof and Pandhof cemeteries cannot provide (Table 13).

	Vrijthof	Pandhof	Total
Graves with grave goods	146	152	298
Investigated individuals	278	318	596
Women (biological sex)	95	90	185
Women with grave goods	35	22	57
Aged women with grave goods	33	22	55

⁴⁰⁸ Halsall 1995; 1996; Stoodly 2000; Brather 2008; Stauch 2008.

⁴⁰⁹ See for example Stauch (2008) who investigated the correlation between gold or silver and age groups.

⁴¹⁰ Halsall 1995, 83-86.

Men (biological sex)	95	93	188
Men with grave goods	31	12	43
Aged men with grave goods	30	12	42
Sex indeterminate	88	135	223
Sex indeterminate with grave goods	37	38	75
Aged individuals, sex indeterminate, with grave goods	35	31	66

Table 13. The numbers of graves with grave goods and the analysed biological features of the skeletal remains from the Vrijthof and Pandhof graves.

The context is not for all the investigated individuals known, and of the individuals from known contexts, not all can be identified as a grave. The available contexts on the basis of which an overview of correlations between gender, age and associated finds can be created is for the Vrijthof a number of 63 contexts (grave goods that are associated with women or men of which the age was determined) and for the Pandhof a number of 34 (total for both cemeteries = 97 individuals). However, not all these contexts were identified as graves. Together with the observation that a majority of the graves can not with certainty be identified as undisturbed, that for the majority of the graves only one or few grave goods are available and that in some graves more than one individual was identified for which it is difficult to establish to which individual the eventual grave goods can be attributed, it is concluded that the informative datasets are too small and will not offer significant correlations. Moreover, some assemblages of grave goods, which also include interesting and elaborate ones, were not associated with skeletal remains.⁴¹¹ These grave goods as a consequence fall outside such overviews. When the 100 aged individuals of the Vrijthof and Pandhof are assigned to specific age groups this becomes especially problematic. Moreover, of the individuals of which the age was determined a considerable group consist of age assignments that could not be more precise than 'adult' (20-80 years, or other broad groups). These age determinations cannot be used for an overview of correlations between age groups and grave goods. However, to compensate for the absence of such a significant overview, cultural research questions for which such overviews are indispensable can be formulated and illustrated here with graves of the Vrijthof and Pandhof as examples. They relate to the formulated cultural categories of grave goods and the cultural categories of objects on the basis of transmission.

The chapter in which the cultural categories of grave goods were identified served also to investigate whether the primordial assumption of inalienable personal possessions is one to be maintained. It was concluded that such a category could have existed, but that it was one of the many options of how early medieval people appreciated the objects that surrounded them; it was suggested that such a notion of material culture does not offer an encompassing explanation for furnished burial. This conclusion can be substantiated to some degree with the available burial evidence from Maastricht. If especially dress-related objects were inalienable personal possessions one was in the end buried with, then the elderly would be associated with such objects to the same extent as the younger generations of which it can be suspected that they already acquired these items in life. A series of basic research questions with regard to this subject can therefore be thought of on the basis of which this practice of burial with inalienable personal possessions can either be rejected or accepted as a general practice for the cemeteries to be analysed.

Were (a selection of) the dead buried with their inalienable personal possessions?

-What is the percentage of elderly (above 50/60) in the burial population?

⁴¹¹ Pandhof grave 11321 for example, which can be considered to be the 'richest' grave of the Pandhof cemetery with gold and silver jewellery, was not associated with skeletal remains.

- What is the percentage of elderly that are buried with objects?
- What is the percentage of each age group that were buried with objects?
- How can the objects in each age-group be characterised?
- What other characteristics besides 'dress-related' objects can be thought of?
- What is the distribution of these categories over the age groups?
- Etc.

The Vrijthof cemetery shows that of the investigated individuals, six were assigned to the age group 57-73. Of these, one woman was buried with grave goods, but the grave 'goods' consisted only of one polychrome bead.

From the Pandhof cemetery, nine burials with individuals with aged between 57 and 80 can be identified. Of this group, one woman was buried with grave goods (grave 11388). The find was a coin, late Roman, which however is now lost, so further information is not available.

The selection of graves within this age-group is small, but it probably points towards the suggestion that the elderly are less regularly buried with grave goods than the age groups below them (see also the section below). The elderly would be buried with their acquired items if burial with inalienable personal possessions was custom. It can be stated with care that this was not a regular practice in Maastricht, but also elsewhere considering other studies of correlations between grave goods and age groups. However, burials with dress-related items and weapons with the elderly do appear in Merovingian Gaul. The suggestion for now is, although the evidence is extremely meagre, that burial with personal possession is insufficient as an explanation for furnished burials in Maastricht. The relation between people and objects was more complicated and several connections in life can exist together. The moment of burial, however, is a moment in which it must be decided how this connection was maintained, transformed, created or dissolved. A general conclusion is that the older one got, the less likely it is that furnished burial was accorded, but the correlations should be investigated for each cemetery again.

4.2.2 Cultural categories of objects on the basis of exchange and transmission: moments of transmission and the variety of circulation periods

The conclusion is that the relation between the living and material culture is more complicated than it was pictured in chronological studies. The exclusive objects that were exchanged in elite networks are not difficult to identify, but it would again be too simplistic to consider exchange, keeping and transmission as a process which is only related to the most exclusive objects and elite networks. The problem is therefore how these processes with regard to the social strata below and to the majority of the burial goods can be identified. Continuity of transmission was related to three categories of objects; the ceremonial heirlooms and the family heirlooms, of which the latter was further categorised as 'economic' capital and as the objects that objectified cultural capital of which the intergenerational transmission was of major importance for the maintenance of a group identity. It was reasoned that the objects of the last sub-category were the most likely to become grave goods. This was related to the organisation of the moments of transmission around life-cycle developments and therefore their identification as dangerous moments during which the continuity of transmission could end. When the appropriate transmission of objects failed, their deposition in a grave was an alternative option. Their presence in graves points towards regular failure of transmission, in other words the loss of these objects for the transmission of family identities. This continuity of transmission is not extremely extended (such as it can be possible for ceremonial heirlooms), but will exceed more than one generation. How can these limited prolongations and variability in circulation be observed in the burial evidence?

Probably it was already manifest in the publications of Merovingian cemeteries; the circulation periods of objects are hardly ever confined to one phase (generation), although the graves themselves are dated to restricted phases. The presentation of the results is considerably focused on the dating of graves, which does in fact mask the variation of circulation within each grave. Acknowledging that the

variety in circulation is informative seems to plead for typological and chronological refinement, but the problem is that the variety in the duration of transmission of individual objects cannot be captured through modelled averages, such as those provided by chronological methods like seriation. This means that the representation of circulation in the burial record has to be addressed differently and that the circulation periods of isolated object-types should be obtained differently than only on the basis of chronological analysis of graves. This requires further research which could not be executed in the context of this thesis, but some research questions can be suggested and some examples from Maastricht elucidate the complicated backgrounds of burial phases of graves.

The grave as a construction of variable circulation and as evidence for object transmission

The examples of graves from Maastricht serve to illustrate in the first place that the dating of a grave to one phase disguises the complexity of circulation that can be present in the same grave. Combined with the biological sex and age of the associated persons, this can give some insights regarding continuity in transmission and the moments around which transmission to the next generation is organised for a variety of objects.

The following graves from Maastricht have resembling brooches (Fig. 12; Appendix 2.1-4). This would, in the chronological method of Merovingian burial chronology, be a strong indication for the contemporaneity of the graves. However, the ambition to date the assemblage of graves goods to short phases does mask the variety of circulation. The variety of circulation is revealed in these examples.

Vrijthof grave 95 (Appendix 2.1)

Biological sex: woman

Cultural gender: woman

Age: 33

Brooch, garnet: C-F? (460/80-610)

String of beads: Maastricht: B-E (400-580/90)

Belt, belt stud, bronze: D (510/20-565)

Belt, buckle, bronze: D-E (510/20-580/90)

Coin: Antoninianus, barbarian imitation

Coin: Antoninianus, Quintillus

Comb, comb case: D-F (510/25-610/20)

Knife: -

Pottery Vessel: Missing

Rest: -

Bracelet, glass (fragment La Tene bracelet): -

Earring, silver: F-H (580/90-670/80)

Earring, silver: F-H (580/90-670/80)

Date of grave: 580/590-670/680

Range of circulation: B-H (400-670/80): **280 years**

Merovingian antiques: not observable in a seriation, but could have been present

Vrijthof grave 166 (Appendix 2.2)

Biological sex: woman

Cultural gender: woman

Age: 20-40

Brooch, garnet: D-E (510/20-580/90)

String of beads: D-H (510/20-670/80) Belt, strap end: missing Belt, plate buckle: G-H (610/20-670/80) Belt Part, strap end: G-H (610/20-670/80) Key: C-F (460/80-610/20) Purse: G-H (610/20-670/80) Date of grave: 610/620-670/680 Range of circulation: C-H (460/80-670/80): 220 years Merovingian antiques: not observable in a seriation, but could have been present
<u>Vrijthof grave 187 (Appendix 2.2)</u> Biological sex: woman Cultural gender: woman Age: 27 +/- 3 Brooch, garnet: E-F (565-610) Brooch, garnet: E-F (565-610) String of beads: Maastricht D-G (510/20-640/50) Belt, buckle: C-D (460/80-565) Pendant, filigree: D-F (510/25-610/20) Pendant, filigree: D-F (510/25-610/20) Pottery, biconical pot: D-E (510/20-580/90) Earring, silver: C-E (460/80-580/90) Earring, silver: C-E (460/80-580/90) Finger ring: - Date of grave: 510/25-580/590 Range of circulation: C-F (460/80-610): 150 years Merovingian antiques: not observable in a seriation, but could have been present
<u>Pandhof grave 11220 (Appendix 2.3)</u> Biological sex: Woman Cultural gender: Woman Age: 19-28 Brooch, garnet: D-E (510/20-580/90) Brooch, garnet: D-E (510/20-580/90) Brooch, bow: D-E (510/20-580/90) Brooch, bow: D-E (510/20-580/90) Beads: - Date of grave: 510/25-580/590 Merovingian antiques: no Range of object circulation: D-E (510/20-580/90): 80 years
<u>Pandhof grave 11321 (Appendix 2.3)</u> Biological sex: - Cultural gender: Woman Age: - Brooch, garnet: D-E (510/20-580/90)

Brooch, bow: E (565-580/90)
String of beads: Maastricht: B-E (400-580/90)
Pendant, filigree, gold:
Belt, buckle, silver: D-E (510/20-580/90)
Pendant, silver: -
Coin: 318-320
Gold thread: -
Earring: C-G (460/80-640/50)
Pendant, crystal ball: C-G (460/80-640/50)
Coin, pendant, silver: c. 500-600
Date of grave: 510/25-580/590
Range of circulation: B-G: 460/80-640/50: 190 years
Merovingian antiques: not observable in a seriation, but could have been present
<u>Pandhof grave 10365 (Appendix 2.4)</u>
Biological sex: man
Cultural gender: woman
Age: 24 +
Brooch, garnet: D-E (510/20-580/90)
Brooch, bow: D-E (510/20-580/90)
String of beads: Maastricht: B-E (400-580/90).
Date of grave: 510/25-580/590
Range of circulation: B-E (400-580/90): 190 years
Merovingian antiques: not observable in a seriation, but could have been present

Figure 12. The total range of circulation of complete assemblages in individual graves.

It appears from these examples that the widest range of circulation of the objects that form the assemblages varies from 80 to 280 years. The widest circulation range of these graves such as they are represented in the examples do not have to represent the actual range of circulation, because an object could have been acquired at first, by the family in which it was going to be transmitted, at the end of its 'normal' circulation curve. But the examples, which are not an exception in Merovingian burial archaeology when the contents of the graves are observed more carefully with regard to their dating ranges, do show that the narrow date ranges of object-types (they circulated as long as approximately one generation) that stand at the basis of the general cultural perspective of chronological analysis until now, is a feature which is only scarcely observable in the results of the chronological analysis of Merovingian burials. Burial chronology aims at dating the grave goods assemblages, and in doing so it follows the logical assumption that the youngest objects provide the date of a phase in which the burial should be dated. This is solid archaeological thinking, but presenting the results as such covers the underlying variety in circulation as the examples from Maastricht show. These examples are not exceptions; the wide circulation range applies to the majority of the graves from Merovingian cemeteries. Why, with the reservations about the accuracy of dating methods taken into account, should these circulation periods not be taken as point of departure for cultural analysis? They can be interpreted as that something as prolonged circulation was in fact a social reality of the variety of Merovingian material culture. If methods could be found that provide more accurate dates of the circulation periods of various object-types, this would form solid evidence for the investigation of variable circulation

periods, both between various sorts of object-types as within one group of object-type. Not all the Vrijthof and Pandhof graves are analysed on variation in circulation, because this thesis only contains the preliminary analysis of these cemeteries, but such a presentation would be a preferable option for future publications. For now the overview of finds and the range of circulation per grave can be found in List 2 (List of dated object-types per grave).

Although probably somewhat exaggerated, the examples of the Vrijthof and Pandhof graves with brooches show the opposite of the presumed burial with personal possessions. It can be observed that the circulation periods of the object-types in nearly all the graves show overlap. If the graves were seriated, their position in the sequence would have averaged the various circulations; this is why researchers can claim that really old objects (objects that clearly date some phases earlier than the average circulation periods of the other grave goods) can only sporadically be observed in the investigated graves, despite the fact that the examples above show that it is very well possible that older objects, although not necessarily extremely old objects, are on a regular basis present in graves. How can the examples of possible variation of circulation in one grave be interpreted? The range of circulation per grave can inform us about how long which items were in circulation, and, in combination with the age at death, some conclusions can be formulated regarding the importance of continuous transmission per object, and the identification (the age at death of the responsible care-taker) of the termination of this line of transmission. The data can form a basis for further theorisation on practices of transmission and burial. Variability in circulation within one grave can indicate that something as the transmission of objects existed. What research questions can be thought of with regard to transmission and the failure of transmission on the basis of the complete dataset of burial evidence?

-Which life-cycle stages can be identified for the Merovingian period on the basis of the burial evidence, or what are the moments of acquisition/transmission?

Beads for example were mentioned as objects that are associated with children. This could indicate that the transmission and acquisition of (a selection of) beads that were considered family heirlooms was structured around a transformation in a child's life.

-What are the associated objects of acquisition/transmission?

-Can these objects be found in other age-groups? Does this imply that this specific transmission has failed? For example: does the occurrence of beads in graves of older women indicate that an opportunity for their transmission had not occurred?

-Empty graves can be a sign of successful transmission. They require further investigation, for example their distribution over the cemetery can be informative, as can the determined age and gender of the deceased.

-Etc.

Two graves, Vrijthof grave 194 and Pandhof Grave 10799, are comparable on the basis of a resembling object: a 'Mediterranean' plate buckle. They are comparable regarding their outline and 'tradition', but are executed in different materials. The Vrijthof specimen is of bronze, the Pandhof specimen is of silver and also has some additional decorations (Fig. 17; Appendix 2.5).

Vrijthof Grave 194 (Appendix 2.5)

Biological sex: man

Cultural gender: man

44-53 years

Plate buckle, bronze: Maastricht phase E (565-580/90)

Seax: Maastricht phase D-E (510/20-580/90)

Ring bronze: -

Pandhof grave 10799 (Appendix 2.5)

Biological sex: child

Cultural gender: woman

3-5 years

Plate buckle, silver: E (565-580/90)

String of beads: Maastricht phase C-F (460/80-610/20)

Glass vessel: LR (50-250)

Pottery vessel: LR (300-425)

Figure 13. The circulation span of the grave goods from Vrijthof grave 194 and Pandhof grave 10799

It appeared that the Vrijthof and Pandhof graves with brooches were of women of approximately the same age-group. This could indicate that the acquisition of these brooches were organised around events that relate to this specific age category. The two graves with a 'Mediterranean' buckle show that the associated persons were of different social categories regarding age and biological sex. Various questions with regard to the burial of personal property, variable and prolonged circulation, and cultural transmission can be thought of.

Normally these graves would be dated to the same phase on the basis of the peculiar plate buckles (see the section of 'Mediterranean' plate-buckles in the discussion of the Vrijthof and Pandhof grave goods). Does this mean that such objects were acquired at such a young age as the burial in grave 10799 would suggest? What does this discrepancy regarding the social groups of the associated persons imply for the dating of both graves? Or could it be that the occurrence of such an exclusive object with a child directs towards other actions than appropriate transmission in relation to life-cycle transformations? Can these plate buckles be an exchange with the ancestral world in order to create sacred heirlooms? Is the bronze example an effort to symbolise the same as the exclusive silver specimen from the Pandhof? It appears that these two graves pose several questions on the basis of their comparison, especially when the age at death is considered. Further research is required to investigate the variety in circulation periods in relation to the variety of objects and the biological features of the associated dead. The focus in this thesis has been on the possibility of various more or long prolonged circulation periods.

The variation of circulation in a selection of the Vrijthof and Pandhof graves served as an example for how the dating of an assemblage to a restricted phase disguises the variation within this assemblage. It also showed that for some sorts of objects (garnet disc brooches and bow brooches) a correlation with a specific age group was observed, and that for other objects (the Mediterranean plate buckle) such a 'correlation' (only established on the basis of two graves) was absent. For all the correlations it also has to be questioned if and how they change over time. The aim was to illustrate that underlying features of graves can be interesting to emphasise apart from the dating of graves to one burial phase. When skeletal remains are available, and of course when the dataset is of such a quality that statistical analysis result in considerable significant results, a series of research questions can be thought of that address the nature of the character between the grave goods, the deceased and the community. For future analysis of Merovingian cemeteries, such as those that will be investigated in the Anastasis-project, a cultural perspective should be the starting point of chronological interpretations.

First, the aim should not be to date the graves to such restricted phases as 15/20/30 years; 50 years or more is preferable. It will as a consequence be relatively difficult to describe the changes in ritual repertoires over the course of the Merovingian period in detail, but changes that are framed in

approximately 50 years, over a time span of more or less 300 years, do provide insights in these matters. Secondly, it is far more interesting to focus on the variability in circulation periods that are captured in the graves than only on the burial phases. If the material culture from graves can be seen as material culture which also had a prominent role among the living, the debate on variation in circulations and the meaning these had in society would surely enrich the chronological debate. It requires more research to find a method that offers reliable results with regard to the establishment of the circulation periods of various objects and objects-types. This will probably be one of the challenging subjects of the chronological debate from a cultural perspective. Also the correlation between specific features of objects, such as colour, decoration schemes etc., and a variety of biological features offer interesting research options for a further cultural perspective on burial goods. It will be clear that especially these last correlations require detailed and refined typological schemes, whereas maybe the search for reliable burial chronologies and circulation trajectories of object-types is best served with more crude typologies and dating schemes.

Conclusion to part I I

With regard to the previous sections, it can be concluded that the application of already existing typo-chronology schemes, when isolated schemes cannot be obtained on the basis of the available dataset (as it is the case for the Vrijthof and Pandhof cemeteries), involves two aspects each with different problems. First, a classification of the finds has to be made on the basis of these schemes; second, the dating of the types comes into question on the basis of which graves can be dated. It was stated that a chronological typology is required for chronological analysis. Both Siegmund and the Franken AG made considerable effort to meet this condition. Their typological classes are for the majority relatively refined. The typological scheme of Legoux, Périn and Vallet, which is the 'final' result of each of their previous works, is less 'objective', and resulted, in comparison with Siegmund and the Franken AG, for the majority of the objects in broader typological classes (compare for example their classification of pottery). Although the published cemeteries of the Middle Meuse Area are at first sight the most qualified to form the basis for the classification and dating of the grave goods from Maastricht, it was concluded that the grave goods from these cemeteries are for the majority classified and dated on the basis of Böhner's typology, which is considered to be outdated for chronological analysis. The available publications of the cemeteries from the Middle Meuse Area are useful for insights in distribution patterns of resembling objects in relation to Maastricht, but not for typo-chronological analysis without a new research programme. The typo-chronological analysis of Siegmund and the Franken AG are the most recent studies in which the typologies are explicitly based on the chronological significance of the object-types. Their typology schemes do not cover the dataset from Maastricht completely, and their research area (the Lower and Middle Rhine Area) is considered to be culturally different from the Middle Meuse Area. The classification and dating of the grave goods on these schemes alone is insufficient. The objects from Maastricht will also be classified and dated, where possible, on the basis of Legoux, Périn and Vallet, but also on the basis of specialised studies of categories of objects and on more distant typo-chronologies from Southern Germany, Switzerland and the Mediterranean world. On the basis of resembling grave goods it is concluded that these regions all have a, although for now not exactly defined, connection with Maastricht. These are distant cemeteries compared to the Lower and Middle Rhine area and the research areas of Northern France, which surround, although with some distance, the location of Maastricht (Fig. 11).

Classifications are made on the basis of the available objects from a period of considerable length. A classification will therefore always, more or less, reflect the gradual change in the material culture over time. This can be assumed to be a given characteristic of each considerable dataset which covers a substantial period. In contrast, the ordering of graves is based on their resemblance of combinations of object types and the gradual change in material culture is not reflected to the same degree in the obtained typo-chronological schemes because the processes in the period after production till deposition (distribution, acquisition, use and transmission) is becoming an influence. On the basis of

the discussions in part I of this thesis, it is concluded that these are complex processes which distort the image of gradual change of material culture. That the objects were the possessions of the persons with which they eventually were buried stands at the basis of the presumed gradual change in material culture in a seriation of graves. Therefore, not so much the development through time of the material culture we encounter in graves is questioned, but much more the reflection of this gradual change in the burial evidence and therefore the possible precision of the periods in which graves can be dated. Moreover, if the circulation periods of the various objects in one grave are observed more closely, it appears that considerable variation can be detected which are only sporadically discussed as a consequence on the predominant focus on the establishment of burial phases of graves.

The analysis of the skeletal remains, in combination with significant research questions, can contribute to insights with regard to the character of the connection between grave goods and the deceased and the associated circulation periods. The dataset of the Vrijthof and Pandhof, as it was argued, is too small to offer significant patterns of age at death and associated grave goods assemblages. A number of research questions were offered instead on the basis of which it can in the first place be investigated whether burial with inalienable personal possessions can either be accepted or rejected as general practice that resulted in the burial evidence to be analysed. On the basis of the illustrative examples of the Vrijthof and Pandhof cemeteries, but also the patterns which were identified in other cemeteries, it seems that other choices were made with regard to the selection of objects as grave goods. A connection between the dead and their grave goods did exist, but this connection is more complicated than 'inalienable personal possessions' pictures it to be. Certainly the process of objects distribution, acquisition and transmission was more complicated than this connection implies. The examples of Maastricht graves revealed a variety of circulation periods for each assemblage. Not the widest range has to represent the factual circulation of the objects, but a narrow dating of the grave underestimates the underlying circulation processes. A cultural perspective on Merovingian burial chronology should in the first place investigate the relation between grave goods and the deceased, and should focus more on the variation of circulation in a grave than on the dating of the complete assemblage to a restricted period of time. Therefore, as a conclusion, it is argued that more effort should be put in the creation of independent chronological sequences of the various object-types other than on the basis of the chronological phasing of assemblages. How this should be obtained on the basis of objects, which are predominantly known from the specific contexts of graves, remains a challenge for future research. In this thesis the objects are still dated on the basis of dates that were obtained as such because this was the only available framework for the dating of a dataset such as the one from Maastricht. The difficulties that were encountered regarding the application of this chronological framework, however, created the chronological discussion in this thesis.

Some choices with regard to the classification and dating of the objects from the Vrijthof and Pandhof cemeteries had to be made with these conclusions in mind. These choices are the following:

1. The classification of the grave goods on the basis of the discussed typologies

The grave goods from the Vrijthof and Pandhof cemeteries are classified according to Siegmund's typology scheme in which the alterations made by the Franken AG will be followed. The classification will be extended with typological discussions from other cemeteries or specialised studies of certain object groups when relevant.

2. The absolute dating of the grave goods on the basis of existing typo-chronologies

The dates of the types of Siegmund and the Franken AG will be used. These will be compared with the dates from Legoux, Périn and Vallet, and others when relevant. A relatively broad date range for each individual object will be aimed at, not the narrowest possible.

3. The absolute dating of the graves on the basis of this result; broad dating ranges will be preferable.

The Franken AG phases are for now translated into Maastricht phases (Table 14). This phasing does more justice to reality than Siegmund's phasing (the phases are (slightly) broader than those of Siegmund for the Lower Rhineland), and the *Kölner Bucht* is not far from Maastricht. The result is an

ordering of the grave goods in Maastricht phases 1-10 (list 2: list of dated objects), on the basis of which the final dates for the graves are realised (list 1: list of dated graves).⁴¹² In this stadium the graves will be dated relatively broadly, not as narrow as possible as the date range of the youngest objects in graves would make it possible (see the introduction to the discussion of the grave finds). As a result, graves are scarcely dated to just one Maastricht phase, but for the majority in two or more phases.

The final conclusions relate to the creation of a new typo-chronology of Merovingian grave goods for the Middle Meuse area on the basis of numerous cemeteries and an extended number of grave goods assemblages. Should such a scheme be aimed at, and should it be based on, a refined classification in order to obtain reliable chronological results? It was stated that every dataset of a considerable number of objects of a substantial period of time will always represent a change of features which are related to time. A seriation of assemblages of grave goods will distort the picture of this gradual development to a certain degree due to complex cultural processes of object distribution, acquisition, use, transmission and finally the choice to bury them with the dead. Despite the findings of Siegmund and Nieveler, that cluster analysis proved that the dataset on the basis of which Siegmund performed his seriations has an underlying structure that shows a gradual development of the grave goods assemblages, it is stated that the interpretation of a chronological seriation is the most reliable when the graves are dated in relatively long phases which should perhaps not comprise less than 50 years. Such a scheme, based on a chronological classification of the grave goods, offers relatively reliable chronological phases of graves on the basis of which the development of the burial rite in the Middle Meuse area can be analysed. There exists a difference between the process of dating graves and dating objects.

For separate categories of objects, such as for example biconical pots, refined classifications of their characteristics separately can be seriated on the basis of which it can be possible to obtain a detailed change of features over time. Probably this would be the most solid method to obtain chronological sequences of object-types. The dating of refined classes of objects should preferably not be based on the seriation of graves, but on separately performed seriations of various object groups from a restricted region. Such orderings can provide insights in the chronological change of their characteristics, but attaching absolute dates to them will still be a challenge. The various circulation periods of the objects which are associated with each other in a grave, however, provides more cultural insights in burials than the dating of the complete assemblage to one specific phase.

The problems of complex processes of exchange, acquisition and transmission were discussed in the previous chapters of this thesis. Another image of cultural reality is created, which stands in contrast with the alleged unaltered status of objects as personal property. This last perception of grave goods is expressed by several researchers, such as discussed in the sections above, which are primarily concerned with chronological analysis. But on the basis of which considerations are the boundaries of the chronological groups established? It appeared that this was a rather subjective process, based on meagre evidence. For Siegmund, this process resulted in 11 so-called Rhineland phases, of which the sixth century consists of phases of 15 years. The typo-chronological scheme of Legoux, Périn and Vallet consists of nine phases with more or less the same length (40-50 years). Does this mean that the rapid change in grave goods as was observed in the sixth century in the Lower Rhine area did not occur in the Ardenne-Meuse region, or is it that certain methodological choices underlie this phenomenon? I suggest that in the process of classifying, seriation and/or topo-chronological analysis, and relative and absolute phasing, so many steps and choices are made that the final chronological result lies far away from the already selective burial evidence that a high degree of accuracy is difficult to accept for these results. This problem is especially urgent for the acceptance of short burial phases. It appeared that the underlying circulation periods for the majority of the object-types comprise longer periods. Despite these being averages, and the individual circulation periods of objects cannot be grasped, it can be a starting

⁴¹² See also the list of steps in the introduction to the discussion of the grave goods from Maastricht.

point for burial chronology from a cultural perspective to accentuate the variation in circulation in isolated graves apart from the burial phases of graves. The variation in circulation offers possibilities to address questions regarding various processes of distribution, exchange, acquisition, keeping, transmission and burial, or in other words the social component of the variety of early medieval objects prior to their selection and deposition as grave goods.

The grave goods from the Vrijthof and Pandhof cemeteries

The descriptive catalogue: introduction

The Vrijthof finds have not been published up to now. The majority of the Pandhof finds have been depicted in the publication of Ypey and Glazema, and are accompanied by short descriptions.⁴¹³ A selection of these Pandhof finds have been published in detail in a number of other publications of which the discussions are included in the upcoming overview of the finds from Maastricht. A number of the finds are lost; these are, when possible, included in the overview and marked with an asterisk (*).

The grave goods from the Vrijthof and Pandhof cemeteries are first discussed per group of resembling objects, such as for example silver buckles, garnet disc brooches, *etc.* The points of discussion per group involve for each object their morphological characteristics, condition, find location in the grave, associated finds and the gender assignation on the basis of these finds.⁴¹⁴ The objects are from the majority classified and dated on the basis of the typo-chronologies of Siegmund, the Franken AG and Legoux, Périn and Vallet. Thereafter parallels/resembling type-groups that are known from other cemeteries and their associated dates are discussed and compared to those of Siegmund, the Franken AG and Legoux, Périn and Vallet. If specialized works for the specific groups of objects or relevant discussions of these groups in publications of other cemeteries are available, they are introduced and their dating schemes are included in the discussion. On the basis of this information a final dating for each object is proposed. The date ranges of the various typo-chronology schemes define the final Maastricht date for each object (see List 2 for an overview).⁴¹⁵ A final date is assigned to the complete assemblages (graves) on the basis of the object dates (see List 1 for an overview of the dated graves). More specific morphological details of each object are recorded in the database. The objects that could not be classified and dated according to the available typo-chronologies are unique specimens for which no parallels from the late Roman or Merovingian world are known till now. These objects are classified as 'Maastricht types'. The graves are dated on the basis of the obtained object-dates, but are placed in a scheme of Maastricht phases (Table 14). These dates are based on the scheme of the Franken AG. This scheme is chosen because their research area is not far from Maastricht and it is the most recent one that is based on carefully motivated (chronological) types. It is argued in this thesis that short phases, such as the phases of the Franken AG, do not represent historical and cultural reality. It will however appear that the graves from Maastricht are hardly ever dated in just one of the phases; for the majority they are dated in two or more phases.

The final dating of the graves

The graves will be dated in Maastricht phases (table 14; see list 1 for the overview of the dated graves) on the basis of the dates of their individual contents as follows:

⁴¹³ Ypey/Glazema 1955.

⁴¹⁴ A complete overview of the graves, the cemetery plan and the exact find location of the finds and skeletal remains in the grave will be published in the two upcoming volumes of the all-round analysis of the Servatius complex.

⁴¹⁵ The final 'Maastricht date' can be different from the date of the first type to which the finds from the Vrijthof and Pandhof are assigned (the alternative types and dates are not included in the list but are included in the data base). The final Maastricht date is based on the date range of all the type groups to which the finds are assigned.

- The date of the grave does not have to cover the complete date range of the objects, although this date range on the basis of the individual objects offers interesting research possibilities (see the discussion above in part II). A shorter time span than this complete range is aimed at, in order to gain some insights in the chronological development of the cemetery, but only one that can be reasoned
- This date should preferably correspond with the phase(s) in which the majority of the objects are dated.
- When a shorter time-span cannot be reasoned, than the complete date-range that is covered by the types is assigned to a grave.
- The date-range of the youngest type does not have to be indicative for the dating of the grave; but the youngest type can never fall outside the Maastricht phase(s) to which the grave is assigned; exceptions can be types of which the dating is questionable/insignificant/less reliable than the other dates.
- The most reliable dates are those of types which already know a thorough research history. These are belts, brooches, and weapons.
- The majority of the pottery and glass vessels are supposed to be more subject to local production preferences than the other categories; their dates (which are based on borrowed typologies) have less influence on the final date of the grave.
- The object-types with a long date-range (types of which it is claimed that the chronological significance is not established yet, for example knives) have less influence on the final dating of the grave, but if these are the only objects in the grave, then the grave is dated according to this long date-range.
- If the date-ranges of the various object types are consecutive but do not overlap, than the last phase of the oldest object type will be incorporated in the final date of the grave.
- If the oldest type has a date-range which does not show an overlap, and neither falls in a phase just before the second oldest type (there is no connection between the phases), than it is considered to be a Merovingian antique. The date of this type has no influence on the final date of the grave.
- The beads do not have a strong influence on the final dating of a grave, only when they are the only find from the grave (Their production was for the majority locally organised, and the reliability of the dating method for the complete strings is delicate).

This exercise leads to the phasing of the individual graves, but, as it was argued before, the date range of all the objects of one assemblage should not be ignored in favour of the establishment of an overview of datable graves (see therefore list 2 for an overview of the dated objects per grave).

List 1: The datable graves from the Vrijthof and Pandhof cemeteries

Contents of the tables:

- Context: number of the find context
- BS: Biological Sex (F= Female, M= Male; more than one individual was observed in a number of the contexts/graves).
- Context type: the identified find context of the objects
- Maastricht phases: phases A-I with absolute dates:

Maastricht phases	
A	Third / Fourth century
B	400-460/80
C	460/80-510/25
D	510/25-±565
E	±565-580/90
F	580/90-610/20
G	610/20-640/50
H	640/50-670/80
I	670/80-725
J	725-...

Table 14. The Maastricht phases and their associated absolute dates.

The contents of the graves and the datings on the basis of which the final dates of the graves/contexts are obtained can be consulted in List 2.

The datable graves/contexts from the Vrijthof cemetery

Context	BS	Context type	Maastricht phases			
309	M	Grave	B	B	400	460/480
66	M	Grave	B	D	400	565
294		Grave	B	F	400	610/620
408	-	Find	B	F	400	610/620
64	-	Possible grave	C	C	460/80	510/525
264	-	Grave	C	C	460/80	510/525
235	F	Grave	C	D	460/80	565
286	F	Grave	C	D	460/80	565
306	-	Grave	C	D	460/80	565
271	-	Grave	C	E	460/80	580/590
279	-	Find	C	E	460/80	580/590
305	-	Grave	C	E	460/80	580/590
13	M+F	Grave	C	F	460/80	610/620
283	-	Grave	C	G	460/80	640/650
76	-	Grave	C	H	460/80	670/680
101	-	Grave	D	D	510/525	565
17	-	Possible grave	D	E	510/525	580/590
88	M	Possible grave	D	E	510/525	580/590
96	M	Grave	D	E	510/525	580/590
115	F	Grave	D	E	510/525	580/590
168	-	Grave	D	E	510/525	580/590
173	F	Grave	D	E	510/525	580/590
187	F	Grave	D	E	510/525	580/590
201	-	Grave	D	E	510/525	580/590
230	F	Grave	D	E	510/525	580/590

250	-	Grave	D	E	510/525	580/590
259	-	Grave	D	E	510/525	580/590
314	F	Grave	D	E	510/525	580/590
68	-	Grave	D	F	510/525	610/620
89	-	Pit	D	F	510/525	610/620
258	-	Grave	D	F	510/525	610/620
12	-	Grave	D	G	510/525	640/650
18	-	Grave	D	G	510/525	640/650
85	F	Grave	D	G	510/525	640/650
21	-	Grave	D	H	510/525	670/680
124	M	Grave	D	H	510/525	670/680
178	M	Grave	D	H	510/525	670/680
210	M	Grave	D	H	510/525	670/680
214	F	Grave	D	H	510/525	670/680
407	-	Grave	D	H	510/525	670/680
73	M	Grave	E	E	565	580/590
97	F	Grave	E	E	565	580/590
194	-	Grave	E	E	565	580/590
285	F + M	Grave	E	E	565	580/590
56	F + M	Grave	E	F	565	610/620
75	M	Grave	E	F	565	610/620
79	M	Grave	E	F	565	610/620
189	-	Grave	E	F	565	610/620
247	F	Grave	E	F	565	610/620
274	-	Grave	E	F	565	610/620
48	-	Grave	E	G	565	640/650
78	-	Possible grave	E	G	565	640/650
84	-	Grave	E	G	565	640/650
110	F	Grave	E	G	565	640/650
218	M	Grave	E	G	565	640/650
287	-	Grave	E	G	565	640/650
288	-	Grave	E	G	565	640/650
300	-	Grave	E	G	565	640/650
308	M	Grave	E	G	565	640/650
315	F	Grave	E	G	565	640/650
100	-	Grave	E	H	565	670/680
140	-	Grave	E	H	565	670/680
222	F	Grave	E	H	565	670/680
277	F	Grave	E	H	565	670/680
293	F	Grave	E	H	565	670/680
310	M	Grave	E	H	565	670/680
19	-	Grave	F	G	580/590	640/650
87	-	Grave	F	G	580/590	640/650
95	F	Grave	F	H	580/590	670/680
99	-	Grave	F	H	580/590	670/680
116	-	Possible grave	F	H	580/590	670/680
138	F	Grave	F	H	580/590	670/680
154	-	Disarticulate human remains	F	H	580/590	670/680
205	-	Grave	F	H	580/590	670/680
223	M	Grave	F	H	580/590	670/680
152	-	Grave	F	J	580/590	>
11	M	Grave	G	H	610/620	670/680
16	F	Grave	G	H	610/620	670/680
30	-	Find	G	H	610/620	670/680
36	-	Grave	G	H	610/620	670/680
39	-	Grave	G	H	610/620	670/680
86	M	Grave	G	H	610/620	670/680
92	-	Grave	G	H	610/620	670/680
105	-	Grave	G	H	610/620	670/680
126	M	Grave	G	H	610/620	670/680
166	F	Grave	G	H	610/620	670/680
284	M	Grave	G	H	610/620	670/680
297	-	Grave	G	H	610/620	670/680
313	M	Grave	G	I	610/620	725
15	-	Grave	H	H	640/650	670/680
58	-	Grave	H	H	640/650	670/680
125	-	Grave	H	I	640/650	725
208	-	Grave	H	I	640/650	725

278	-	Grave	H	J	640/650	>
292	-	Grave	H	J	640/650	>
70	-	Find	I	J	670/680	>

The datable graves/contexts from the Pandhof cemetery

Context	BS	Context type	Maastricht phases			
10039	M	grave	A	A	<	400
10088	F	grave	A	A	<	400
10108	-	grave	A	A	<	400
10136	F	grave	A	A	<	400
10144	-	find	A	A	<	400
10204	-	grave	A	A	<	400
10331	-	grave	A	A	<	400
10337	-	find	A	A	<	400
10526	-	grave	A	A	<	400
10551	-	grave	A	A	<	400
10556	-	possible grave	A	A	<	400
10576	-	grave	A	A	<	400
10583	F	grave	A	A	<	400
10589	-	disarticulate human remains	A	A	<	400
10606	-	grave	A	A	<	400
10805	M	grave	A	A	<	400
10864	M	grave	A	A	<	400
10865	-	grave	A	A	<	400
10866	F + M	grave	A	A	<	400
10944	-	grave	A	A	<	400
11120	-	find	A	A	<	400
11140	-	grave	A	A	<	400
11225	M	grave	A	A	<	400
11236	F	grave	A	A	<	400
11274	-	elevation layer	A	A	<	400
11338	M	grave	A	A	<	400
11362	F	grave	A	A	<	400
11371	-	grave	A	A	<	400
10932	F	grave	A	C	<	510/525
10047	-	grave	A	G	<	640/650
10069	F	grave	A	G	<	640/650
10140	-	possible grave	B	B	400	460/480
10508	-	find	B	B	400	460/480
10511	M	grave	B	B	400	460/480
11406	-	find	B	C	400	510/525
10094	-	grave	B	D	400	565
10420	-	find	B	D	400	565
10549	M	grave	B	D	400	565
10068	-	grave	B	E	400	580/590
10122	-	grave	B	E	400	580/590
10227	-	grave	B	E	400	580/590
11252	F	grave	B	E	400	580/590
10399	-	grave	B	F	400	610/620
10903	-	grave	B	F	400	610/620
10536	F	grave	C	C	460/80	510/525
10923	F	grave	C	C	460/80	510/525
11228	F	grave	C	C	460/80	510/525
10021	F	grave	C	D	460/80	565
10564	-	grave	C	D	460/80	565
15013	-	foundation	C	D	460/80	565
10024	-	grave	C	E	460/80	580/590
10252	F	grave	C	E	460/80	580/590
10506	-	find	C	E	460/80	580/590
10143	-	find	C	F	460/80	610/620
10186	-	find	C	F	460/80	610/620
10527	M	grave	C	F	460/80	610/620
10220	-	find	C	G	460/80	640/650

10349	-	grave	C	G	460/80	640/650
10514	F	grave	C	G	460/80	640/650
10796	-	grave	C	G	460/80	640/650
10986	-	find	C	G	460/80	640/650
10012	M	grave	D	E	510/525	580/590
10048	-	grave	D	E	510/525	580/590
10102	-	grave	D	E	510/525	580/590
10145	-	find	D	E	510/525	580/590
10161	M	grave	D	E	510/525	580/590
10365	M	grave	D	E	510/525	580/590
10561	-	find	D	E	510/525	580/590
10792	-	find	D	E	510/525	580/590
10797	-	grave	D	E	510/525	580/590
10858	-	grave	D	E	510/525	580/590
10889	-	find	D	E	510/525	580/590
11220	F	grave	D	E	510/525	580/590
11321	-	grave	D	E	510/525	580/590
11325	-	grave	D	E	510/525	580/590
10037	-	grave	D	F	510/525	610/620
10307	-	grave	D	F	510/525	610/620
10619	F	possible grave	D	F	510/525	610/620
10988	-	grave	D	F	510/525	610/620
11342	M	grave	D	F	510/525	610/620
10032	F	grave	D	G	510/525	640/650
10407	-	grave	D	G	510/525	640/650
11217	-	grave	D	G	510/525	640/650
10031	-	grave	D	H	510/525	670/680
10074	F	grave	D	H	510/525	670/680
10128	-	grave	D	H	510/525	670/680
10131	-	grave	D	H	510/525	670/680
10148	-	find	D	H	510/525	670/680
10790	-	find	D	H	510/525	670/680
10828	-	grave	D	H	510/525	670/680
10968	F	grave	D	H	510/525	670/680
10097	-	grave	E	E	565	580/590
10100	-	grave	E	E	565	580/590
10168	-	grave	E	E	565	580/590
10332	-	grave	E	E	565	580/590
10723	M	grave	E	E	565	580/590
10056	-	grave	E	F	565	610/20
10246	-	grave	E	F	565	610/620
10336	M	grave	E	F	565	610/620
10799	-	grave	E	F	565	610/620
10885	F	grave	E	F	565	610/620
10042	-	grave	E	G	565	640/650
10118	-	grave	E	G	565	640/650
10213	-	find	E	G	565	640/650
10344	-	grave	E	G	565	640/650
10641	-	grave	E	G	565	640/650
10856	-	grave	E	G	565	640/650
10248	-	grave	E	H	565	670/680
10360	-	grave	E	H	565	670/680
10985	-	grave	E	H	565	670/680
11341	-	grave	E	H	565	670/680
10061	F	grave	E	I	565	725
10162	-	grave	E	J	565	>
10155	-	grave	F	H	580/590	670/680
10370	-	grave	F	H	580/590	670/680
10510	F	grave	F	H	580/590	670/680
10635	-	find	F	H	580/590	670/680
10133	-	grave	G	G	610/620	640/650
10435	-	find	G	G	610/620	640/650
10634	-	find	G	G	610/620	640/650
10863	-	grave	G	G	610/620	640/650
10129	M	grave	G	H	610/620	670/680
10200	-	grave	G	H	610/620	670/680
10321	-	grave	G	H	610/620	670/680
10418	-	grave	G	H	610/620	670/680

10500	-	grave	G	H	610/620	670/680
10743	-	grave	G	H	610/620	670/680
10054	-	grave	G	I	610/620	725
10226	F	grave	H	H	640/650	670/680

List 2: The grave goods / objects from the Vrijthof and Pandhof cemeteries (sites)

Contents of the tables:

Context= find context of the object (the context types can be found in List 1).

Find#= find number of the object.

Sub#= sub number assigned to find number.

Class= general class to which the object is assigned.

Subclass= specified class.

Material= base material of which the object is made (additional material is possible).

Type= first type according to which the object is classified (alternative types are included in the database).

Fag= Franken AG (2003) type

Siegmund / (S-)= Siegmund (1998) type

L/P/V= Legoux/Périn/Vallet (2004) type

The remainder of the types are completely named in the column

Maastricht phase= dating of object to a Maastricht phase on the basis of the type dates to which the object is assigned.

The grave goods from the Vrijthof cemetery / site

Context	Find#	Sub#	Class	SubClass	Material	Type	Maastricht phase
3	1714	1	Vessel	Unknown	Pottery	Missing	-
11	1665	7	Rivet	Nail	Copper alloy	Scabbard nails	-
11	1665	6	Mount	Mount	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
11	1665	5	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
11	1664	1	Belt Part	Plate Buckle	Copper alloy	Fag Spa. 1d	F-G (580/90-640/50)
11	1665	4	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
11	1665	3	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
11	1665	2	Rivet	Rivet, Decorated	Copper alloy	Fag Sax 4.3B	G-H (610/20-670/80)
11	1666	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.23.	G-H (610/20-670/80)
11	1665	1	Rivet	Rivet, Decorated	Copper alloy	Fag Sax 4.3B	G-H (610/20-670/80)
12	1673	2	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
12	1673	3	Bead	Monochrome	Glass	S-31.1	D-G (510/20-640/50)
12	1673	1	Bead	Monochrome	Glass	S-35.4	D-G (510/20-640/50)
13	1680	1	Knife	Knife	Iron	Knife	-
13	1680	2	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)

13	1680	3	Arrow	Head	Iron	L/P/V 26	C-F (460/80-610)
13	1675	1	Vessel	Fragment / Unknown	Pottery	Missing	-
15	1670	1	Belt Part	Plate Buckle	Iron	Siegmund Gur 4.7	H (640/50-670/80)
15	1669	1	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
15	1671	1	Belt Part	Counter Plate	Iron	Siegmund Gur 4.7	H (640/50-670/80)
15	1670	2	Axe/Francisca	Axe	Iron	Siegmund FBA. 2.1.	E-F (565-610)
15	1671	2	Pin	Rod with ring	Iron	L/P/V 353	D-I (510/20-725)
15	1670	3	Seax	Seax	Iron	Fag Sax 2.1	F-G (580/90-640/50)
15	1670	4	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
15	1670	5	Rest	Metal	Iron	Indet.	-
16	1679	3	Seax	Seax	Iron	Siegmund Sax. 2.1.	G-H (610/20-670/80)
16	1679	2	Rivet	Rivet, Decorated	Copper alloy	Fag Sax 4.3B	G-H (610/20-670/80)
16	1679	1	Rivet	Rivet, Decorated	Copper alloy	Fag Sax 4.3B	G-H (610/20-670/80)
16	1679	4	Seax	Seax	Iron	Fag Sax 2.1	F-G (580/90-640/50)
17	1681	1	Brooch	Disc, Garnet	Copper alloy	Siegmund Fib. 1.3.	D-E (510/20-580/90)
17	1681	2	Bead	Monochrome	Glass	S-1.8	
18	1661	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
18	1662	1	Vessel	Trefoil Jug	Pottery	Siegmund Kan 1.12.	B-D (400-565)
19	1607	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.42.	F-G (580/90-640/50)
19	1605	1	Seax	Seax	Iron	Missing	-
19	1606	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
21	1619	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
29	1629	1	Knife	Knife	Iron	Knife	-
30	1630	2	Belt Part	Strap End	Copper alloy	L/P/V 199	
30	1630	3	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
30	1630	4	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
30	1630	5	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
30	1630	6	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
30	1630	7	Knife	Knife	Iron	Knife	-
30	1630	8	Rest	Metal	Copper alloy	Fag S-Sax4.5?	G-H (610/20-670/80)
30	1630	9	Seax	Seax		Missing	-
36	1623	1	Glass Vessel	Palm cup	Glass	Siegmund Gla 2.2.	G-H (610/20-670/80)
36	1622	1	Vessel	Unknown	Pottery	L/P/V 404?	B-G (400-640/50)?
39	1603	5	Mount	Mount	Copper alloy	Mount / rivet	-
39	1603	1	Rivet	Rivet, Decorated	Copper alloy	Fag Sax 4.3B	G-H (610/20-670/80)
39	1603	2	Rivet	Rivet, Decorated	Copper alloy	Fag Sax 4.3B	G-H (610/20-670/80)
39	1603	3	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
39	1574	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
39	1603	6	Seax	Seax		Missing	-
39	1603	4	Belt Part	Slotted plate	Copper alloy	T-shaped mount	-
48	1587	3	Bead	Monochrome	Glass	-	E-G (565-640/50)
48	1587	6	Bead	Monochrome	Glass	-	E-G (565-640/50)
48	1586	1	Rest	Metal	Copper alloy	Ring?	-
48	1587	5	Bead	Monochrome	Glass	S-34.1	E-G (565-640/50)

48	1567	1	Glass Vessel	Fragment / Unknown	Glass	Missing	-
48	1586	3	Coin	Coin		Dupondius/As: indeterminable	54-96
48	1587	7	Bead	Polychrome	Glass	Koch 1977, 21,5	E-G (565-640/50)
48	1586	4	Stone / Jewel	Stone	Stone	Stone: natural	-
48	1587	11	Rest	Metal	Copper alloy	Indet.	-
48	1587	10	Bead	Monochrome	Glass	S-40.1	E-G (565-640/50)
48	1587	1	Bead	Natural	Amethyst	S-5.2	E-G (565-640/50)
48	1586	5	Bead	Monochrome	Glass	Beads	
48	1587	4	Bead	Monochrome	Glass	S-group 37 (1-2)	E-G (565-640/50)
48	1592	2	Belt Part	Strap End	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
48	1587	8	Bead	Monochrome	Glass	-	E-G (565-640/50)
48	1594	3	Rest	Metal	Iron	Indet.	-
48	1594	2	Rest	Metal	Copper alloy	L/P/V 362?	F-G (580/90-640/50)
48	1594	1	Pendant	Chain	Copper alloy	Siegmund Ggh. 6.	F-H (580/90-670/80)
48	1593	1	Ring	Finger ring	Copper alloy	Finger ring	
48	1586	2	Coin	Pendant		Coin pendant: Follis, Constantinus I	A (330-334)
48	1592	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
48	1591	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
48	1590	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
48	1589	1	Belt Part	Plate	Iron	Missing	-
48	1588	2	Rest	Metal	Iron	Indet.	-
48	1588	1	Rest	Metal	Iron	Indet.	-
48	1587	9	Bead	Monochrome	Glass	-	E-G (565-640/50)
48	1593	2	Pendant	Chain	Copper alloy	Siegmund Ggh. 6.	F-H (580/90-670/80)
56	0979	1	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
58	1634	3	Seax	Seax	Iron	Fag Sax2.1	F-G (580/90-640/50)
58	1624	1	Vessel	Fragment / Unknown	Pottery	Missing	-
58	1634	4	Knife	Knife	Iron	Knife	-
58	1634	1	Belt Part	Counter Plate	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
58	1634	2	Belt Part	Back Plate	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
59	1595	1	Belt Part	Belt loop	Copper alloy	Belt loop	-
64	0965	4	Vessel	Fragment / Unknown		Missing	-
64	0965	3	Rest	Metal	Copper alloy	Missing	-
64	0965	2	Bead	Monochrome	Glass	S-1.1	C (460/80-510/25)
64	0965	1	Bead	Monochrome	Glass	S-group 47	C (460/80-510/25)
66	1566	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 10.0	B-D (400-565)
68	1149	7	Bead	Monochrome	Glass	S-1.6	E-H (565-670/80)
68	1149	6	Bead	Monochrome	Glass	S-1.8	E-H (565-670/80)
68	1149	5	Bead	Monochrome	Glass	S-33.3	E-H (565-670/80)
68	1149	4	Bead	Monochrome	Glass	S-40.1	E-H (565-670/80)
68	1149	3	Rest	Metal	Iron	Coffin nail	-
68	1149	2	Bead	Polychrome	Glass	S-2.13	E-H (565-670/80)
68	1149	9	Bead	Monochrome	Glass	S-35.4	E-H (565-670/80)
68	1149	10	Bead	Natural	Amber	Amber bead	E-H (565-670/80)

68	1105	1	Brooch	Bow	Copper alloy	Hinged brooch	Roman
68	1149	12	Bead	Monochrome	Glass	-	E-H (565-670/80)
68	1149	1	Belt Part	Buckle	Copper alloy	Siegmund Gur. 2.9.	D-F (510/20-610)
68	1149	8	Bead	Monochrome	Glass	S-group 47	E-H (565-670/80)
68	1149	11	Bead	Monochrome	Glass	-	E-H (565-670/80)
69	1427	1	Glass Vessel	Bottle	Glass	Isings 82b2 (variant)	LR-Merovingian?
70	1394	3	Rivet	Nail	Copper alloy	Scabbard nails	-
70	1394	1	Knife	Knife	Iron	Knife	-
70	1394	2	Seax	Seax	Iron	Fag Sax3	I-J (670/80->725)
73	1584	7	Seax	Seax	Iron	Missing	-
73	1584	3	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
73	1584	5	Knife	Knife	Iron	Knife	-
73	1584	1	Belt Part	Plate Buckle	Copper alloy	Group A	E (565-580/90)
73	1584	6	Rest	Metal	Copper alloy	Rod	-
73	1584	8	Pin	unknown/fragment	Copper alloy	Indet.	-
73	1584	4	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
75	1381	2	Belt Part	Counter Plate	Iron	Fag Gur 4.1/2	E-F (565-610)
75	1381	3	Belt Part	Back Plate	Iron	Fag Gur 4.1/2	E-F (565-610)
75	1383	1	Pin	Toilet utensils	Copper alloy	Siegmund Nad. 2.2.	E-G (565-640/50)
75	1424	1	Rest	Unknown		Indet.	-
75	1381	4	Knife	Knife	Iron	Knife	-
75	1380	1	Rest	Unknown	Unknown	Indet.	-
75	1378	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
75	1377	1	Vessel	Beaker	Pottery	Oelmann 33a	200-250
75	1381	1	Belt Part	Plate Buckle	Iron	Fag Gur 4.1/2	E-F (565-610)
76	1530	1	Comb	Composite Double	Antler	Siegmund Ger. 3.2.	C-H (460/80-670/80)
78	1525	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.22.	E-G (565-640/50)
78	1524	1	Vessel	Trefoil Jug	Pottery	Siegmund Kan 1.2.	E-G? (565-640/50)
79	1397	3	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
79	1420	1	Vessel	(Biconical) Dish	Pottery	Maastricht	C-D (460/80-565)
79	1397	4	Rest	Metal	Copper alloy	Fish hook	-
79	1397	2	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
79	1397	1	Knife	Knife	Iron	Knife	-
79	1382	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.b.	E-F (565-610)
79	8888-79	1	Rest	Metal	Iron	Indet.	-
79	1382	1	Rest	Metal	Iron	Coffin nail	-
79	1382	3	Belt Part	Strap End	Copper alloy	Siegmund Gur. 3.2.b.	E-F (565-610)
79	1385	1	Rest	Unknown	Unknown	Indet.	-
84	1379	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 4.11.	E-G (565-640/50)
85	1418	10	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
85	1418	6	Bead	Monochrome	Glass	S-group 46 (1-5)	D-G (510/20-640/50)
85	1418	1	Bead	Polychrome	Glass	-	D-G (510/20-640/50)
85	1418	4	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
85	1419	1	Brooch	Bow	Copper alloy	Bow brooch (Scandinavian/Thuringian?)	C-F (460/80-610/20)

85	1418	3	Bead	Natural	Amethyst	S-5.2	D-G (510/20-640/50)
85	1418	9	Bead	Monochrome	Glass	S-1.2	D-G (510/20-640/50)
85	1418	8	Bead	Monochrome	Glass	S-group 37 (1-2)	D-G (510/20-640/50)
85	1418	7	Bead	Polychrome	Glass	S-2.4	D-G (510/20-640/50)
85	1422	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
85	1421	1	Vessel	Trefoil Jug	Pottery	Siegmund Kan 1.2.	E-G? (565-640/50)
85	1418	12	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
85	1418	5	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
85	1418	11	Rest	Metal	Iron	Coffin nail	-
85	1418	2	Bead	Natural	Amber	Amber bead	D-G (510/20-640/50)
86	1388	1	Rest	Metal	Iron	Missing	-
86	1387	2	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
86	1387	3	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
86	1387	4	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
86	1387	5	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
86	1387	7	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
86	1389	1	Belt Part	Strap End	Copper alloy	L/P/V 199 (Purse)	C-G (460/80-640/50)
86	1387	1	Belt Part	Plate Buckle	Iron	Maastricht	G-H (610/20-670/80)
86	1387	6	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
87	1391	1	Vessel	Fragment / Unknown		Missing	-
87	1392	1	Glass Vessel	Palm cup	Glass	Siegmund Gla 2.1	F-G (580/90-640/50)
87	1393	1	Vessel	Beaker	Pottery	L/P/V 398	G-H (610/20-670/80)
88	1416	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.12.	D-E (510/20-580/90)
88	1390	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
88	1395	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.12.	D-G (510/20-640/50)
89	1428	1	Belt Part	Buckle	Copper alloy	L/P/V 116	D-F (510/20-610)
90	8888-90	1	Vessel	Biconical Pot	Missing	Missing	-
92	1403	9	Rivet	Rivet	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
92	1403	8	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
92	1403	7	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
92	1403	6	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
92	1403	5	Rivet	Rivet, Perforated	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
92	1403	4	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 4.6.	G (610/20-640/50)
92	1403	3	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 4.6.	G (610/20-640/50)
92	1403	12	Rest	Metal	Iron	Indet.	-
92	1403	11	Seax	Seax		Missing	-
92	1403	10	Stone / Jewel	Touchstone	Stone	Siegmund Probersteine	-
92	1403	1	Belt Part	Plate Buckle	Iron	Siegmund Gur. 4.6.	G (610/20-640/50)
92	1403	2	Belt Part	Buckle	Copper alloy	Siegmund Gur. 2.8.?	D (510/25-565)?
94	1486	1	Rest	Metal	Copper alloy	Missing	-
95	1478	4	Coin	Coin	Copper alloy	Coin: Antoninianus, barbarian imitation	270-300
95	1481	2	Belt Part	Belt Stud	Copper alloy	Siegmund Gur. 2.10.	D (510/20-565)
95	1485	2	Ring	Earring	Silver	Fag Ohr4B	F-H (580/90-670/80)
95	1484	2	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)

95	1485	1	Ring	Earring	Silver	Fag Ohr4B	F-H (580/90-670/80)
95	1484	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	C-E (460/80-580/90)
95	1483	1	Rest	Metal	Iron	Indet.	-
95	1482	1	Ring	Ring		Missing	-
95	1481	1	Belt Part	Buckle	Copper alloy	Fag Gur. 2.6/7C	D-E (510/20-580/90)
95	1480	1	Knife	Knife	Iron	Knife	-
95	1479	2	Vessel	Jug	Pottery	Missing	-
95	1478	2	Coin	Coin		Coin: Antoninianus, Quintillus	270
95	1478	1	Bead	Monochrome	Glass	S-31.1	B-E (400-580/90)
95	1482	3	Bead	Polychrome	Glass	-	D-G (510/20-640/50)
95	1479	1	Comb	Composite Double	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
95	1479	3	Comb	Case	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
95	1482	2	Bead	Polychrome	Glass	S-2.13	D-G (510/20-640/50)
95	1482	4	Bead	Polychrome	Glass	Koch M67/72	D-G (510/20-640/50)
95	1482	5	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
95	1484	3	Bead	Monochrome	Glass	S-34.1	D-H (510/20-670/80)
95	1484	4	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
95	1484	5	Bead	Monochrome	Glass	S-47.1?	D-H (510/20-670/80)
95	1484	6	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
95	1484	7	Bead	Monochrome	Glass	S-group 46 (1-5)	D-H (510/20-670/80)
95	1482	6	Bead	Monochrome	Glass	Melon bead	D-G (510/20-640/50)
95	1478	3	Ring	Bracelet	Glass	Fragment La Tene bracelet	-
96	1529	1	Shear	Shear (complete)	Iron	L/P/V 355	C-G (460/80-640/50)
96	1529	5	Rest	Metal	Iron	Rod	-
96	1529	4	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
96	1529	2	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
96	1528	2	Belt Part	Back Plate	Copper alloy	Indet: back plate	E-F (565-610)
96	1528	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
96	1529	3	Knife	Knife	Iron	Knife	-
96	1529	6	Coin	Coin		imitation Justinian I	D (527-565)
97	1497	2	Belt Part	Strap End	Copper alloy	Siegmund Sna. 1.2.	E (565-580/90)
97	1474	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
97	1475	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
97	1496	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.2.	E (565-580/90)
97	1497	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.2.	E (565-580/90)
97	1498	1	Comb	Connecting Plate	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
97	1498	2	Pendant	Animal teeth	Bone	L/P/V 343	C-F (460/80-610)
97	1499	1	Belt Part	Plate Buckle	Unknown	Missing	-
97	1500	1	Pendant	Herkules keule	Bone	L/P/V 344	E-G (565-640/50)
97	1496	2	Belt Part	Strap End	Copper alloy	Siegmund Sna. 1.2.	E (565-580/90)
99	1426	1	Rest	Metal	Iron	Rod	-
99	1414	1	Rest	Unknown	-	Missing	-
99	1413	3	Rest	Metal	Iron	Coffin nail	-
99	1413	2	Belt Part	Strap End	Copper alloy	Maastricht	F-H (580/90-670/80)

99	1413	1	Belt Part	Plate Buckle	Copper alloy	Maastricht	F-H (580/90-670/80)
99	1853	1	Glass Vessel	Bottle	Glass	Isings 82b2 (variant)	LR-Merov?
99	1852	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
99	1413	4	Key	Key	Copper alloy	Key (Missing)	-
100	1434	2	Bead	Monochrome	Glass	S-33.1	E-H (565-670/80)
100	1435	1	Rest	Organic	Antler	L/P/V 359	D-F (510/20-610)
100	1434	9	Bead	Monochrome	Glass	S-35.6	E-H (565-670/80)
100	1434	8	Bead	Monochrome	Glass	S-group 37 (1-2)	E-H (565-670/80)
100	1434	6	Bead	Monochrome	Glass	-	E-H (565-670/80)
100	1435	3	Pendant	Pendant	Copper alloy	miniature umbo?	-
100	1434	4	Bead	Monochrome	Glass	-	E-H (565-670/80)
100	1434	3	Bead	Polychrome	Glass	S-35.11	E-H (565-670/80)
100	1435	2	Rest	Metal	Iron	Rod	-
100	1434	20	Rest	Metal	Iron	Indet.	-
100	1434	7	Bead	Polychrome	Glass	S-35.8	E-H (565-670/80)
100	1434	13	Bead	Polychrome	Glass	Koch 35,2	E-H (565-670/80)
100	1434	12	Bead	Monochrome	Glass	-	E-H (565-670/80)
100	1434	11	Bead	Polychrome	Glass	Koch 15,34	E-H (565-670/80)
100	1434	10	Bead	Monochrome	Glass	S-32.3	E-H (565-670/80)
100	1434	1	Bead	Monochrome	Glass	S-33.3	E-H (565-670/80)
100	1434	21	Pendant	Coin/Pseudo Coin	Copper alloy	Coin pendant; As II; indet	c. 346-423
100	1434	5	Bead	Polychrome	Glass	S-35.12	E-H (565-670/80)
100	1495	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
100	1495	2	Belt Part	Strap End	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
100	1495	3	Bead	Monochrome	Glass	-	E-H (565-670/80)
100	1495	4	Bead	Monochrome	Glass	S-35.4	E-H (565-670/80)
100	1495	5	Bead	Monochrome	Glass	S-33.6	E-H (565-670/80)
100	1495	6	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
100	1495	7	Belt Part	Strap End	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
101	1493	1	Belt Part	Belt Stud	Copper alloy	Siegmund Gur. 2.10.	D (510/20-565)
101	8888-101	1	Tweezers	Tweezers	Unknown	Missing	-
101	1490	1	Belt Part	Buckle	Copper alloy	Missing	-
101	1490	2	Rest	Metal	Iron	Missing	-
101	1491	1	Knife	Knife	Iron	Knife	-
101	1493	2	Belt Part	Belt Stud	Copper alloy	Siegmund Gur. 2.10.	D (510/20-565)
101	1493	3	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.2.	E (565-580/90)
104	1582	1	Axe/Francisca	Unknown	Unknown	Missing	-
105	1473	7	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
105	1473	6	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
105	1473	5	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
105	1473	4	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
105	1473	3	Knife	Knife	Iron	Siegmund Ger. 1.2.	H-J (640/50->725)
105	1473	2	Belt Part	Counter Plate	Iron	L/P/V 191	H-I (640/50-725)
105	1473	1	Belt Part	Plate Buckle	Iron	L/P/V 191	H-I (640/50-725)

105	1472	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.43.	F-H (580/90-670/80)
105	1470	3	Bead	Spindle whorl	Pottery	L/P/V 347	C-G (460/80-640/50)
105	1470	2	Belt Part	Plate Buckle	Iron	Siegmund Sna. 2.5.	G-H (610/20-670/80)
105	1470	1	Belt Part	Plate Buckle	Iron	Siegmund Sna. 2.5.	G-H (610/20-670/80)
105	1473	8	Seax	Seax	Iron	Missing	-
105	1471	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
110	1628	8	Belt Part	Strap End	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
110	1624-110	9	Bead	Monochrome	Glass	S-36.1	D-H (510/20-670/80)
110	1626	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.31.	D-E (510/20-580/90)
110	1627	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
110	1628	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
110	1628	10	Rest	Metal	Iron	Indet.	-
110	1628	11	Pendant	Bell	Copper alloy	Small bell	E-G (565-640/50)
110	1628	12	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
110	1628	2	Ring	Ring	Copper alloy	Ring	-
110	1628	5	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
110	1628	9	Rest	Metal	Copper alloy	Indet.	-
110	1628	4	Ring	Ring	Copper alloy	Ring	-
110	1628	7	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
110	1624-110	8	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
110	1624-110	23	Bead	Polychrome	Glass	Koch group 20	D-H (510/20-670/80)
110	1628	6	Bead	Natural	Amber	Pendant	?
110	1628	3	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
110	1553	2	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
110	1553	1	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
110	1624-110	2	Bead	Polychrome	Glass	S-33.7	D-H (510/20-670/80)
110	1541	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.31.	C-E (460/80-580/90)
110	1624-110	5	Bead	Polychrome	Glass	S-35.12	D-H (510/20-670/80)
110	1553	3	Knife	Knife	Iron	Knife	-
110	1596	2	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
110	1624-110	25	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
110	1624-110	21	Bead	Polychrome	Glass	S-32.7	D-H (510/20-670/80)
110	1624-110	7	Bead	Monochrome	Glass	S-46.2	D-H (510/20-670/80)
110	1624-110	24	Bead	Monochrome	Glass	S-35.4	D-H (510/20-670/80)
110	1596	1	Belt Part	Counter Plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
110	1624-110	26	Bead	Polychrome	Glass	Koch 4.6	D-H (510/20-670/80)
110	1565	1	Pin	Decorative	Bone	Pin/Utensil	-
110	1624-110	4	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
110	1624-110	6	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
110	1624-110	20	Bead	Monochrome	Glass	S-35.6	D-H (510/20-670/80)
110	1624-110	11	Bead	Monochrome	Glass	S-1.1	D-H (510/20-670/80)
110	1624-110	19	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
110	1624-110	18	Bead	Natural	Amethyst	S-5.2	D-H (510/20-670/80)
110	1624-110	17	Bead	Monochrome	Glass	-	D-H (510/20-670/80)

110	1624-110	15	Bead	Polychrome	Glass	Koch 21,5	D-H (510/20-670/80)
110	1624-110	3	Bead	Polychrome	Glass	Koch group 42	D-H (510/20-670/80)
110	1624-110	12	Bead	Monochrome	Glass	S-33.1	D-H (510/20-670/80)
110	1624-110	10	Bead	Monochrome	Glass	S-group 46 (1-5)	D-H (510/20-670/80)
110	1624-110	1	Pendant	Jewelled	Gold	Siegmund Per. 6.1.	D-F (510/25-610/20)
110	1624-110	13	Bead	Polychrome	Glass	S-35.8	D-H (510/20-670/80)
114	1465	1	Seax	Seax	Iron	Missing	-
115	1614	1	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
115	1614	2	Rest	Organic	-	Seax scabbard remains?	-
116	1564	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
116	1570	1	Rest	Metal	Iron	Missing	-
116	1569	1	Belt Part	Plate Buckle	Copper alloy	Maastricht	F-H (580/90-670/80)
116	1564	2	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
116	1568	1	Belt Part	Plate Buckle	Copper alloy	Maastricht	F-H (580/90-670/80)
121	1556	2	Stone / Jewel	Stone	Stone	Pebble	-
121	1556	1	Rest	Metal	Iron	Indet.	-
124	1609	3	Bead	Monochrome	Glass	S-47.1	D-H (510/20-670/80)
124	1609	2	Bead	Polychrome	Glass	S-group 37 (3)	D-H (510/20-670/80)
124	1609	6	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
124	1609	5	Bead	Polychrome	Glass	S-35.13	D-H (510/20-670/80)
124	1609	4	Bead	Polychrome	Glass	Koch group 42	D-H (510/20-670/80)
124	1609	1	Bead	Monochrome	Glass	S-35.6	D-H (510/20-670/80)
125	1599	1	Belt Part	Plate	Iron	Maastricht	F-G (580/90-640/50)
125	1598	2	Belt Part	Counter Plate	Iron	Maastricht	H-I (640/50- 725)
125	1599	2	Belt Part	Plate	Iron	Maastricht	H-I (640/50- 725)
125	1599	3	Belt Part	Plate	Iron	Maastricht	H-I (640/50- 725)
125	1600	1	Seax	Seax	Iron	Fag Sax3	I-J (670/80->725)
125	1601	1	Lance	Head	Iron	Siegmund Lan 2.4	D-I (510/20-725)
125	1600	2	Belt Part	Plate Buckle	Iron	Maastricht	H-I (640/50- 725)
125	1598	1	Umbo	Umbo	Iron	Siegmund Sbu 6	G (610/20-640/50)
126	1572	1	Knife	Knife	Iron	Knife	-
126	1572	4	Rest	Metal	Iron	Indet.	-
126	1573	1	Glass Vessel	Beaker, bell	Glass	Fag Gla 8B/C	E (565-580/90)
126	1572	3	Belt Part	Strap End	Iron	Siegmund Sna. 2.5.	G-H (610/20-670/80)
126	1572	2	Belt Part	Plate Buckle	Iron	Siegmund Sna. 2.5.	G-H (610/20-670/80)
138	1551	1	Rest	Metal	Copper alloy	Chatelaine?	F-H (580/90-670/80)
139	1552	1	Axe/Francisca	Unknown	Iron	Missing	-
140	1547	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
152	1617	1	Bead	Monochrome	Glass	S-1.8	F-J (580/90->725)
152	1617	5	Bead	Monochrome	Glass	S-1.8	F-J (580/90->725)
152	1617	4	Bead	Monochrome	Glass	S-1.8	F-J (580/90->725)
152	1617	6	Bead	Monochrome	Glass	S-1.2	F-J (580/90->725)
152	1617	2	Bead	Monochrome	Glass	S-33.6	F-J (580/90->725)
152	1617	3	Bead	Monochrome	Glass	-	F-J (580/90->725)

154	1545	1	Belt Part	Plate Buckle	Copper alloy	Indet	F-H (580/90-670/80)
164	1633	1	Bead	Polychrome	Glass	-	-
165	1580	1	Rest	Metal	Iron	Missing	-
166	1539	3	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
166	1539	7	Bead	Polychrome	Glass	Koch M67/72	D-H (510/20-670/80)
166	1539	8	Bead	Monochrome	Glass	S-group 37 (1-2)	D-H (510/20-670/80)
166	1540	1	Key	Key	Copper alloy	L/P/V 350	C-F (460/80-610/20)
166	1539	6	Bead	Monochrome	Glass	S-47.1	D-H (510/20-670/80)
166	1539	5	Bead	Monochrome	Glass	S-1.8	D-H (510/20-670/80)
166	1540	7	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1540	2	Belt Part	Plate Buckle	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1540	3	Belt Part	Strap End	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1542	1	Belt Part	Strap End	Copper alloy	Strap end (lost)	-
166	1540	9	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1540	10	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1539	2	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
166	1539	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
166	1540	4	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1540	8	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1540	5	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1540	6	Mount	Purse mount	Copper alloy	L/P/V 361	G-H (610/20-670/80)
166	1539	4	Bead	Monochrome	Glass	S-47.5	D-H (510/20-670/80)
168	1536	1	Vessel	Jug	Pottery	Vanvinckenroye 369	275-325
168	1534	6	Rest	Metal	Iron	Nails?	-
168	1534	1	Knife	Knife	Iron	Knife	-
168	1534	4	Pin	Rod with ring	Iron	L/P/V 353	D-I (510/20-725)
168	1534	5	Rest	Metal	Iron	Rod	-
168	1534	2	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
168	1534	3	Pin	Rod with ring	Iron	L/P/V 353	D-I (510/20-725)
168	1535	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
168	1533	1	Belt Part	Buckle	Iron	Siegmund Gur. 2.2.b.	B-D (400-565)
173	1450	1	Rivet	Rivet	Copper alloy	Seax rivet, indet	-
173	1450	2	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
178	1516	12	Bead	Polychrome	Glass	Koch group 27	D-H (510/20-670/80)
178	1516	8	Bead	Monochrome	Glass	S-group 46 (1-5)	D-H (510/20-670/80)
178	1516	7	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
178	1516	6	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
178	1516	5	Bead	Monochrome	Glass	S-40.1	D-H (510/20-670/80)
178	1516	4	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
178	1516	3	Bead	Polychrome	Glass	Koch group 27	D-H (510/20-670/80)
178	1516	2	Bead	Monochrome	Glass	S-34.1	D-H (510/20-670/80)
178	1406	1	Comb	Teeth segment Plate	Antler	Siegmund Ger. 3.2.	-
178	1516	13	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
178	1516	9	Bead	Monochrome	Glass	S-35.4	D-H (510/20-670/80)

178	1516	11	Bead	Monochrome	Glass	Melon bead	D-H (510/20-670/80)
178	1516	1	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
178	1515	1	Knife	Knife	Iron	Siegmund Ger. 1.2.	H-J (640/50->725)
178	1406	2	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
178	1516	14	Rest	Metal	Iron	Nail	-
179	1504	2	Bead	Monochrome	Glass	S-group 47	C-J (460/80->725)
179	1504	1	Bead	Monochrome	Glass	-	-
183	8888-183	1	Ring	Finger ring	Missing	Missing	-
184	1510	1	Glass Vessel	Fragment / Unknown	Glass	Isings 52/55	Roman
184	1510	2	Glass Vessel	Fragment / Unknown	Glass	Glass fragment	
187	1636	7	Bead	Polychrome	Glass	S-35.11	D-G (510/20-640/50)
187	1637	15	Bead	Monochrome	Glass	S-31.1	B-E (400-580/90)
187	1637	14	Bead	Monochrome	Glass	-	B-E (400-580/90)
187	1637	13	Bead	Monochrome	Glass	S-47.9	B-E (400-580/90)
187	1637	12	Bead	Monochrome	Glass	-	B-E (400-580/90)
187	1637	11	Bead	Polychrome	Glass	S-33.7	B-E (400-580/90)
187	1637	10	Bead	Monochrome	Glass	S-1.2	B-E (400-580/90)
187	1637	1	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
187	1636	10	Bead	Monochrome	Glass	S-33.3	D-G (510/20-640/50)
187	1636	8	Bead	Monochrome	Glass	S-group 37 (1-2)	D-G (510/20-640/50)
187	1636	6	Bead	Natural	Amber	Amber bead	D-G (510/20-640/50)
187	1636	5	Bead	Monochrome	Glass	S-40.1	D-G (510/20-640/50)
187	1636	4	Bead	Monochrome	Glass	S-35.4	D-G (510/20-640/50)
187	1636	3	Bead	Monochrome	Glass	S-1.8	D-G (510/20-640/50)
187	1636	2	Pendant	Jewelled	Gold	Siegmund Per. 6.1.	D-F (510/25-610/20)
187	1637	8	Bead	Polychrome	Glass	Koch group 27	B-E (400-580/90)
187	1636	9	Bead	Monochrome	Glass	S-31.1	D-G (510/20-640/50)
187	1637	7	Bead	Monochrome	Glass	-	B-E (400-580/90)
187	1643	1	Belt Part	Buckle	Copper alloy	Siegmund Gur. 2.4.	C-D (460/80-565)
187	1642	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	E-F (565-610)
187	1641	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	E-F (565-610)
187	1640	2	Bead	Natural	Amber	Amber bead	-
187	1640	1	Ring	Earring	Silver	Fag Ohr4A	C-E (460/80-580/90)
187	1638	2	Ring	Earring	Silver	Fag Ohr4A	C-E (460/80-580/90)
187	1638	1	Ring	Finger ring	Silver	Finger ring	
187	1637	6	Bead	Monochrome	Glass	S-40.1	B-E (400-580/90)
187	1637	17	Bead	Monochrome	Glass	S-33.3	B-E (400-580/90)
187	1637	16	Bead	Monochrome	Glass	S-47.1	B-E (400-580/90)
187	1636	1	Pendant	Jewelled	Gold	Siegmund Per. 6.1.	D-F (510/25-610/20)
187	1637	5	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
187	1637	4	Bead	Polychrome	Glass	S-35.13	B-E (400-580/90)
187	1637	3	Bead	Polychrome	Glass	S-2.11	B-E (400-580/90)
187	1637	2	Bead	Polychrome	Glass	S-2.12	B-E (400-580/90)
187	1637	19	Bead	Monochrome	Glass	S-35.4	B-E (400-580/90)

187	1637	18	Bead	Polychrome	Glass	S-35.11	B-E (400-580/90)
187	1637	9	Bead	Monochrome	Glass	S-group 37 (1-2)	B-E (400-580/90)
187	1639	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.31.	D-E (510/20-580/90)
189	1489	3	Bead	Unknown	Unknown	Bead: missing	-
189	1489	2	Brooch	Brooch	Copper alloy	Maastricht type	-
189	1489	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.4.	E-F (565-610)
194	1502	2	Ring	Ring	Copper alloy	Ring	-
194	1502	1	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
194	1503	1	Belt Part	Plate Buckle	Copper alloy	Maastricht-type	E (565-580/90)
198	1741	1	Ring	Finger ring	Copper alloy	Finger ring	-
198	1741	2	Bead	Unknown	Unknown	Bead, missing	-
198	1741	3	Rest	Unknown		Missing	-
199	1684	2	Rest	Metal	Iron	Indet.	-
199	1684	1	Seax	Seax	Iron	Missing	-
201	1501	3	Arrow	Head	Iron	L/P/V 23/24	C-F (460/80-610)
201	1501	4	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
201	1501	2	Knife	Knife	Iron	Knife	-
201	1501	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
201	1501	5	Rest	Metal	Iron	Indet.	-
204	1682	1	Vessel	Fragment / Unknown	Pottery	Missing	-
205	1653	1	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
205	1654	2	Belt Part	Back Plate	Copper alloy	L/P/V 179?	G-H (610/20-670/80)
205	1652	2	Rest	Metal	Iron	Nail?	-
205	1654	1	Belt Part	Plate Buckle	Copper alloy	L/P/V 179?	G-H (610/20-670/80)
205	1654	3	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
205	1652	1	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
208	1646	1	Belt Part	Strap End	Copper alloy	Stein 1967	H-I (640/50-725)
208	8888-208	1	Bead	Unknown	Unknown	-	-
210	1744	6	Knife	Knife, blade	Iron	Knife	-
210	1744	5	Rest	Metal	Iron	Indet.	-
210	1744	2	Tweezers	Tweezers	Copper alloy	Siegmund Ger 2.6	G-H (610/20-670/80)
210	1744	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
210	1744	3	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
214	1759	3	Rest	Metal	Iron	Indet.	-
214	1761	1	Belt Part	Buckle	Copper alloy	Indet	D-E? (510/20-580/90)
214	1760	1	Belt Part	Buckle	Unknown	Missing	-
214	1759	1	Bead	Polychrome	Glass	S-33.7	D-H (510/20-670/80)
214	1759	2	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
218	1686	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.22.	E-G (565-640/50)
218	1688	1	Rest	Metal	Iron	Indet.	-
220	1685	1	Vessel	Fragment / Unknown	Pottery	Missing	-
221	1723	1	Glass Vessel	Dish, ribbed	Glass	Isings 3b	69
222	1648	1	Belt Part	Plate Buckle	Copper alloy	Maastricht	E-H (565-670/80)
223	1650	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.43.	F-H (580/90-670/80)

223	1651	1	Glass Vessel	Fragment / Unknown	Glass	Siegmund Gla. 4.?	B-D (400-565)
225	1699	1	Vessel	Jar	Pottery	Vanvinckenroye 423	150-200
228	1644	1	Vessel	Trefoil Jug	Pottery	Maastricht	Merovingian
230	1766	1	Belt Part	Buckle	Copper alloy	Indet	C-D (460/80-565)
230	1767	8	Key	Key	Iron	L/P/V 350	D-F (510/25-610/20)
230	1767	1	Belt Part	Plate Buckle	Copper alloy	L/P/V 131	E-H (565-670/80)
230	1767	11	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
230	1767	12	Ring	Ring	Copper alloy	Ring	-
230	1767	13	Rest	Metal	Copper alloy	Indet.	-
230	1767	14	Rest	Metal	Iron	Indet.	-
230	1756	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.31.	D-E (510/20-580/90)
230	1765	1	Bead	Unknown	Unknown	Missing	-
230	1767	10	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
230	1765	2	Ring	Ring	Unknown	Missing	-
230	1767	15	Rest	Metal		Indet.	-
230	1767	9	Pendant	Decorative disc	Antler	L/P/V 359	D-F (510/20-610)
230	1767	5	Shear	Shear (complete)	Iron	L/P/V 355	C-G (460/80-640/50)
230	1767	2	Belt Part	Slotted plate	Copper alloy	T-shaped mount	-
230	1767	3	Comb	Composite Double	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
230	1767	4	Comb	Case	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
230	1767	7	Key	Latch lifter Key	Iron	L/P/V 351	C-F (460/80-610)
230	1767	6	Knife	Knife	Iron	Knife	-
230	1766	2	Rest	Metal	Copper alloy	Indet.	-
235	1748	5	Bead	Monochrome	Glass	-	C-D (460/80-565)
235	1748	2	Bead	Monochrome	Glass	-	C-D (460/80-565)
235	1748	3	Bead	Polychrome	Glass	Koch M80	C-D (460/80-565)
235	1748	10	Bead	Monochrome	Glass	-	C-D (460/80-565)
235	1748	6	Bead	Monochrome	Glass	S-46.4	C-D (460/80-565)
235	1749	1	Vessel	(Biconical) Dish	Pottery	Dragendorff 32	150-250
235	1748	4	Bead	Monochrome	Glass	-	C-D (460/80-565)
235	1747	1	Belt Part	Buckle	Copper alloy	Missing	-
235	1748	1	Bead	Monochrome	Glass	S-group 46 (1-5)	C-D (460/80-565)
235	1748	8	Bead	Monochrome	Glass	-	C-D (460/80-565)
235	1750	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
235	1748	7	Bead	Monochrome	Glass	-	C-D (460/80-565)
245	1763	1	Seax	Seax	Iron	Missing	-
247	1754	1	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
247	1752	1	Bead	Monochrome	Glass	S-35.4	D-H (510/20-670/80)
247	1754	2	Glass Vessel	Fragment / Unknown	Glass	Fragment glass vessel	-
247	1752	3	Bead	Monochrome	Glass	S-group 37 (1-2)	D-H (510/20-670/80)
247	1752	2	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
247	1752	5	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
247	1752	6	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
247	1752	10	Bead	Polychrome	Glass	S-35.8	D-H (510/20-670/80)

247	1752	8	Bead	Polychrome	Glass	Koch group 42	D-H (510/20-670/80)
247	1752	9	Bead	Polychrome	Glass	S-33.7	D-H (510/20-670/80)
247	1753	1	Rest	Metal	Iron	Missing	-
247	1752	7	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
247	1752	4	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
250	1795	3	Rest	Metal	Copper alloy	Indet.	-
250	1795	2	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
250	1795	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
250	1795	4	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
258	1832	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
258	1831	9	Bead	Monochrome	Glass	-	D-E (510/20-580/90)
258	1831	1	Bead	Monochrome	Glass	-	D-E (510/20-580/90)
258	1831	10	Bead	Monochrome	Glass	-	D-E (510/20-580/90)
258	1839	1	Vessel	Bottle	Pottery	Maastricht	?
258	1831	11	Rest	Metal	Copper alloy	Indet.	-
258	1831	7	Bead	Monochrome	Glass	S-1.3.?	D-E (510/20-580/90)
258	1831	8	Bead	Polychrome	Glass	S-2.11	D-E (510/20-580/90)
258	1831	2	Bead	Natural	Amber	Amber bead	D-E (510/20-580/90)
258	1831	3	Bead	Monochrome	Glass	S-1.3	D-E (510/20-580/90)
258	1831	4	Bead	Monochrome	Glass	S-1.3	D-E (510/20-580/90)
258	1831	5	Bead	Monochrome	Glass	-	D-E (510/20-580/90)
258	1831	6	Bead	Monochrome	Glass	S-1.3	D-E (510/20-580/90)
258	1840	1	Vessel	Jar	Pottery	Siegmund Kru. 1.3.	E-F (565-610)
259	1835	1	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
259	1834	4	Pin	Unknown/fragment	Iron	L/P/V 353	D-I (510/20-725)
259	1834	3	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
259	1834	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
259	1834	2	Tweezers	Tweezers	Iron	L/P/V 322	D-F (510/20-610)
259	1835	4	Coin	Coin		Coin	
259	1835	3	Coin	Coin	Gold	Coin	
259	1833	1	Knife	Knife	Iron	Knife: Missing	-
263	1838-263	1	Seax	Sword	Iron	L/P/V 95	-
264	1837	1	Knife	Knife	Iron	Knife: Missing	-
264	1837	2	Bead	Spindle whorl	Glass	Siegmund Ggh 1.2	C (460/80-510/25)
270	8888-270	1	Bead	Unknown	Unknown	-	-
271	1825	1	Axe/Francisca	Unknown	Iron	Siegmund FBA 1.2/1.3*	C-E (460/80-580/90)
273	1828	1	Vessel	Jug	Pottery	Maastricht	?
274	1793	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.31.	D-E (510/20-580/90)
274	1792	3	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
274	1792	2	Ring	Earring	Silver	Silver earring	C-H (460/80-670/80)
274	1792	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	E-F (565-610)
274	1798	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
274	1782	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	E-F (565-610)
277	1807	5	Bead	Polychrome	Glass	Koch group 7?	E-H (565-670/80)

277	1807	9	Bead	Monochrome	Glass	S-47.7	E-H (565-670/80)
277	1807	8	Bead	Monochrome	Glass	-	E-H (565-670/80)
277	1807	6	Bead	Monochrome	Glass	-	E-H (565-670/80)
277	1807	4	Bead	Monochrome	Glass	S-35.6	E-H (565-670/80)
277	1807	3	Bead	Natural	Amber	Amber bead	E-H (565-670/80)
277	1807	2	Glass Vessel	Fragment / Unknown	Glass	Fragment	
277	1807	11	Bead	Monochrome	Glass	S-1.3	E-H (565-670/80)
277	1807	10	Bead	Monochrome	Glass	S-32.2	E-H (565-670/80)
277	1807	1	Rest	Metal	Iron	Indet.	-
277	1807	7	Bead	Monochrome	Glass	S-33.5	E-H (565-670/80)
278	1817	1	Belt Part	Plate Buckle	Iron	Fag Gur 4.8A	H (640/50-670/80)
278	1817	10	Seax	Seax	Iron	Fag Sax3	I-J (670/80-> 725)
278	1817	8	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
278	1817	7	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
278	1817	6	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
278	1817	5	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
278	1817	4	Belt Part	Plate	Iron	Fag Gur 4.8A	H (640/50-670/80)
278	1817	3	Belt Part	Plate	Iron	Fag Gur 4.8A	H (640/50-670/80)
278	1817	9	Knife	Knife, blade	Iron	Knife	-
278	1817	13	Rest	Metal	Iron	Indet.	-
278	1817	12	Rest	Metal	Iron	Loop (seax scabbard)	I-J (670/80-> 725)
278	1817	11	Rivet	Nail	Copper alloy	Scabbard nails	-
278	1817	2	Belt Part	Plate	Iron	Fag Gur 4.8A	H (640/50-670/80)
279	1797	2	Knife	Knife	Iron	Knife	-
279	1797	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.31.	C-E (460/80-580/90)
283	1811	1	Shear	Shear (complete)	Iron	L/P/V 355	C-G (460/80-640/50)
283	1812	1	Bead	Unknown	Unknown	Bead, missing	-
283	1811	2	Rest	Metal	Iron	Indet.	-
283	1806	1	Vessel	Fragment / Unknown	Pottery	Missing	-
284	1815	7	Rivet	Nail	Copper alloy	Scabbard nails	-
284	1815	1	Belt Part	Counter Plate	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
284	1815	2	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
284	1815	3	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
284	1815	4	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
284	1815	6	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
284	1815	5	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
285	1819	5	Bead	Monochrome	Glass	S-group 46 (1-5)	E (565-580/90)
285	1819	1	Bead	Monochrome	Glass	-	E (565-580/90)
285	1819	4	Bead	Monochrome	Glass	-	E (565-580/90)
285	1819	2	Bead	Monochrome	Glass	S-47.1	E (565-580/90)
285	1819	3	Bead	Natural	Amethyst	S-5.2	E (565-580/90)
286	1810	1	Belt Part	Buckle	Copper alloy	Böhner A6	C-D (460/80-565)
287	1784	2	Vessel	Fragment / Unknown	Pottery	Fragments	-
287	1784	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.21.	E-G (565-640/50)

288	1788	2	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
288	1788	1	Rest	Metal	Iron	Siegmund Ger. 5	C-I (460/80-725)
288	1789	1	Belt Part	Buckle	Copper alloy	Missing	-
288	1785	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.21.	E-G (565-640/50)
288	1786	2	Seax	Seax		Missing	-
288	1786	1	Axe/Francisca	Francisca	Iron	Siegmund FBA 1.2/1.3	C-E (460/80-580/90)
291	1804	1	Vessel	(Biconical) Dish	Pottery	Maastricht-type?	E-G (565-640/50)
292	1790	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.43.	F-H (580/90-670/80)
292	1791	1	Vessel	Fragment / Unknown	Pottery	Missing	-
292	1794	1	Knife	Knife	Iron	Siegmund Ger. 1.2.	H-J (640/50->725)
292	1794	2	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
293	1701	1	Knife	Knife	Iron	Siegmund Ger. 1.2.	H-J (640/50->725)
293	1701	3	Rest	Metal	Iron	Indet.	-
293	1702	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
293	1701	2	Rest	Metal	Copper alloy	Indet.	-
294	1803	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
294	8888-294	1	Rest	Metal	Iron	Indet.	-
297	1703	3	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
297	1703	2	Knife	Knife	Iron	Knife	-
297	1703	4	Mount	Scabbard	Copper alloy	-	G-H (610/20-670/80)
297	1703	5	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
297	1703	6	Rivet	Nail	Copper alloy	Scabbard nails	-
297	1703	1	Rivet	Rivet	Copper alloy	Large rivet	-
299	1816	1	Vessel	Beaker	Pottery	Maastricht/Gellep 100/101	A (340-400)
300	1805	1	Vessel	Jug	Pottery	Siegmund Kan 1.2.	E-G (565-640/50)
300	1820	1	Lance	Head	Iron	Missing	-
305	1823	1	Axe/Francisca	Francisca	Iron	Siegmund FBA 1.2/1.3	C-E (460/80-580/90)
305	1823	2	Axe/Francisca	Francisca	Iron	Siegmund FBA 1.2/1.3	C-E (460/80-580/90)
306	1796	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.1.	C-D (460/80-565)
306	1777	1	Rest	Metal	Brass	Indet.	-
308	1735	1	Pin	Toilet utensils	Copper alloy	Siegmund Nad. 2.2.	E-G (565-640/50)
308	1737	2	Bead	Natural	Rock-crystal	S-5.1	B-E (400-580/90)
309	1732	1	Glass Vessel	Dish	Glass	Siegmund Gla 1.3.	B (400-460/80)
310	1783	4	Lance	Head	Iron	Siegmund Lan 2.5	G-I (610/20-725)
310	1783	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
310	1783	2	Axe/Francisca	Francisca	Iron	Siegmund FBA 1.2/1.3	C-E (460/80-580/90)
310	1783	3	Rest	Metal	Copper alloy	Indet.	-
313	1019	1	Comb	Composite Single	Antler	Siegmund Ger. 3.12.	G-I (610/20-725)
313	1019	2	Bead	Monochrome	Glass	-	B-D (400-565)
313	1019	3	Bead	Monochrome	Glass	-	B-D (400-565)
313	1019	4	Bead	Polychrome	Glass	S-group 31	B-D (400-565)
314	1172	3	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
314	1173	2	Bead	Polychrome	Glass	S-2.13	E (565-580/90)
314	1173	1	Rest	Metal	Copper alloy	Indet.	-

314	1172	7	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
314	1172	2	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
314	1172	4	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
314	1173	4	Bead	Polychrome	Glass	S-2.13	E (565-580/90)
314	1172	5	Bead	Monochrome	Glass	S-1.8	D-H (510/20-670/80)
314	1172	6	Bead	Natural	Amber	Amber bead	D-H (510/20-670/80)
314	1173	3	Bead	Polychrome	Glass	Koch 1.13	E (565-580/90)
314	1172	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
315	1151	5	Rest	Metal	Copper alloy	Rod	-
315	1151	3	Bead	Monochrome	Glass	-	E-G (565-640/50)
315	1151	2	Bead	Monochrome	Glass	-	E-G (565-640/50)
315	1151	1	Bead	Natural	Amethyst	S-5.2	E-G (565-640/50)
318	0941	1	Glass Vessel	Fragment / Unknown	Glass	Missing	-
319	0951	1	Vessel	Fragment / Unknown		Fragment	-
357	0766	1	Vessel	Fragment / Unknown		Fragment	-
361	0070	1	Vessel	Fragment / Unknown	Pottery	Fragment	-
406	8888-406	1	Rest	Metal	Iron	Indet.	-
407	1522	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
408	1521	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)

The stray finds from the Vrijthof cemetery / site

Context	Find#	Sub#	Class	SubClass	Material	Type	Maastricht phase
0	1843	1	Belt Part	Plate Buckle	Iron	Siegmund Gur. 4.5.	G (610/20-640/50)
0	1618	1	Rest	Metal	Iron	Knife fragment?	-
0	1849	2	Ring	Ring	Copper alloy	Ring	-
0	1740	1	Ring	Ring	Copper alloy	Ring	-
0	1846	1	Axe/Francisca	Unknown	Iron	Missing	-
0	1843	4	Lance	Head	Iron	Siegmund Lan 1.1.a	D-E (510/20-580/90)
0	1849	5	Rest	Metal	Copper alloy	Indet.	-
0	1843	2	Rivet	Rivet	Copper alloy	Fag S-Sax 4.1	G-H (610/20-670/80)
0	1849	6	Rest	Metal	Iron	Indet.	-
0	1487	4	Knife	Knife	Iron	Knife	-
0	1487	5	Belt Part	Buckle	Silver	L/P/V 142	C-D (460/80-565)
0	1487	6	Rest	Metal	Iron	L/P/V 353	D-I (510/20-725)
0	1838	7	Glass Vessel	Dish	Glass	Feyeux 2003, 81.3K	D-E (510/20-580/90)
0	1838	5	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
0	1838	4	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.5?	F-G? (580/90-640/50)
0	1843	3	Seax	Seax	Iron	Fag Sax2.1	F-G (580/90-640/50)
0	8888	4	Belt Part	Plate Buckle	Copper alloy	Maastricht	D (510/20-565)

0	1618	2	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
0	8888	6	Brooch	Form, Bird	Gold?	Maastricht type	?
0	1487	7	Rest	Metal	Iron	Rod	-
0	1322	4	Rest	Metal	Iron	Indet.	-
0	1384	2	Glass Vessel	Fragment / Unknown	Glass	Vessel, fragment	-
0	1849	4	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
0	8888	5	Rest	Metal	-	Indet.	-
0	1838	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.21.	D-E (510/20-580/90)
0	8888	3	Pendant	Crystal Ball	Iron	Siegmund Ggh. 2.	C-G (460/80-640/50)
0	8888	2	Ring	Finger ring	Copper alloy	Siegmund Ger 2.6	G-H (610/20-670/80)
0	8888	1	Comb	Case	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
0	2965	1	Brooch	Bow	Silver	L/P/V 268	C-D (460/80-565)
0	1487	2	Rivet	Rivet, Decorated	Copper alloy	L/P/V 195	C-D (460/80-565)
0	1487	3	Belt Part	Belt Stud	Copper alloy	L/P/V 195	C-D (460/80-565)
0	1487	1	Rivet	Rivet, Decorated	Copper alloy	Siegmund Gur. 2.10.	D (510/20-565)
0	1755	3	Rivet	Rivet, Decorated	Copper alloy	Rivet (seax scabbard)	G-I (610/20-725)
0	1739	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
0	1755	9	Rest	Metal	Copper alloy	Indet.	-
0	1755	8	Rivet	Rivet, Decorated	Copper alloy	Rivet (seax scabbard)	G-I (610/20-725)
0	1755	7	Knife	Knife	Iron	Knife	-
0	1755	6	Rivet	Rivet, Decorated	Copper alloy	Rivet (seax scabbard)	G-I (610/20-725)
0	1838	3	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.32.	D-E (510/20-580/90)
0	1755	4	Rivet	Rivet, Decorated	Copper alloy	Rivet (seax scabbard)	G-I (610/20-725)
0	1691	1	Vessel	Beaker	Pottery	L/P/V 398	G-H (610/20-670/80)
0	1755	2	Rivet	Rivet, Decorated	Copper alloy	Rivet (seax scabbard)	G-I (610/20-725)
0	1755	10	Seax	Seax	-	Missing	-
0	1755	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 4.11.	E-G (565-640/50)
0	1739	3	Belt Part	Strap End	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
0	1739	4	Rivet	Rivet	Iron	Seax rivet, indet	-
0	1739	5	Rest	Metal	Iron	Indet.	-
0	1755	5	Rivet	Rivet, Decorated	Copper alloy	Rivet (seax scabbard)	G-I (610/20-725)
0	1322	3	Rest	Metal	Iron	Indet.	-
0	1849	3	Glass Vessel	Fragment / Unknown	Glass	Glass cylinder	
0	1526	1	Coin	Coin		Coin	
0	1829	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.32.	D-E (510/20-580/90)
0	1576	1	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
0	1645	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.22.	E-G (565-640/50)
0	1659	1	Knife	Knife	Iron	Fag Sax1	D-E (510/20-580/90)
0	1739	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
0	1771	1	Belt Part	Plate Buckle	Iron	Fag Gur 4.1/2	E-F (565-610)
0	1692	1	Vessel	Beaker	Pottery	Dragendorff 53	150-250
0	1322	2	Knife	Knife	Iron	Knife?	-
0	1683	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
0	1687	1	Belt Part	Plate Buckle	Iron	Indet	-

0	1687	2	Rivet	Rivet	Copper alloy	Seax rivet, indet	-
0	1687	3	Rest	Metal	Iron	Indet.	-
0	1838	2	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.43.	F-H (580/90-670/80)
0	1771	2	Rest	Metal	Iron	Indet.	-
0	1361	1	Bead	Polychrome	Glass	S-group 31	B-E (400-580/90)
0	1330	2	Rest	Metal	Iron	Indet.	-
0	1755	11	Vessel	Fragment / Unknown	Pottery	Fragments	-
0	1265	1	Rest	Metal	Copper alloy	Handle	-
0	1175	1	Belt Part	Plate Buckle	Copper alloy	L/P/V 131	E-G (565-640/50)
0	1175	2	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.22.	E-G (565-640/50)
0	1849	1	Ring	Ring	Copper alloy	Ring	-
0	1171	1	Rest	Metal	Copper alloy	Fragments	-
0	1322	1	Knife	Knife	Iron	Knife	-
0	1330	4	Rest	Organic	Wood	Fragment	-
0	1384	1	Rest	Metal	Copper alloy	Disc with holes	-
0	1024	1	Bead	Monochrome	Glass	Melon bead	Roman
0	0980	1	Rivet	Rivet, Decorated	Copper alloy	-	-
0	1175	3	Belt Part	Back Plate	Copper alloy	Indet: back plate	-
0	1221	1	Pin	Unknown/fragment	Copper alloy	Pin/Utensil	-
0	1106	1	Ring	Ring	Copper alloy	Ring	-
0	1087	1	Coin	Coin		Coin	
0	1330	1	Pin	Decorative	Copper alloy	Roman pin	Roman

The grave goods / objects from the Pandhof cemetery

Context	Find#	Sub#	Class	SubClass	Material	Type	Maastricht phase
10012	0049	2	Knife	Knife	Iron	Knife	-
10012	0049	1	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.2.	E (565-580/90)
10012	0049	3	Axe/Francisca	Axe	Iron	Siegmund FBA. 3.1.	D-E (510/20-580/90)
10012	0049	4	Pin	Unknown/fragment	Copper alloy	Fragment pin	-
10021	0090	18	Stone / Jewel	Mounted Jewel	Silver	Mounted stone	C (460/80-510/25)
10021	0090	22	Stone / Jewel	Jewel	Garnet?	Jewel red	C (460/80-510/25)
10021	0090	23	Stone / Jewel	Jewel	Garnet?	Jewel red	C (460/80-510/25)
10021	0090	24	Stone / Jewel	Jewel	Garnet?	Jewel red, plano-convex	C (460/80-510/25)
10021	0090	20	Stone / Jewel	Mounted Jewel	Silver	Mounted stone	C (460/80-510/25)
10021	0090	7	Coin	Pendant	Silver	Coin pendant	164-181
10021	0090	12	Coin	Pendant	Silver	Coin pendant	161-175
10021	0090	11	Coin	Pendant	Silver	Coin pendant	145-161
10021	0090	10	Coin	Pendant	Silver	Coin pendant	117-138

10021	0090	15	Coin	Pendant	Silver	Coin pendant	69
10021	0090	21	Stone / Jewel	Jewel	Carneol?	Jewel yellow	C (460/80-510/25)
10021	0090	17	Coin	Pendant	Silver	Coin pendant	77-78
10021	0090	13	Coin	Pendant	Silver	Coin pendant	163-164
10021	0090	9	Coin	Pendant	Silver	Coin pendant	155-156
10021	0090	14	Coin	Pendant	Silver	Coin pendant	148-149
10021	0090	8	Coin	Pendant	Silver	Coin pendant	141-145
10021	0090	1	Ring	Finger ring	Gold/Silver	Missing	-
10021	0090	16	Coin	Pendant	Silver	Coin pendant	77-78
10021	0090	2	Coin	Pendant	Silver	Coin pendant	98-117
10021	0090	3	Coin	Pendant	Silver	Coin pendant	112-117
10021	0090	4	Coin	Pendant	Silver	Coin pendant	112-117
10021	0090	5	Coin	Pendant	Silver	Coin pendant	164-181
10021	0090	6	Coin	Pendant	Silver	Coin pendant	145-160
10021	0090	19	Stone / Jewel	(Mounted) Jewel	Silver	Mounted stone	C (460/80-510/25)
10024	0082	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.21.	D-E (510/20-580/90)
10024	0082	2	Glass Vessel	Dish	Glass	Koch IV M	C (460/80-510/25)
10031	0071	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
10031	0071	2	Vessel	Jug	Pottery	Siegmund Kan 1.12.	B-D (400-565)
10031	0071	3	Vessel	Beaker	Pottery	L/P/V 398	G-H (610/20-670/80)
10031	0071	4	Vessel	Unknown	Pottery	Siegmund Wwt.2.1.	G-H (610/20-670/80)
10032	0110	1	Belt Part	Plate Buckle	Iron	Siegmund Gur. 4.5.	G (610/20-640/50)
10032	0110	2	Pin	Decorative	Copper alloy	Maastricht	D-F? (510/20-610)
10037	0108	1	Vessel	Beaker	Pottery	Maastricht Beaker	D-I (510/20-725)
10037	0108	2	Vessel	Bottle	Pottery	Siegmund 5th-6th	B-F (400-610)
10037	0108	4	Pendant	Decorative disc	Antler	L/P/V 359	D-F (510/20-610)
10039	0113	1	Coin	Coin	Copper alloy	Coin	A (326)
10042	0060	2	Pin	Decorative	Gold	Moller 1976/77	D-F (510/20-610)
10042	0060	3	Ring	Ring	Copper alloy	Ring	-
10042	0060	1	Belt Part	Buckle	Iron	Siegmund Gur. 2.6.	D-E (510/20-580/90)
10042	0060	10	Bead	Natural	Amber	Amber bead	-
10042	0060	9	Bead	Monochrome	Glass	S-group 45	D-G (510/20-640/50)
10042	0060	8	Bead	Natural	Amethyst	S-5.2	D-G (510/20-640/50)
10042	0060	7	Pendant	Coin/Pseudo Coin	Copper alloy	Pendant	141-145
10042	0060	6	Knife	Knife	Iron	Knife	-
10042	0060	5	Brooch	Disc, Filigree	Copper alloy	Siegmund Fib. 2.3.	F-G (580/90-640/50)
10044	0584	3	Stone / Jewel	Mounted Jewel	Silver	Round silver setting with jewel (garnet?)	C (460/80-510/25)
10044	0584	4	Stone / Jewel	Mounted Jewel	Silver	Round silver setting with jewel (garnet?)	C (460/80-510/25)
10044	0584	2	Ring	Finger ring	Silver	Finger ring	Roman
10044	0584	1	Ring	Finger ring	Copper alloy	Finger ring	Roman
10047	0092	1	Pin	Decorative	Silver	Fag Nad4	A-G (300-640/50)
10048	0072	18	Glass Vessel	Beaker, cone	Glass	Koch III N	B-C (400-510/25)

10048	0072	6	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	9	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10048	0072	8	Glass Vessel	Bottle	Glass	Feyeux 2003, 10.0	B-D (400-565)
10048	0072	7	Glass Vessel	Beaker	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
10048	0072	19	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 1.12.	D (510/20-565)
10048	0072	12	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	4	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	3	Belt Part	Strap End	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	2	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	17	Belt Part	Belt loop	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	16	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	15	Belt Part	Slotted plate	Brass	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	14	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	11	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	10	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10048	0072	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	13	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10048	0072	5	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10054	0043	1	Bead	Monochrome	Glass	S-34.1	G-I (610/20-725)
10056	0019	3	Glass Vessel	Stemmed glass	Glass	Feyeux 2003, 43.0	C-I (460/80-725)
10056	0019	1	Vessel	(Biconical) Dish	Pottery	Brulet 420	C-D (460/80-565)
10056	0019	4	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10056	0019	2	Vessel	(Biconical) Dish	Pottery	Siegmund Sha 2.13	E-F (565-610)
10061	0048	10	Bead	Monochrome	Glass	S-47.1?	E-G (565-640/50)
10061	0048	6	Bead	Polychrome	Glass	S-35.11	E-G (565-640/50)
10061	0048	11	Bead	Monochrome	Glass	-	E-G (565-640/50)
10061	0048	12	Bead	Polychrome	Glass	S-35.8	E-G (565-640/50)
10061	0048	1	Belt Part	Buckle	Copper alloy	Indet	C-D (460/80-565)
10061	0048	2	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.	I (670/80-725)
10061	0048	17	Bead	Monochrome	Glass	-	E-G (565-640/50)
10061	0048	9	Bead	Monochrome	Glass	S-47.1	E-G (565-640/50)
10061	0048	13	Bead	Monochrome	Glass	-	E-G (565-640/50)
10061	0048	7	Bead	Polychrome	Glass	Koch 21,2	E-G (565-640/50)
10061	0048	5	Bead	Polychrome	Glass	S-33.7	E-G (565-640/50)
10061	0048	4	Bead	Natural	Rock-crystal	S-5.1	E-G (565-640/50)
10061	0048	3	Pendant	Chain	Copper alloy	Siegmund Ggh. 6.	F-H (580/90-670/80)
10061	0048	8	Bead	Polychrome	Glass	S-32.7	E-G (565-640/50)
10061	0048	14	Bead	Monochrome	Glass	-	E-G (565-640/50)
10061	0048	15	Bead	Polychrome	Glass	Koch 21,5	E-G (565-640/50)
10061	0048	16	Bead	Monochrome	Glass	S-33.3	E-G (565-640/50)
10063	0064	1	Rest	Metal	Iron	Indet.	-
10068	0093	13	Bead	Monochrome	Glass	S-31.1	B-E (400-580/90)
10068	0093	6	Bead	Monochrome	Glass	-	B-E (400-580/90)
10068	0093	5	Bead	Monochrome	Glass	S-47.2	B-E (400-580/90)

10068	0093	15	Coin	Coin	Copper alloy	Coin	A (347-348)
10068	0093	19	Coin	Coin	Copper alloy	Coin	A (337-340)
10068	0093	4	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
10068	0093	3	Pendant	Case	Copper alloy	Siegmund Ggh. 5.	G (610/20-640/50)
10068	0093	2	Ring	Ring	Copper alloy	Ring	-
10068	0093	18	Coin	Coin	Copper alloy	Coin	A (335-337)
10068	0093	7	Bead	Monochrome	Glass	S-47.1	B-E (400-580/90)
10068	0093	16	Coin	Coin	Copper alloy	Coin	c. 350-500?
10068	0093	12	Bead	Precious metal	Silver	-	B-E (400-580/90)
10068	0093	11	Bead	Monochrome	Glass	S-47.7	B-E (400-580/90)
10068	0093	14	Bead	Natural	Rock-crystal	S-5.1	B-E (400-580/90)
10068	0093	10	Bead	Monochrome	Glass	-	B-E (400-580/90)
10068	0093	1	Pin	Decorative	Bone	L/P/V 318	E-H (565-670/80)
10068	0093	17	Coin	Coin	Copper alloy	Coin	c. 350-500
10068	0093	9	Bead	Monochrome	Glass	-	B-E (400-580/90)
10068	0093	8	Bead	Monochrome	Glass	S-47.9	B-E (400-580/90)
10069	0065	3	Pin	Unknown/fragment	Silver	Fragments pin	-
10069	0065	1	Pin	Decorative	Silver	Fag Nad4	A-G (300-640/50)
10069	0065	2	Pin	Decorative	Silver	Fag Nad4	A-G (300-640/50)
10074	0027	22	Glass Vessel	Palm cup	Glass	Siegmund Gla 2.1	F-G (580/90-640/50)
10074	0027	6	Bead	Monochrome	Glass	S-33.3	F-H (580/90-670/80)
10074	0027	7	Bead	Monochrome	Glass	-	F-H (580/90-670/80)
10074	0027	5	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
10074	0027	4	Belt Part	Strap End	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10074	0027	3	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10074	0027	23	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.3K	B-D (400-565)
10074	0027	20	Bead	Polychrome	Glass	Koch 20,8	F-H (580/90-670/80)
10074	0027	2	Belt Part	Strap End	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10074	0027	19	Bead	Natural	Amethyst	S-5.2	F-H (580/90-670/80)
10074	0018	2	Rest	Metal	Iron	Indet	-
10074	0018	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 31.2HI	F-I (580/90-725)
10074	0027	18	Bead	Polychrome	Glass	Koch III N	B-C (400-510/25)
10074	0027	17	Bead	Monochrome	Glass	S-33.1	F-H (580/90-670/80)
10074	0027	16	Bead	Polychrome	Glass	S-32.7	F-H (580/90-670/80)
10074	0027	8	Bead	Monochrome	Glass	S-33.6	F-H (580/90-670/80)
10074	0027	24	Pendant	Decorative disc	Antler	L/P/V 359	D-F (510/20-610)
10074	0027	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10074	0027	15	Bead	Polychrome	Glass	S-35.11	F-H (580/90-670/80)
10074	0027	14	Bead	Monochrome	Glass	-	F-H (580/90-670/80)
10074	0027	13	Bead	Monochrome	Glass	S-47.1	F-H (580/90-670/80)
10074	0027	12	Bead	Polychrome	Glass	S-35.13	F-H (580/90-670/80)
10074	0027	11	Bead	Monochrome	Glass	S-35.4	F-H (580/90-670/80)
10074	0027	10	Bead	Monochrome	Glass	-	F-H (580/90-670/80)
10088	0094	1	Coin	Coin	Copper alloy	Coin	A (364-378)

10093	0078	1	Ring	Finger ring	Gold	Finger ring	-
10094	0022	6	Bead	Monochrome	Glass	S-group 46 (1-5)	C-J (460/80->725)
10094	0022	3	Comb	Composite Double	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
10094	0022	4	Comb	Case	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
10094	0022	5	Brooch	Brooch	Copper alloy	L/PV 211	D (510/25-565)
10094	0022	2	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
10094	0022	8	Coin	Pendant	Copper alloy	Coin pendant	c. 280-500
10094	0022	7	Coin	Pendant	Copper alloy	Coin pendant	A (364-378)
10094	0022	9	Coin	Pendant	Copper alloy	Coin pendant	270-300
10094	0022	1	Belt Part	Buckle	Iron	Siegmund Gur. 2.2.b.	B-D (400-565)
10097	0045	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10097	0045	2	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10097	0045	3	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10097	0045	4	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.22.	E-G (565-640/50)
10097	0045	5	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10100	0059	12	Bead	Polychrome	Glass	Koch 21.9	E-F (565-610/20)
10100	0059	19	Belt Part	Belt loop	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	1	Belt Part	Plate Buckle	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	11	Stone / Jewel	Flint	Copper alloy	Siegmund Ger. 6.	C-I (460/80-725)
10100	0059	17	Belt Part	Slotted plate	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	13	Bead	Monochrome	Glass	S-47.9	C (460/80-510/25)
10100	0059	14	Bead	Natural	Amber	Amber bead	-
10100	0059	15	Belt Part	Slotted plate	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	7	Knife	Knife	Iron	Knife	-
10100	0059	18	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
10100	0059	2	Belt Part	Back Plate	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	3	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10100	0059	10	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
10100	0059	6	Belt Part	Slotted plate	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	8	Knife	Knife	Iron	Knife	-
10100	0059	9	Rest	Metal	Iron	Indet.	-
10100	0059	16	Belt Part	Slotted plate	Copper alloy	Fag Gur. 3A	E (565-580/90)
10100	0059	4	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10100	0059	5	Belt Part	Back Plate	Copper alloy	Fag Gur. 3A	E (565-580/90)
10102	0023	3	Bead	Monochrome	Glass	-	-
10102	0023	2	Bead	Precious metal	Gold	Gold bead	D (510/25-565)
10102	0023	4	Bead	Monochrome	Glass	S-33.3	D-H (510/25-670/80)
10102	0023	1	Belt Part	Buckle	Silver	Siegmund Gur. 2.7.	D-E (510/20-580/90)
10108	0091	2	Ring	Ring	Glass	Bracelet sapropelite	A (300-400)
10108	0091	3	Ring	Ring	Glass	Bracelet sapropelite	A (300-400)
10108	0091	1	Ring	Ring	Glass	Bracelet sapropelite	A (300-400)
10118	0042	7	Bead	Monochrome	Glass	S-35.4	E-G (565-640/50)
10118	0042	1	Key	Latch lifter Key	Copper alloy	L/P/V 351	C-F (460/80-610)
10118	0042	2	Pendant	Chain	Copper alloy	Siegmund Ggh. 6.	F-H (580/90-670/80)

10118	0042	3	Bead	Polychrome	Glass	S-2.13	E-G (565-640/50)
10118	0042	6	Bead	Monochrome	Glass	-	E-G (565-640/50)
10118	0042	4	Bead	Monochrome	Glass	S-35.4	E-G (565-640/50)
10118	0042	5	Bead	Monochrome	Glass	S-33.3	E-G (565-640/50)
10122	0073	3	Bead	Monochrome	Glass	S-33.3	B-E (400-580/90)
10122	0073	1	Belt Part	Buckle	Iron	Siegmund Gur. 2.2.b.	B-D (400-565)
10122	0073	2	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
10122	0073	4	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10128	0040	5	Bead	Polychrome	Glass	S-32.7	D-H (510/20-670/80)
10128	0040	1	Comb	Connecting Plate	Antler	Siegmund Ger. 3.2.	-
10128	0040	6	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
10128	0040	4	Bead	Polychrome	Glass	S-35.8	D-H (510/20-670/80)
10128	0040	7	Bead	Monochrome	Glass	S-35.4	D-H (510/20-670/80)
10128	0040	2	Pendant	Pendant	Amber	Pendant	?
10128	0040	3	Bead	Polychrome	Glass	S-35.11	D-H (510/20-670/80)
10129	0021	12	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
10129	0021	15	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
10129	0021	16	Rivet	Nail	Copper alloy	Scabbard nails	-
10129	0021	17	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
10129	0021	4	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
10129	0021	11	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
10129	0021	2	Belt Part	Plate	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
10129	0021	13	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
10129	0021	5	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
10129	0021	6	Rivet	Nail	Iron	Coffin nail	-
10129	0021	1	Belt Part	Plate Buckle	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
10129	0021	10	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
10129	0021	14	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax4.4.	H (640/50-670/80)
10129	0021	9	Belt Part	Plate	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
10129	0021	3	Comb	Connecting Plate	Antler	Comb fragment	-
10129	0021	7	Belt Part	Plate Buckle	Copper alloy	Missing	-
10129	0021	8	Belt Part	Plate	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
10131	0044	5	Rest	Metal	Iron	Indet.	-
10131	0044	2	Bead	Monochrome	Glass	S-33.1	B-E (400-580/90)
10131	0044	1	Bead	Monochrome	Glass	S-33.3	D-H (510/25-670/80)
10131	0044	4	Rest	Metal	Copper alloy	Indet.	-
10131	0044	3	Bead	Monochrome	Glass	-	-
10133	0081	1	Pendant	Case	Copper alloy	Siegmund Ggh. 5.	G (610/20-640/50)
10133	0081	2	Pendant	Coin/Pseudo Coin	Silver	Coin pendant	A (335-337)
10136	0112	2	Vessel	Beaker	Pottery	Chenet 334	A (300-400)
10136	0112	1	Vessel	Beaker	Pottery	Oelmann 33c	A (300-350)
10140	0080	1	Vessel	(Biconical) Dish	Pottery	Unverzagt 34	B (400-460/80)
10143	0024	1	Key	Latch lifter Key	Copper alloy	L/P/V 351	C-F (460/80-610)
10144	0035	3	Ring	Ring	Copper alloy	Ring	-

10144	0035	1	Ring	Bracelet	Copper alloy	Bracelet Kaiseraugst	A (300-400)
10144	0035	2	Ring	Ring	Copper alloy	Copper alloy ring	-
10145	0055	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.31.	D-E (510/20-580/90)
10148	0036	2	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
10148	0036	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
10154	0405	1	Comb	Connecting Plate	Antler	Comb fragment?	-
10155	0408	2	Pendant	Chain	Copper alloy	Siegmund Ggh. 6.	F-H (580/90-670/80)
10155	0408	1	Comb	Connecting Plate	Antler	Connecting plate	
10155	0408	3	Rest	Metal		Indet.	-
10161	0452	2	Bead	Spindle whorl	Pottery	L/P/V 347	C-G (460/80-640/50)
10161	0452	3	Rest	Bone	Bone	Bobbin (date?)	?
10161	0452	1	Belt Part	Buckle	Copper alloy	Fag Gur. 2.6/7B	D-E (510/20-580/90)
10162	0453	1	Bead	Polychrome	Glass	S-36.7	E-J (565->725)
10162	0453	2	Coin	Coin	Copper alloy	Coin	A (333-336)
10168	0520	14	Belt Part	Belt loop	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	16	Axe/Francisca	Axe	Iron	Siegmund FBA 4.2	E-G (565-640/50)
10168	0520	17	Seax	Seax		Missing	-
10168	0520	3	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	7	Coin	Coin		Coin	missing?
10168	0520	2	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	6	Belt Part	Strap End	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	9	Rest	Organic		Indet.	-
10168	0520	5	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	12	Knife	Knife	Iron	Knife	-
10168	0520	13	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	8	Knife	Knife	Iron	Knife	-
10168	0520	15	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	1	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10168	0520	10	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
10168	0520	11	Bead	Natural	Amber	Amber bead	-
10168	0520	4	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10186	0026	1	Belt Part	Buckle	Copper alloy	L/P/V 122/123	C-F (460/80-610)
10186	0026	2	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
10186	0026	3	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
10186	0026	4	Pendant	Pendant	Amber	Pendant	-
10193	0061	1	Coin	Coin	Copper alloy	Coin	A (332-333)
10200	0299	1	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
10204	0318	1	Coin	Coin	Copper alloy	Coin	A (330-335)
10204	0318	2	Coin	Coin	Copper alloy	Coin	A (347-348)
10211	0307	1	Coin	Coin	Copper alloy	Coin	recent
10213	0304	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.21.	E-G (565-640/50)
10220	0303	3	Bead	Monochrome	Glass	S-33.3	C-G (460/80-640/50)
10220	0303	4	Bead	Monochrome	Glass	S-46.4	C-G (460/80-640/50)
10220	0303	2	Bead	Monochrome	Glass	S-35.4	C-G (460/80-640/50)

10220	0303	1	Pendant	Jewelled	Gold	Siegmund Per 6.1	D-G (510/25-640/50)
10220	0303	6	Bead	Monochrome	Glass	S-35.4	C-G (460/80-640/50)
10220	0303	5	Bead	Monochrome	Glass	-	C-G (460/80-640/50)
10225	0302	1	Coin	Coin	Gold	Coin	recent
10226	0301	2	Vessel	(Biconical) Dish	Pottery	Dragendorff 31	150-225
10226	0301	1	Belt Part	Strap End	Iron	Siegmund Gur. 4.7.	H (640/50-670/80)
10227	0321	1	Bead	Monochrome	Glass	S-47.6	B-E (400-580/90)
10227	0321	9	Bead	Monochrome	Glass	S-36.1	B-E (400-580/90)
10227	0321	8	Bead	Monochrome	Glass	-	B-E (400-580/90)
10227	0321	7	Bead	Monochrome	Glass	-	B-E (400-580/90)
10227	0321	6	Bead	Monochrome	Glass	S-1.5	B-E (400-580/90)
10227	0321	5	Bead	Monochrome	Glass	S-46.4	B-E (400-580/90)
10227	0321	4	Bead	Natural	Rock-crystal	S-5.1	B-E (400-580/90)
10227	0321	3	Bead	Monochrome	Glass	S-36.2	B-E (400-580/90)
10227	0321	2	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
10246	0320	1	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
10248	0324	7	Bead	Monochrome	Glass	S-group 47	C-J (460/80->725)
10248	0324	6	Rest	Metal	Iron	Indet.	-
10248	0324	5	Rest	Metal	Copper alloy	Siegmund Ggh. 6.	F-H (580/90-670/80)
10248	0324	3	Ring	Ring	Copper alloy	Ring	-
10248	0324	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10248	0324	4	Ring	Ring	Copper alloy	Ring	-
10248	0324	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10252	0333	8	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10252	0333	1	Vessel	(Biconical) Dish	Pottery	Dragendorf 18/31	75
10252	0333	2	Bead	Polychrome	Glass	Koch 3,4 / 3,14	C-E (460/80-580/90)
10252	0333	3	Bead	Monochrome	Glass	-	C-E (460/80-580/90)
10252	0333	4	Bead	Polychrome	Gold	S-40.2	C-E (460/80-580/90)
10252	0333	5	Bead	Monochrome	Glass	S-34.1	C-E (460/80-580/90)
10252	0333	6	Bead	Monochrome	Glass	S-36.1	C-E (460/80-580/90)
10252	0333	7	Bead	Monochrome	Glass	S-47.1	C-E (460/80-580/90)
10256	0330	1	Knife	Knife	Iron	Knife	-
10307	0572	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
10307	0571	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.3K	B-D (400-565)
10307	0572	2	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
10307	0571	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
10321	0558	2	Seax	Seax	Iron	Indet.	-
10321	0558	6	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
10321	0558	1	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax 4.2	G-H (610/20-670/80)
10321	0558	4	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax 4.2	G-H (610/20-670/80)
10321	0558	5	Rivet	Rivet, Decorated	Copper alloy	Fag S-Sax 4.2	G-H (610/20-670/80)
10321	0558	3	Rest	Organic	Bone	Indet.	-
10331	0559	1	Coin	Coin	Copper alloy	Coin	c. 364-395
10332	0556	8	Rivet	Nail	Copper alloy	Scabbard nails	-

10332	0556	5	Knife	Knife	Iron	Knife	-
10332	0556	7	Rivet	Rivet	Copper alloy	Rivet (3x)	
10332	0556	4	Belt Part	Strap End	Copper alloy	Siegmund Gur. 3.2.	E (565-580/90)
10332	0556	3	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.	E (565-580/90)
10332	0556	2	Belt Part	Slotted plate	Copper alloy	Siegmund Gur. 3.2.	E (565-580/90)
10332	0556	1	Belt Part	Buckle	Copper alloy	Siegmund Gur. 3.2.	E (565-580/90)
10332	0556	6	Belt Part	Belt loop	Copper alloy	Siegmund Gur. 3.2.	E (565-580/90)
10336	0561	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10336	0561	4	Rest	Metal	Iron	Indet.	-
10336	0561	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.b.	E-F (565-610)
10336	0561	3	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10337	0551	1	Coin	Coin	Copper alloy	Coin	A (383-388)
10344	0570	1	Vessel	Beaker	Pottery	Oelmann 30	150-250
10344	0569	3	Vessel	Jug	Pottery	Siegmund Kan 2.1.?	?
10344	0569	4	Glass Vessel	Beaker, bell	Glass	Fag Gla 8B/C	E (565-580/90)
10344	0569	2	Vessel	(Biconical) Dish	Pottery	Dragendorff 36	70-225
10344	0569	5	Knife	Knife	Iron	Knife	-
10344	0568	2	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 4.11.	E-G (565-640/50)
10344	0568	1	Belt Part	Buckle	Copper alloy	Siegmund Gur. 3.2.b.	E-F (565-610)
10344	0569	1	Belt Part	Back Plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
10349	0576	2	Ring	Earring	Silver	Siegmund Ohr. 2.	C-G (460/80-640/50)
10349	0576	1	Ring	Earring	Silver	Siegmund Ohr. 2.	C-G (460/80-640/50)
10360	0575	8	Rivet	Nail	Iron	Coffin nail	-
10360	0575	7	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10360	0575	5	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
10360	0575	1	Ring	Ring	Iron	L/P/V 357	D-G (510/20-640/50)
10360	0575	2	Pin	Unknown/fragment	Iron	Pin/rod	
10360	0575	4	Pin	Unknown/fragment	Iron	L/P/V 353	D-I (510/20-725)
10360	0575	3	Seax	Seax	Iron	Fag Sax2.1	H (640/50-670/80)
10360	0575	6	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
10365	0562	13	Bead	Monochrome	Glass	S-42.2	B-E (400-580/90)
10365	0562	12	Bead	Monochrome	Glass	Roman	B-E (400-580/90)
10365	0562	11	Bead	Monochrome	Glass	S-35.4	B-E (400-580/90)
10365	0562	10	Bead	Polychrome	Glass	Koch 3,4 / 3,14	B-E (400-580/90)
10365	0562	1	Brooch	Bow	Gold	Koch V.1	D-E (510/20-580/90)
10365	0562	6	Bead	Natural	Rock-crystal	S-5.1	B-E (400-580/90)
10365	0562	14	Bead	Monochrome	Glass	S-35.2 (small)	B-E (400-580/90)
10365	0562	3	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
10365	0562	17	Bead	Monochrome	Glass	S-47.1?	B-E (400-580/90)
10365	0562	9	Bead	Monochrome	Glass	-	B-E (400-580/90)
10365	0562	15	Bead	Monochrome	Glass	-	B-E (400-580/90)
10365	0562	5	Bead	Polychrome	Glass	S-2.11	B-E (400-580/90)
10365	0562	16	Bead	Monochrome	Glass	S-31.1	B-E (400-580/90)
10365	0562	7	Bead	Natural	Amber	Amber bead	B-E (400-580/90)

10365	0562	8	Bead	Monochrome	Glass	S-47.6	B-E (400-580/90)
10365	0562	4	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
10365	0562	2	Brooch	Bow	Gold	Koch V.1	D-E (510/20-580/90)
10370	0555	3	Belt Part	Back Plate	Copper alloy	L/P/V 96	E-F (565-610)
10370	0555	2	Belt Part	Counter Plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
10370	0555	5	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
10370	0555	12	Belt Part	Slotted plate	Copper alloy	Belt fitting (seax)	G-H (610/20-670/80)
10370	0555	6	Vessel	Unknown	Pottery	Indet	-
10370	0555	7	Seax	Seax	Iron	Fag Sax2.2	G-H (610/20-670/80)
10370	0555	13	Rivet	Rivet	Copper alloy	Rivet (3x)	-
10370	0555	14	Rivet	Nail	Copper alloy	Scabbard nails	G-H (610/20-670/80)
10370	0555	9	Bead	Monochrome	Glass	S-group 45	C (460/80-510/25)
10370	0555	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
10370	0555	8	Bead	Polychrome	Glass	S-35.14	E-F (565-610/20)
10370	0555	10	Belt Part	Slotted plate	Copper alloy	Belt fitting (seax)	G-H (610/20-670/80)
10370	0555	11	Belt Part	Slotted plate	Copper alloy	Belt fitting (seax)	G-H (610/20-670/80)
10370	0555	16	Belt Part	Plate	Copper alloy	Siegmund Gur. 3.3.	G (610/20-640/50)
10370	0555	15	Mount	Scabbard	Copper alloy	Fag S-Sax4.5	G-H (610/20-670/80)
10370	0552	1	Lance	Head	Iron	Siegmund Lan 2.3?	E-J (565->725)
10370	0555	4	Belt Part	Slotted plate	Copper alloy	Belt fitting (seax)	G-H (610/20-670/80)
10399	0589	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10407	0581	12	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
10407	0581	11	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
10407	0581	9	Bead	Monochrome	Glass	S-47.5	D-G (510/20-640/50)
10407	0581	4	Bead	Monochrome	Glass	S-1.8	D-G (510/20-640/50)
10407	0581	2	Ring	Earring	Gold	Von Freeden 1979	C-D (460/80-565)
10407	0581	10	Bead	Monochrome	Glass	S-47.1	D-G (510/20-640/50)
10407	0581	8	Bead	Monochrome	Glass	S-47.1?	D-G (510/20-640/50)
10407	0581	19	Pendant	Decorative disc	Antler	L/P/V 359	D-F (510/20-610)
10407	0581	16	Bead	Monochrome	Glass	S-33.3	D-G (510/20-640/50)
10407	0581	3	Bead	Polychrome	Glass	S-2.13	D-G (510/20-640/50)
10407	0581	5	Bead	Monochrome	Glass	S-2.1	D-G (510/20-640/50)
10407	0581	6	Bead	Monochrome	Glass	S-33.3	D-G (510/20-640/50)
10407	0581	15	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
10407	0581	17	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
10407	0581	18	Bead	Polychrome	Glass	S-2.13 fragments	D-G (510/20-640/50)
10407	0581	14	Bead	Monochrome	Glass	S-47.1	D-G (510/20-640/50)
10407	0581	7	Bead	Monochrome	Glass	S-35.4	D-G (510/20-640/50)
10407	0581	13	Bead	Monochrome	Glass	-	D-G (510/20-640/50)
10407	0581	1	Ring	Earring	Gold	Von Freeden 1979	C-D (460/80-565)
10418	0557	2	Seax	Seax	Iron	Fag Sax2.3	H (640/50-670/80)
10418	0557	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.22.	E-G (565-640/50)
10420	0579	3	Coin	Coin	Copper alloy	Coin	c. 348
10420	0579	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 10.0	B-D (400-565)

10420	0579	2	Coin	Coin	Copper alloy	Coin	A (347-348)
10435	0549	1	Belt Part	Plate Buckle	Silver	Maastricht	G (610/20-640/50)
10435	0549	2	Vessel	(Biconical) Dish	Pottery	Dragendorff 33	130-160
10500	0469	6	Rest	Metal	Copper alloy	Indet.	-
10500	0469	5	Ring	Finger ring	Copper alloy	Finger ring?	-
10500	0469	4	Rivet	Rivet	Copper alloy	Rivet	
10500	0469	2	Vessel	(Biconical) Dish	Pottery	Gellep 126	C-E (460/80-580/90)
10500	0469	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 3.23.	G-H (610/20-670/80)
10500	0469	3	Rest	Metal	Iron	Indet.	-
10506	0458	1	Axe/Francisca	Francisca	Iron	Siegmund FBA 1.2/1.3	C-E (460/80-580/90)
10508	0451	1	Glass Vessel	Dish	Glass	Siegmund Gla 1.3.	B (400-460/80)
10508	0451	2	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10510	0448	1	Brooch	Form, Bird	Silver	Thiry 1939, 68-72	D-F (510/20-610)
10510	0448	2	Brooch	Form, Bird	Silver	Thiry 1939, 68-72	D-F (510/20-610)
10510	0448	3	Bead	Natural	Amber	Amber bead	-
10510	0450	1	Glass Vessel	Palm cup	Glass	Siegmund Gla 2.2.	G-H (610/20-670/80)
10511	0446	1	Vessel	Jug	Pottery	Siegmund Kan 1.2.	E-G? (565-640/50)
10511	0446	3	Coin	Coin	Copper alloy	Coin	A (364-378)
10511	0446	2	Glass Vessel	Beaker	Glass	Koch II G	B (400-460/80)
10514	0454	2	Ring	Finger ring	Silver	Finger ring	-
10514	0454	8	Bead	Monochrome	Glass	S-group 47	B-E (400-580/90)
10514	0454	7	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
10514	0454	6	Pin	Decorative	Silver	L/P/V 311	C-D (460/80-565)
10514	0454	5	Ring	Earring	Silver	Siegmund Ohr. 2.	C-G (460/80-640/50)
10514	0454	3	Ring	Finger ring	Silver	Finger ring	C-F (460/80-610/20)
10514	0454	1	Ring	Bracelet	Silver	Siegmund Rng. 1.1.	C-D (460/80-565)
10514	0454	4	Ring	Earring	Silver	Siegmund Ohr. 2.	C-G (460/80-640/50)
10526	0510	1	Coin	Coin	Copper alloy	Coin	A (364-378)
10527	0489	5	Knife	Knife	Iron	Knife	-
10527	0489	1	Belt Part	Plate Buckle	Silver	Maastricht/Altenerding	D-F (510/20-610)
10536	0502	1	Comb	Composite Double	Antler	Siegmund Ger. 3.21.	C (460/80-510/25)
10549	0492	1	Belt Part	Buckle	Silver	Maastricht	C-D (460/80-565)
10549	0492	3	Rest	Metal	Copper alloy	Indet.	-
10549	0492	4	Rest	Metal	Iron	Indet.	-
10549	0492	2	Belt Part	Buckle	Copper alloy	Siegmund Sna. 1.1.	D-E (510/20-580/90)
10551	0491	1	Coin	Coin	Copper alloy	Coin	A (364-378)
10554	0490	5	Bead	Monochrome	Glass	Roman	Roman
10554	0490	4	Bead	Monochrome	Glass	S-1.2	B-E (400-580/90)
10554	0490	2	Pendant	Case	Copper alloy	Siegmund Ggh. 5.	G (610/20-640/50)
10554	0490	1	Pendant	Coin/Pseudo Coin	Copper alloy	Coin pendant	A (351-353)
10554	0490	3	Bead	Monochrome	Glass	S-33.3	D-H (510/25-670/80)
10556	0512	1	Coin	Coin	Copper alloy	Coin	A (364-378)
10561	0522	2	Belt Part	Belt Stud	Silver	Siegmund Gur. 2.10.	D (510/20-565)
10561	0522	3	Belt Part	Belt Stud	Silver	Siegmund Gur. 2.10.	D (510/20-565)

10561	0522	1	Belt Part	Buckle	Silver	Siegmund Gur 2.6.	D-E (510/20-580/90)
10564	0496	3	Ring	Finger ring	Gold	Missing	-
10564	0496	1	Ring	Bracelet	Silver	Siegmund Rng. 1.1.	C-D (460/80-565)
10564	0496	2	Ring	Finger ring	Silver	Finger ring	-
10576	0535	1	Vessel	(Biconical) Dish	Pottery	Chenet 324	A (300-400)
10583	0497	1	Coin	Coin	Copper alloy	Coin	A-B (395-4670)
10589	0514	1	Coin	Coin	Copper alloy	Coin	A (330-341)
10596	0518	1	Glass Vessel	Bottle		Missing	-
10598	0519	1	Pin	Unknown/fragment	Copper alloy	Indet	-
10606	0503	1	Coin	Coin	Copper alloy	Coin	117-192
10619	0532	1	Axe/Francisca	Axe	Iron	Siegmund Broadaxe	D-F (510/20-610)
10620	0540	1	Glass Vessel	Bottle	Unknown	Missing	
10634	0433	1	Belt Part	Plate Buckle	Silver	Maastricht	G (610/20-640/50)
10634	0433	2	Belt Part	Strap End	Silver	Strap end	G (610/20-640/50)
10634	0433	4	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
10634	0433	5	Vessel	Beaker	Pottery	Beaker	G (610/20-640/50)
10634	0433	3	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.43.	F-H (580/90-670/80)
10635	0432	4	Bead	Monochrome	Glass	S-33.6	F-H (580/90-670/80)
10635	0432	2	Bead	Monochrome	Glass	S-47.7	F-H (580/90-670/80)
10635	0432	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.21.	D-G (510/20-640/50)
10635	0432	3	Bead	Monochrome	Glass	S-33.3	F-H (580/90-670/80)
10636	0447	3	Rivet	Rivet	Copper alloy	Rivet	-
10636	0447	2	Belt Part	Buckle	Copper alloy	Buckle?	-
10636	0447	1	Bead	Monochrome	Glass	S-1.1	C (460/80-510/25)
10641	0493	1	Pin	Toilet utensils	Brass	Siegmund Nad. 2.2.	E-G (565-640/50)
10641	0493	2	Bead	Monochrome	Glass	Fragments	-
10723	0087	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.a.	E (565-580/90)
10723	0087	3	Rest	Metal	Iron	Indet.	-
10723	0087	2	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
10743	0122	1	Vessel	Beaker	Pottery	L/P/V 398	G-H (610/20-670/80)
10772	0085	1	Coin	Coin	Copper alloy	Coin	Recent
10790	0088	1	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
10792	0089	2	Rest	Metal	Iron	Indet.	-
10792	0089	1	Axe/Francisca	Axe	Iron	Siegmund FBA. 3.1.	D-E (510/20-580/90)
10793	0086	1	Ring	Finger ring	Copper alloy	Finger ring	
10796	0142	12	Bead	Natural	Amber	Amber bead	-
10796	0142	9	Rivet	Rivet	Copper alloy	Seax rivet, indet	-
10796	0142	5	Rest	Metal	Gold	Indet.	-
10796	0142	6	Belt Part	Buckle	Copper alloy	Siegmund Gur. 2.4.?	C-D (460/80-565)
10796	0142	8	Pin	Unknown/fragment	Copper alloy	Fragment	-
10796	0142	1	Pin	Decorative	Copper alloy	Fag Nad4	A-G (300-640/50)
10796	0142	4	Knife	Knife	Iron	Knife	-
10796	0142	3	Axe/Francisca	Axe	Iron	L/P/V 6	C (460/80-510/25)
10796	0142	2	Pin	Decorative	Copper alloy	Fag Nad4	A-G (300-640/50)

10796	0142	10	Rest	Metal	Copper alloy	Indet.	-
10796	0142	11	Bead	Monochrome	Glass	-	-
10796	0142	7	Rest	Non-metal	Glass	(Play board) piece	-
10797	0147	2	Axe/Francisca	Axe	Iron	Siegmund FBA. 3.1.	D-E (510/20-580/90)
10797	0147	1	Pin	Unknown/fragment	Copper alloy	Fragment pin	-
10799	0128	7	Bead	Monochrome	Glass	S-1.2	C-F (460/80-610)
10799	0128	6	Bead	Monochrome	Glass	S-1.4	C-F (460/80-610)
10799	0128	5	Bead	Monochrome	Glass	S-47.5	C-F (460/80-610)
10799	0128	9	Bead	Monochrome	Glass	L/P/V group I	C-F (460/80-610)
10799	0128	3	Bead	Monochrome	Glass	S-46.4	C-F (460/80-610)
10799	0128	15	Glass Vessel	Bottle	Glass	Isings 50	LR
10799	0128	2	Vessel	(Biconical) Dish	Pottery	Brulet 420	C-D (460/80-565)
10799	0128	8	Bead	Monochrome	Glass	S-40.2	C-F (460/80-610)
10799	0128	4	Bead	Monochrome	Glass	S-40.2	C-F (460/80-610)
10799	0128	13	Bead	Monochrome	Glass	-	C-F (460/80-610)
10799	0128	12	Bead	Monochrome	Glass	S-40.2	C-F (460/80-610)
10799	0128	11	Bead	Monochrome	Glass	S-42.2	C-F (460/80-610)
10799	0128	10	Bead	Monochrome	Glass	S-42.3	C-F (460/80-610)
10799	0128	1	Belt Part	Plate Buckle	Silver	Maastricht	E (565-580/90)
10799	0128	14	Bead	Monochrome	Glass	-	C-F (460/80-610)
10805	0189	1	Coin	Coin	Copper alloy	Coin	A (364-378)
10828	0240	14	Bead	Monochrome	Glass	S-47.8	B-F (400-610)
10828	0240	23	Bead	Monochrome	Glass	-	B-F (400-610)
10828	0240	22	Bead	Monochrome	Glass	S-40.1	B-F (400-610)
10828	0240	20	Bead	Monochrome	Glass	S-47.2	B-F (400-610)
10828	0240	2	Pin	Decorative	Copper alloy	Fag Nad4	A-G (300-640/50)
10828	0240	19	Bead	Monochrome	Glass	S-1.1	B-F (400-610)
10828	0240	18	Bead	Monochrome	Glass	-	B-F (400-610)
10828	0240	17	Bead	Monochrome	Glass	-	B-F (400-610)
10828	0240	24	Bead	Monochrome	Glass	S-group 46 (1-5)	B-F (400-610)
10828	0240	15	Bead	Monochrome	Glass	S-46.4	B-F (400-610)
10828	0240	5	Pin	Decorative	Copper alloy	Fag Nad4	A-G (300-640/50)
10828	0240	13	Bead	Monochrome	Glass	-	B-F (400-610)
10828	0240	12	Bead	Monochrome	Glass	S-33.3	B-F (400-610)
10828	0240	11	Bead	Monochrome	Glass	S-47.9	B-F (400-610)
10828	0240	16	Bead	Monochrome	Glass	S-42.1	B-F (400-610)
10828	0240	25	Bead	Monochrome	Glass	S-47.1	B-F (400-610)
10828	0240	26	Rest	Metal	Silver	Indet.	-
10828	0240	4	Pin	Decorative	Copper alloy	Fag Nad4	A-G (300-640/50)
10828	0240	1	Ring	Finger ring	Copper alloy	Finger ring	-
10828	0240	6	Pin	Decorative	Copper alloy	Fag Nad4	A-G (300-640/50)
10828	0240	7	Pin	Unknown/fragment	Copper alloy	Utensil, looped head	-
10828	0240	8	Rest	Metal	Copper alloy	Indet.	-
10828	0240	9	Pin	Decorative	Copper alloy	L/P/V 318	E-H (565-670/80)

10828	0240	10	Pendant	Miniature vessel	Glass	Miniature glass vessel pendant	Roman
10828	0240	21	Bead	Polychrome	Glass	S-group 37 (3)	B-F (400-610)
10828	0240	3	Pin	Decorative	Copper alloy	L/P/V 318	E-H (565-670/80)
10856	0172	3	Bead	Monochrome	Glass	S-group 46 (1-5)	E-G (565-640/50)
10856	0172	2	Bead	Monochrome	Glass	S-31.1	E-G (565-640/50)
10856	0172	1	Bead	Natural	Amethyst	S-5.2	E-G (565-640/50)
10858	0127	1	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.21.	D-E (510/20-580/90)
10858	0127	2	Vessel	Jug	Pottery	Siegmund Kan 1.12.	B-D (400-565)
10863	0146	1	Belt Part	Plate Buckle	Iron	Siegmund Gur. 4.3.?	G (610/20-640/50)
10864	0230	1	Coin	Coin	Copper alloy	Coin	A (335-337)
10864	0230	3	Coin	Coin	Copper alloy	Coin	A (347-348)
10864	0230	2	Coin	Coin	Copper alloy	Coin	A (330-341, after)
10864	0230	4	Coin	Coin	Copper alloy	Coin	A (347-348)
10865	0209	1	Coin	Coin	Copper alloy	Coin	c. 300-500
10866	0202	1	Coin	Coin	Copper alloy	Coin	A (347-348)
10885	0139	9	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10885	0139	10	Coin	Pendant	Copper alloy	Coin pendant	A (335-341)
10885	0139	8	Glass Vessel	Beaker	Glass	Koch II G	B (400-460/80)
10885	0150	1	Belt Part	Buckle	Copper alloy	Indet	C-D (460/80-565)
10885	0139	7	Pendant	Coin/Pseudo Coin	Copper alloy	Coin pendant	A (316-330)
10885	0139	6	Knife	Knife	Iron	Knife	-
10885	0139	5	Ring	Finger ring	Copper alloy	Finger ring	-
10885	0139	4	Belt Part	Buckle	Silver	Siegmund Gur. 2.4./2.6.	D-E (510/20-580/90)
10885	0139	3	Belt Part	Back Plate	Iron	Siegmund Gur. 4.4.	F (580/90-610)
10885	0139	2	Belt Part	Counter Plate	Iron	Siegmund Gur. 4.4.	F (580/90-610)
10885	0139	1	Belt Part	Plate Buckle	Iron	Siegmund Gur. 4.4.	F (580/90-610)
10889	0143	1	Axe/Francisca	Axe	Iron	Siegmund FBA. 3.1.	D-E (510/20-580/90)
10903	0218	1	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10923	0182	2	Bead	Monochrome	Glass	S-47.1	C (460/80-510/25)
10923	0182	3	Bead	Monochrome	Glass	S-46.1	C (460/80-510/25)
10923	0182	1	Bead	Monochrome	Glass	S-1.4	C (460/80-510/25)
10927	0185	1	Belt Part	Buckle	Copper alloy	Buckle?	-
10928	0233	1	Pin	Unknown/fragment	Copper alloy	Fragment pin	-
10932	0193	1	Coin	Pendant	Copper alloy	Coin pendant	c. 300-500
10944	0224	2	Vessel	Jug	Pottery	Maastricht	-
10944	0224	1	Glass Vessel	Bottle	Glass	Isings 101	LR
10968	0245	6	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)
10968	0245	5	Glass Vessel	Bottle	Glass	Isings 82A1 (variant)	A-C (300-510/25)
10968	0245	4	Glass Vessel	Bottle	Glass	Isings 82A1 (variant)	A-C (300-510/25)
10968	0245	3	Ring	Finger ring	Silver	Finger ring	-
10968	0245	2	Pin	Decorative	Silver	Fag Nad4	A-G (300-640/50)
10968	0245	1	Pin	Decorative	Silver	L/P/V 318	E-H (565-670/80)
10968	0245	8	Glass Vessel	Beaker	Glass	Siegmund Gla 3.1	B (400-460/80)
10968	0245	7	Glass Vessel	Bottle	Glass	Feyeux 2003, 20.0	B-F (400-610)

10985	0254	5	Bead	Polychrome	Glass	S-33.7	E-H (565-670/80)
10985	0254	4	Bead	Polychrome	Glass	S-35.13	E-H (565-670/80)
10985	0254	1	Bead	Polychrome	Glass	Koch	E-H (565-670/80)
10985	0254	2	Bead	Monochrome	Glass	S-33.3	E-H (565-670/80)
10985	0254	3	Bead	Polychrome	Glass	S-35.8	E-H (565-670/80)
10986	0252	1	Ring	Earring	Silver	Siegmund Ohr. 2.	C-G (460/80-640/50)
10986	0252	2	Pin	Decorative	Silver	Fag Nad3	C (460/80-510/25)
10986	0252	3	Rest	Metal	Copper alloy	Indet.	-
10988	0261	6	Bead	Monochrome	Glass	-	D-H (510/20-670/80)
10988	0261	3	Bead	Polychrome	Glass	S-35.11	D-H (510/20-670/80)
10988	0261	5	Bead	Polychrome	Glass	S-35.8	D-H (510/20-670/80)
10988	0261	4	Bead	Monochrome	Glass	S-33.3	D-H (510/20-670/80)
10988	0261	2	Pin	Toilet utensils	Copper alloy	L/P/V 352	E-F (565-610)
10988	0261	1	Rest	Metal	Copper alloy	Thimble	-
10988	0255	4	Rest	Metal	Iron	Indet.	-
10988	0255	2	Knife	Knife	Iron	Knife	-
10988	0261	7	Bead	Monochrome	Glass	S-35.4	D-H (510/20-670/80)
10988	0255	1	Belt Part	Buckle	Copper alloy	Siegmund Gur. 2.4.	C-D (460/80-565)
10988	0255	3	Brooch	Disc, Garnet	Copper alloy	Fragment	
10990	0215	1	Rest	Metal	Iron	Indet.	-
11120	0262	2	Coin	Coin	Copper alloy	Coin	c. 260-500
11120	0262	3	Coin	Coin	Copper alloy	Coin	recent
11120	0262	1	Coin	Coin	Copper alloy	Coin	A (316-330)
11140	0294	1	Coin	Coin	Copper alloy	Coin	A (330-331)
11140	0294	2	Coin	Coin	Copper alloy	Coin	A (332-333)
11217	0341	1	Belt Part	Plate Buckle	Iron	Siegmund Sna. 2.4.?	G (610/20-640/50)
11217	0341	2	Belt Part	Strap End	Iron	Siegmund Sna. 2.4.?	G (610/20-640/50)
11217	0341	3	Comb	Composite Double	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
11217	0341	4	Comb	Case	Antler	Siegmund Ger. 3.23.	D-F (510/25-610/20)
11217	0341	5	Vessel	(Biconical) Dish	Pottery	Dragendorff 32	150-250
11217	0341	9	Glass Vessel	Bottle	Glass	Feyoux 2003, 20.0	B-F (400-610)
11217	0341	6	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.32.	D-E (510/20-580/90)
11217	0341	7	Seax	Seax	Iron	Fag Sax2.1	F-G (580/90-640/50)
11217	0341	8	Glass Vessel	Beaker, globular	Glass	Fag S-Gla 3.2.	D-H (510/20-670/80)
11220	0375	1	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
11220	0375	4	Brooch	Bow	Gold	Koch V.2.1.2.	D-E (510/20-580/90)
11220	0375	3	Brooch	Bow	Gold	Koch V.2.1.2.	D-E (510/20-580/90)
11220	0375	2	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
11225	0383	1	Vessel	(Biconical) Dish	Pottery	Chenet 304	A-B (300-450)
11225	0383	2	Vessel	Jar	Pottery	Gellep 109	A (300-400)
11225	0383	4	Vessel	Beaker	Pottery	Chenet 334	A (300-400)
11225	0383	3	Glass Vessel	Bottle	Glass	Isings 90	LR
11228	0380	1	Comb	Composite Double	Antler	Siegmund Ger. 3.21.	C (460/80-510/25)
11236	0393	2	Vessel	(Biconical) Dish	Pottery	Chenet 320	A-B (300-450)

11236	0393	3	Vessel	Beaker	Pottery	Chenet 334	A (300-400)
11236	0393	4	Vessel	Jar	Pottery	Vanvinckenroye 416-418	A (300-350)
11236	0393	5	Glass Vessel	Beaker	Glass	Isings 96	LR
11236	0393	6	Rivet	Nail	Iron	Coffin nail	-
11236	0393	7	Vessel	Jug	Pottery	Gellep 79-80	A (300-350)
11236	0393	1	Vessel	(Biconical) Dish	Pottery	Chenet 304	A-B (300-450)
11252	0365	10	Bead	Monochrome	Glass	-	B-E (400-580/90)
11252	0365	8	Bead	Polychrome	Glass	Koch 3,3	B-E (400-580/90)
11252	0365	7	Bead	Polychrome	Glass	Koch group 27	B-E (400-580/90)
11252	0365	6	Bead	Polychrome	Glass	Koch 3,6	B-E (400-580/90)
11252	0365	5	Bead	Monochrome	Glass	-	B-E (400-580/90)
11252	0365	3	Bead	Polychrome	Glass	S-group 31	B-E (400-580/90)
11252	0365	4	Bead	Polychrome	Glass	Koch 21,2	B-E (400-580/90)
11252	0365	2	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
11252	0365	1	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
11252	0365	9	Bead	Polychrome	Glass	-	B-E (400-580/90)
11252	0365	11	Bead	Polychrome	Glass	Koch 20,13-17	B-E (400-580/90)
11260	0373	2	Ring	Finger ring	Silver	Finger ring	Roman
11260	0373	1	Ring	Finger ring	Silver	Finger ring	-
11273	0394	1	Glass Vessel	Bottle	Glass	Glass vessel, indet.	LR/M?
11274	0366	1	Coin	Coin	Copper alloy	Coin	A (337-341)
11321	0418	4	Belt Part	Buckle	Silver	Siegmund Gur 2.6.	D-E (510/20-580/90)
11321	0418	1	Pendant	Crystal Ball	Rock-crystal	Siegmund Ggh. 2.	C-G (460/80-640/50)
11321	0418	10	Bead	Natural	Amber	Amber bead	C-E (460/80-580/90)
11321	0418	11	Bead	Monochrome	Glass	S-42.2	C-E (460/80-580/90)
11321	0418	13	Bead	Monochrome	Glass	S-35.1	C-E (460/80-580/90)
11321	0418	27	Bead	Monochrome	Glass	S-group 37 (1-2)	B-E (400-580/90)
11321	0418	3	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
11321	0418	12	Bead	Monochrome	Glass	S-47.1	C-E (460/80-580/90)
11321	0418	5	Brooch	Disc, Garnet	Silver	Siegmund Fib. 1.3.	D-E (510/20-580/90)
11321	0418	6	Rest	Metal	Gold	Gold thread	-
11321	0418	7	Pendant	Pendant	Silver	Fragment; indet	-
11321	0418	29	Coin	Coin	Copper alloy	Coin	A (318-320)
11321	0418	8	Bead	Monochrome	Glass	S-42.1	C-E (460/80-580/90)
11321	0418	9	Bead	Monochrome	Glass	S-group 46 (1-5)	C-E (460/80-580/90)
11321	0418	28	Coin	Pendant	Silver	Coin pendant	c. 500-600
11321	0418	2	Pendant	Jewelled	Gold	Pendant with garnets	D-E (510/20-580/90)
11321	0418	17	Brooch	Bow	Gold	Koch V.2.2.6.	E (565-580/90)
11321	0418	14	Bead	Monochrome	Glass	-	C-E (460/80-580/90)
11321	0418	25	Bead	Monochrome	Glass	S-47.1	B-E (400-580/90)
11321	0418	26	Bead	Monochrome	Glass	-	B-E (400-580/90)
11321	0418	16	Brooch	Bow	Gold	Koch V.2.2.6.	E (565-580/90)
11321	0418	15	Ring	Earring	Gold	Siegmund Ohr. 2.	C-G (460/80-640/50)
11321	0418	24	Bead	Monochrome	Glass	S-42.2	B-E (400-580/90)

11321	0418	23	Bead	Monochrome	Glass	S-40.2	B-E (400-580/90)
11321	0418	18	Bead	Natural	Amber	Amber bead	B-E (400-580/90)
11321	0418	22	Bead	Monochrome	Glass	S-35.1	B-E (400-580/90)
11321	0418	21	Bead	Monochrome	Glass	S-1.2	B-E (400-580/90)
11321	0418	20	Bead	Precious metal	Gold	Gold bead	B-E (400-580/90)
11321	0418	19	Bead	Monochrome	Glass	Melon bead	B-E (400-580/90)
11325	0417	4	Vessel	Jug	Pottery	Gellep 108	A-B (375-425 (500?))
11325	0417	2	Glass Vessel	Jar	Glass	Isings 121	LR-A
11325	0417	3	Vessel	Biconical Pot	Pottery	Siegmund Kwt. 2.21.	D-E (510/20-580/90)
11325	0417	1	Glass Vessel	Dish	Glass	Siegmund Gla 1.3.	B (400-460/80)
11338	0421	1	Coin	Coin	Copper alloy	Coin	A (350-353)
11341	0407	1	Belt Part	Back Plate	Iron	Siegmund Gur. 4.4-7	F-H (580/90-670/80)
11342	0466	12	Bead	Monochrome	Glass	-	C-E (460/80-580/90)
11342	0466	5	Ring	Bracelet	Copper alloy	Whurer 2000, B.3.	D-F (510/20-610)
11342	0466	10	Bead	Monochrome	Glass	S-47.1	C-E (460/80-580/90)
11342	0466	4	Ring	Bracelet	Copper alloy	Martin, Kaiseraugst form 2	?
11342	0466	14	Rest	Metal	Iron	Indet.	-
11342	0466	11	Bead	Monochrome	Glass	S-43.1	C-E (460/80-580/90)
11342	0466	13	Bead	Monochrome	Glass	-	C-E (460/80-580/90)
11342	0466	7	Rest	Metal	Copper alloy	Indet.	-
11342	0466	1	Comb	Composite Double	Antler	Siegmund Ger. 3.2.	-
11342	0466	17	Bead	Monochrome	Glass	S-43.1	C-E (460/80-580/90)
11342	0466	18	Bead	Monochrome	Glass	S-47.2	C-E (460/80-580/90)
11342	0466	15	Rest	Organic	Wood	Remains box	-
11342	0466	8	Rest	Metal	Copper alloy	Indet.	-
11342	0466	9	Bead	Monochrome	Glass	Melon bead	C-E (460/80-580/90)
11342	0466	16	Rest	Metal		Fragments (various)	-
11342	0466	2	Ring	Ring	Copper alloy	Martin Kaiseraugst form 2	?
11342	0466	3	Ring	Bracelet	Copper alloy	Martin Kaiseraugst form 2	?
11342	0466	6	Pin	Decorative	Copper alloy	L/P/V 318	E-H (565-670/80)
11362	0470	1	Coin	Coin	Copper alloy	Coin	A (364-378)
11371	0480	1	Ring	Bracelet	Bone	Bone simple ring	-
11371	0480	2	Ring	Bracelet	Copper alloy	Bracelet	A (300-400)
11388	0481	1	Coin	Coin	Unknown	Coin	Missing
11406	0411	1	Glass Vessel	Beaker	Glass	Siegmund Gla 4.1	B-C (400-510/25)
15013	0269	9	Coin	Coin	Copper alloy	Coin	A (378-388)
15013	0269	4	Pin	Unknown/fragment	Copper alloy	Fragment pin	-
15013	0269	3	Stone / Jewel	Stone	Stone	Stone	-
15013	0269	2	Ring	Finger ring	Copper alloy	Maastricht	C-D (460/80-565)
15013	0269	1	Ring	Ring	Copper alloy	Copper alloy ring	-
15013	0269	8	Bead	Monochrome	Glass	S-33.3	D-H (510/25-670/80)
15013	0269	7	Rest	Metal	Copper alloy	Indet.	-
15013	0269	6	Rest	Metal	Copper alloy	Indet.	-
15013	0269	5	Rest	Non-metal	Glass	(Play board) piece	-

15021	0372	1	Rest	Metal	Copper alloy	Indet.	-

The stray finds from the Pandhof cemetery / site

Context	Find#	Sub#	Class	SubClass	Material	Type	Maastricht phase
19999	0431	1	Coin	Coin	Brass	Coin	recent
19999	9999	13	Glass Vessel	Bottle	Glass	Isings 8 (variant)	A-C (300-510/25)
19999	9999	1	Belt Part	Buckle	Silver?	Siegmund Gur. 2.4.?	C-D (460/80-565)
19999	0471	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
19999	0471	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Sna. 2.2.	E-H (565-670/80)
19999	0156	1	Coin	Coin	Copper alloy	Coin	A (364-378)
19999	0264	1	Vessel	Bottle	Pottery	Indet	?
19999	0121	2	Coin	Coin	Silver	Coin	recent
19999	9999	20	Coin	Coin	Copper alloy	Coin	260-300
19999	0542	1	Coin	Coin	Copper alloy	Coin	recent
19999	0530	2	Belt Part	Belt Stud	Copper alloy	Propeller	LR
19999	0003	1	Pin	Toilet utensils	Copper alloy	Toilet implement	Roman
19999	9999	16	Rest	Metal	Copper alloy	Indet.	-
19999	0370	1	Coin	Coin	Copper alloy	Coin	A (364-367)
19999	0353	1	Coin	Coin	Copper alloy	Coin	A (330-340)
19999	0352	2	Coin	Coin	Copper alloy	Coin	recent
19999	0351	3	Coin	Coin	Copper alloy	Coin	recent
19999	0340	1	Coin	Coin	Copper alloy	Coin	recent
19999	0310	1	Coin	Coin	Copper alloy	Coin	recent
19999	0309	3	Coin	Coin	Copper alloy	Coin	recent
19999	0547	1	Pin	Unknown/fragment	Copper alloy	Pin/Utensil	Roman
19999	0550	1	Rest	Metal	Iron	Indet.	-
19999	0524	6	Coin	Coin	Copper alloy	Coin	recent
19999	0526	1	Coin	Coin	Copper alloy	Coin	A (337-340)
19999	0444	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.11.	B (400-460/80)
19999	0171	1	Coin	Coin	Copper alloy	Coin	A (330-341)
19999	0121	1	Coin	Coin	Copper alloy	Coin	recent
19999	0075	1	Coin	Coin	Copper alloy	Coin	recent
19999	0628	1	Coin	Coin	Copper alloy	Coin	recent
19999	0566	1	Coin	Coin	Copper alloy	Coin	c. 388-402
19999	0524	5	Coin	Coin	Copper alloy	Coin	c. 350-500
19999	0486	1	Coin	Coin	Copper alloy	Coin	A (364-378)

19999	0052	1	Coin	Coin	Copper alloy	Coin	A (313-318)
19999	0351	2	Coin	Coin	Copper alloy	Coin	241-243
19999	0170	1	Coin	Coin	Copper alloy	Coin	103-111
19999	9999	14	Knife	Knife	Iron	Knife	-
19999	0351	1	Coin	Pendant	Silver	Coin pendant	c. 222-253
19999	9999	15	Seax	Seax	Iron	Fag Sax1	D-E (510/20-580/90)
19999	0002	1	Pin	Toilet utensils	Copper alloy	Utensil	Roman
19999	9999	9	Stone / Jewel	Flint	Flint	Siegmund Ger. 6.	C-I (460/80-725)
19999	9999	8	Rivet	Rivet	Copper alloy	Rivet	
19999	9999	7	Pendant	Coin/Pseudo Coin	Copper alloy	Coin pendant	A (337-341)
19999	9999	5	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
19999	9999	4	Fire steel	Fire steel	Iron	Siegmund Ger. 5	C-I (460/80-725)
19999	9999	19	Rest	Metal	Iron	Indet.	-
19999	9999	18	Rest	Metal	Iron	Indet.	-
19999	9999	17	Rivet	Rivet, Decorated	Copper alloy	Maastricht?	G-I (610/20-725)
19999	0530	1	Pin	Unknown/fragment	Copper alloy	Siegmund Gur. 2.10.	D (510/20-565)
19999	0494	1	Coin	Coin	Copper alloy	Coin	119
19999	0286	1	Belt Part	Back Plate	Copper alloy	Indet: back plate	-
19999	0349	1	Pin	Decorative	Silver	L/P/V 318	E-H (565-670/80)
19999	0347	1	Ring	Finger ring	Copper alloy	Finger ring	-
19999	0343	2	Ring	Finger ring	Copper alloy	Finger ring	-
19999	0343	1	Belt Part	Strap End	Copper alloy	Strap end	E-F (565-610)
19999	0339	1	Ring	Ring	Copper alloy	Copper alloy ring	-
19999	0315	1	Rest	Metal	Iron	Indet.	-
19999	0311	1	Pin	Decorative	Copper alloy	Pin	Roman
19999	0309	2	Rest	Metal	Copper alloy	Indet.	-
19999	0309	1	Bead	Monochrome	Glass	-	-
19999	0548	1	Rest	Metal	Iron	Cattle bell	C-I (460/80-725)
19999	0300	1	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.b.	E-F (565-610)
19999	0404	1	Rivet	Rivet	Copper alloy	Rivet	
19999	0279	1	Rest	Metal	Iron	Indet.	-
19999	0270	2	Rest	Metal	Copper alloy	Indet.	-
19999	0270	1	Key	Key	Copper alloy	Roman ring key	C? (460/80-510/25)
19999	0263	1	Rest	Metal	Copper alloy	Indet.	-
19999	0236	1	Brooch	Bow	Copper alloy	Thread brooch	Roman
19999	0173	1	Rest	Metal	Iron	Indet.	-
19999	0140	1	Belt Part	Buckle	Copper alloy	LME	recent
19999	0131	1	Pin	Decorative	Copper alloy	L/P/V 318	E-H (565-670/80)
19999	0120	1	Vessel	Jug	Pottery	Siegmund Kan 1.12.	B-D (400-565)
19999	0118	1	Vessel	Bottle	Pottery	Siegmund 5th-6th	B-F (400-610)
19999	0300	2	Belt Part	Plate Buckle	Copper alloy	Siegmund Gur. 3.2.b.	E-F (565-610)
19999	0430	4	Bead	Polychrome	Glass	S-group 31	B-E (400-580/90)
19999	0524	4	Ring	Ring	Copper alloy	Copper alloy ring	-
19999	0524	3	Ring	Ring	Copper alloy	Copper alloy ring	-

19999	0524	2	Belt Part	Buckle	Copper alloy	L/P/V 122/123	C-F (460/80-610)
19999	0524	1	Belt Part	Buckle	Copper alloy	L/P/V 122/123	C-F (460/80-610)
19999	0523	1	Seax	Seax	Iron	Indet. Only tip present. Very corroded.	-
19999	0515	1	Pin	Decorative	Silver	Pin; indet	-
19999	0471	3	Brooch	Brooch	Copper alloy	Swastika brooch	Roman
19999	0449	2	Bead	Monochrome	Glass	S-47.7	F-H (580/90-670/80)
19999	0449	1	Comb	Teeth segment Plate	Antler	Siegmund Ger. 3.1.	-
19999	0441	1	Rest	Bone	Antler	Worked	-
19999	0352	1	Rest	Metal	Copper alloy	Jews harp	Recent?
19999	0430	5	Bead	Monochrome	Glass	-	-
19999	0397	1	Ring	Finger ring	Copper alloy	Finger ring	-
19999	0430	3	Rest	Metal	Copper alloy	With gold remains	-
19999	0430	2	Ring	Ring	Copper alloy	Copper alloy ring	-
19999	0430	1	Pin	Toilet utensils	Copper alloy	Toilet implement	Roman
19999	0429	1	Vessel	Bottle	Pottery	Siegmund Fla.1.1.	E-G (565-640/50)
19999	0428	4	Bead	Natural	Amber	Amber bead	-
19999	0428	3	Bead	Monochrome	Glass	S-35.4	D-G (510/25-640/50)
19999	0428	2	Bead	Natural	Amethyst	S-5.2	E-H (565-670/80)
19999	0428	1	Bead	Polychrome	Glass	S-group 31	B-E (400-580/90)
19999	0410	1	Bead	Spindle whorl	Pottery	L/P/V 347	C-G (460/80-640/50)
19999	0057	1	Vessel	Jug	Pottery	Siegmund Kan 1.12.	B-D (400-565)
19999	0438	1	Vessel	(Biconical) Dish	Pottery	Siegmund Sha. 2.5?	F-G? (580/90-640/50)

The Grave Goods from the Vrijthof and Pandhof Cemeteries in Maastricht

Pottery

Numerous pottery vessels of the middle Roman, late Roman and Merovingian period were found in the Vrijthof and Pandhof cemeteries (table 15).⁴¹⁶ Next to complete or nearly complete vessels a considerable quantity of potsherds was found. Not all of the (nearly) complete vessels can be assigned to a grave, and some of the pots which were registered as 'find' are now lost. These circumstances are mainly due to the excavation method, administration problems and post-excavation developments. Because of the character of the sites all pots for which the context remained unidentifiable are considered as former grave goods and will be analysed as such.⁴¹⁷ The basic vessel categories biconical pots, jars, jugs, bottles, dishes and beakers or goblets of both the Roman and Merovingian period were found in the Vrijthof and Pandhof cemeteries. Biconical pots are the most common vessels for both the cemeteries. They are characteristic for the Merovingian period, and a series of specialised studies for this specific pot form is available.

Middle Roman / late Roman / later fifth century pottery	Vrijthof	Pandhof	Total
Plates	1	7	8
Bowls	-	6	6
Beakers	1	5	6
Jars	1	3	4
Jugs	1	1	2
Total	4	22	26
Merovingian pottery	Vrijthof	Pandhof	Total
Biconical pots	23	13	36
Plates/bowls	11	8	19
Jars	1	1	2
Jugs	6	6	12
Bottles	1	4	5
Beakers	3	3	6
Wölbwandtöpfe	-	1	1
Globular pot	1	-	1
Total	46	36	82
Total	50	58	108

Table 15. The distribution of Roman and Merovingian pottery forms over the Vrijthof and Pandhof cemeteries.

⁴¹⁶ The first analysis of the Pandhof pottery was executed by drs. R. Terluin (AAC, University of Amsterdam, unpublished material studies thesis), supervised by drs. J. Hendriks (municipal Bureau for Archaeology and Built Heritage of Nijmegen/AAC, University of Amsterdam).

⁴¹⁷ The majority of the potsherds can be regarded as residual finds. The potsherds from the Vrijthof cemetery were studied by drs. M. Dijkstra (AAC, University of Amsterdam) and will be published in the first volume of the all-round analysis of the Servatius complex.

From the Pandhof cemetery 22 vessels date in the middle Roman, late Roman period and later fifth century. Only four vessels from the Vrijthof cemetery date to these periods (table 15). A clear distinction between late Roman and early Merovingian pottery is not always obvious, especially for the categories dishes and bowls. They show both continuity in production and use from the late Roman period into the early Merovingian period. Some of the vessels cannot unambiguously be assigned to either one of these periods and are for now designated as forms of the later fifth century (and perhaps somewhat later), here regarded as a transitional phase in which new pot forms arise (some early biconical pots) and some pots of a late Roman tradition can still be found.

Late Roman pottery is known to have been mass-produced in the fourth and early fifth centuries, of which the production centres of Argonne, Trier and Mayen are most familiar.⁴¹⁸ The production seems to have been centrally organized and the products were found over large areas in Northern Gaul and the Rhineland. The almost industrial production of Roman pottery offered extensive possibilities for refined typo-chronological research, which resulted in several detailed typologies. It should however be noticed that the production period does not have to coincide with the period in which objects were selected as grave goods. For the analysis of the pottery from the Pandhof and Vrijthof cemeteries some standard typo-chronological works are used, such as those of Chenet (late antique *sigillata* from the Argonne production centre), Oswald and Pryce (an overview of *sigillata* forms), and Redknap (mainly coarse ware from the Mayen production centre).⁴¹⁹ Publications that are based on grave finds, such as the work of Pirling and Siepen on the late Roman and Merovingian cemetery of Krefeld-Gellep or Vanvinckenroye's compilations for the pottery found in the cemeteries from Roman Tongeren (Belgium, not far from Maastricht), provided the best framework for the dating of the finds and their contexts.

On the other hand, it seems as if the production of Merovingian pottery was organized at a smaller scale, and that this locally produced pottery was distributed over more limited regions; a change in production and distribution that already started in the fifth century.⁴²⁰ This resulted in subtle regional differences in the appearance of Merovingian pottery (although on a general level all the individual specimens can be identified as the 'Merovingian ceramic repertoire'). The creation of a refined scheme of types and periods at a supra-regional scale is difficult to obtain and will be more ambiguous than the typo-chronological schemes that are available for the Roman period. Sites in the central Meuse valley where Merovingian pottery was produced were discovered in Huy, Maastricht and Kessel-Hout.⁴²¹ The pottery production in Maastricht was located on the right bank of the river Meuse in the quarter of what is now called Wyck. Four ovens were discovered here in which remains of Merovingian pottery was found.⁴²² The ovens were in use during the sixth and seventh centuries and it seems that various pot forms were produced here.⁴²³ The biconical pots of the Merovingian period have been the subject of various specialised studies of which the work of Will on the pots of the Upper Rhine Valley can be mentioned as the most recent one at this moment.⁴²⁴

Middle Roman, late Roman and later fifth century pottery

Twenty-six specimens of middle Roman, late Roman and later fifth century pottery were found in the Pandhof and Vrijthof cemeteries (table 16). This group consists of dishes, bowls, bottles, jugs and beakers. The deposition of pottery in graves during the Roman and late Roman period is different from that in the Merovingian period in that usually several vessels of pottery and glass were placed together

⁴¹⁸ Van Ossel 1986; Brulet 1990; Bayard 1998. For a general view on for example Argonne pottery as characteristic of the transformation of the Roman world see Wickham 2005, 794-805.

⁴¹⁹ Chenet 1941; Oswald/Pryce 1966; Redknap 1999.

⁴²⁰ E.g. Van Ossel 1985.

⁴²¹ Braat 1936 (Kessel-Hout); Willems 1986 (Huy); Plumier *et al.* 1999; Dijkman 1999.

⁴²² Panhuysen *et al.* 1992.

⁴²³ Van Wersch (2006a) studied the remains of pottery found in one of the four ovens. A comparison between the mineralogical constituents of these remains with the specimens from the Vrijthof and Pandhof cemeteries is necessary in order to establish the relation between the production centre in Wyck and the pots deposited in these cemeteries.

⁴²⁴ Will 2005.

in the grave (a grave with six vessels is for example known from the Pandhof cemetery). Moreover, other sorts of objects are less common in late Roman graves than they are in Merovingian graves. Pottery and glass vessels were usually deposited together as an ensemble at a specific location in the grave, although these locations can vary. In the Merovingian period it was usual to deposit only one or two vessels of pottery or glass near the feet, both at the left and right side, or in a separate dug out niche in the wall of the grave pit. Besides, these pots were frequently deposited as components of grave goods assemblages consisting of a variety of objects; a custom that can also be observed in the cemeteries of Maastricht. It is for these cemeteries interesting to explore whether the middle Roman and late Roman pots were re-used in Merovingian times or that graves as early as the middle Roman or late Roman period can be identified in Maastricht (table 16). I did not deal in great detail with the discussions on the dating of Roman pottery here, for our present purpose this is less relevant.

Middle Roman/late Roman/ later 5th century pottery	#	Date (centuries)	LR grave	LR / M grave	Merovingian grave
Plate, Unverzagt 34	1	4th-early 5 th	?	?	?
Plate, Dragendorff 36	1	Late 1st-early 2 nd	-	-	1
Plate, Dragendorff 18/31	1	2nd century	-	-	1
Plate, Dragendorff 31	1	Second half 2nd-early 3rd	-	-	1
Plate, Dragendorff 32	2	Late 2nd-first half 3rd	-	-	2
Plate, Chenet 304	2	4th-first half 5 th	2	-	-
Bowl, Dragendorff 33	1	Second/third quarter 2nd	-	-	1
Bowl, Chenet 320	1	Second half 4th-first half 5th	1	-	-
Bowl, Chenet 324	1	4 th	?	?	?
Bowl, Brulet 420	2	Second half 5th-first half 6th	-	-	2
Bowl, Gellep 131 / Siegmund Sha 2.11	1	Second half 5 th	-	?	?
Beaker, Chenet 334	3	4th century-early 5th	3	-	-
Beaker, Oelmann 30	1	Second half 2nd-first half 3rd	-	-	1
Beaker, Oelmann 33a	1	First half 3 rd	-	-	1
Beaker, Unverzagt 16	1	First half 4 th	1	-	-
Jug, Oelmann 64	1	End 3rd-early 4 th	-	-	1
Jug, Gellep 79/80	1	End 3rd-first half 4th	1	-	-
Jar, Gellep 77	1	First half 4 th	1	-	-
Jar, Vanvinckenroye 1967.71/72	1	Second half 2 nd	?	?	?
Jar, Gellep 109	1	4 th	1	-	-
Jar, Böhner D4a	1	5th-early 6 th	-	1	-
Total	26		10 (3?)	1 (4?)	11 (4?)

Table 16. The deposition of middle, late Roman or later fifth century pottery in late Roman and (early) Merovingian graves/contexts. ? = stray find / no context information available.

It appears that the majority of the oldest (of the first to the third century) vessels were reused in graves of the Merovingian period. Graves of this period could on the basis of pottery depositions not be identified in the Servatius complex. The vessels which date thereafter were deposited in contemporary graves or graves of the Merovingian period. It can be assumed that these two categories of vessels

(contemporary use and reuse of antiques) knew different processes of selection for funerary purposes.⁴²⁵ The appearance, provenance and distribution patterns of middle Roman and late Roman pottery types that are similar with the Vrijthof and Pandhof vessels are extensively discussed in various publications. Here the main discussion will evolve around the deposition patterns and contexts of these vessels in the Vrijthof and Pandhof cemeteries.

Plate: coarse ware

Pandhof: 10140 (80-1).

Appendix 1: Figure 1.

The dish from Pandhof grave 10140 is of a coarse fabric and greyish colour, most likely from Mayen.⁴²⁶ It has a slightly concave bottom with a diameter of 18 cm, an outwards going wall, a carination towards the top and an inward bended rim which is rounded, not thickened. This plate can be classified as type Unverzagt 34 and dates in the fourth or the beginning of the fifth century, among others based on the grave contexts of similar finds in Krefeld-Gellep and Tongeren.⁴²⁷ No other finds are known from this grave, and for now this grave is identified as a late Roman or later fifth century grave on the basis of this find alone.

Plates/Dishes: *terra sigillata*

Vrijthof: 235 (1749-1). Pandhof: 10226 (301-2); 10252 (333-1); 10344 (569-2); 11217 (341-5); 11225 (383-1)⁴²⁸; 11236 (393-1)⁴²⁹.

Appendix 1: Figure 1.

Plates or dishes are distinguished from bowls (although the distinction can be somewhat ambiguous) by their lower wall, larger diameter and more open appearance. The plate from Pandhof grave 10344 can be classified as type Dragendorff 36 of South Gaulish samian ware or *terra sigillata* which dates in the later first or early second centuries.⁴³⁰ This plate was found with a pottery jug, a glass vessel, a bronze back plate (belt element) and a knife, all Merovingian of date. It is therefore identified as a middle Roman antique in a Merovingian grave.

The plate from Pandhof grave 10252 can be classified as type Dragendorff 18/31 of Central or East Gaulish samian ware and dates to the second century.⁴³¹ It was found together with a Merovingian glass bottle and a number of glass beads, of which some also date in the late Roman period. Both the plate and the late Roman beads are survivals of these periods in this grave.

The plate from Pandhof 10226 can be classified as type Dragendorff 31 of East Gaulish samian ware (probably Argonne) and dates to the second half of the second and the beginning of the third centuries.⁴³² At the inside of the plate there is an illegible potter's stamp, which was possibly never meant to be read as the potter's name.⁴³³ At the outside wall, just above the foot stand, someone (maybe the owner) left his signature in *sgrafitto*. The fragment of this signature, however, also is illegible. The plate was found together with a strap end of the Merovingian period. This vessel is a middle Roman antique in this grave.

Two other plates of East Gaulish samian ware can be classified as type Dragendorff 32 and date in the late second century and first half of the third century.⁴³⁴ The plate from Pandhof grave 11217 was found together with a biconical pot and two glass vessels, as well as a seax, a comb and a plate buckle with strap end that are all without doubt Merovingian. This plate also is a middle Roman survival.

⁴²⁵ See the section on antiques and heirlooms in Merovingian graves in chapter three.

⁴²⁶ Redknapp 1999, 156-159, Abb. 14-15, Form R6.

⁴²⁷ Vanvinckenroye 1967, 61, plaat 22, nr. 138; Brulet 1990, 52, planche 14, H24; Pirling/Siepen 2006, 236-237, Gellep 126.

⁴²⁸ Ypey/Glazema 1955, 75.

⁴²⁹ Ypey/Glazema 1955, 74.

⁴³⁰ Oswald/Pryce 1920, 192-194, plate LIII.

⁴³¹ Oswald/Pryce 1920, 181-183, plate XLVI.

⁴³² Hiddink 2003, 227.

⁴³³ Communication Dr. M. Polak (Radboud University Nijmegen).

⁴³⁴ Oswald/Pryce 1920, 205-206.

The other plate of this type is the only middle Roman plate known from the Vrijthof cemetery (grave 235). It was found in a grave with a glass vessel, various beads and a belt fitting (now lost), all Merovingian in date. The plate is an antique in this grave.

Two late Roman *terra sigillata* plates from the production centres in the Argonne can be identified as type Chenet 304, and can be dated to the fourth and the first half of the fifth centuries.⁴³⁵ The plate out of Pandhof grave 11225 was found with a pottery beaker and jar that date in the fourth and beginning of the fifth century, and a glass vessel which dates in the second and third century. This grave is identified as a fifth century grave on the basis of these finds. On the basis of this evidence it seems that not only Merovingian graves contained antiques; they were also deposited in earlier graves.

The plate from Pandhof 11236 was found with three other pottery vessels, which date in the fourth and beginning of the fifth century, and a glass vessel, which dates in the third or fourth century. No other finds are known from this grave, and on the basis of these finds it seems plausible to date Pandhof grave 11236 in the fourth to early fifth centuries.

Summarizing, of the seven middle-Roman sigillata dishes only the two youngest were (on the basis of the associated finds) deposited in graves of the fourth and/or fifth centuries (in Pandhof graves 11225 and 11236) and were not reused objects. These two graves contained no other categories of objects apart from several pottery vessels, and can thus be identified as burials of a 'late-Roman tradition'. These two graves belong to the group of earliest graves in the Pandhof cemetery. The other five dishes either survived some centuries above ground before their deposition in the Merovingian period or were found, in Merovingian times, in late-Roman graves or other contexts and subsequently reused as grave goods.

Bowls: *terra sigillata*

Pandhof: 10435 (549-2); 11236 (393-2)⁴³⁶; 19999 (535-1).

Appendix 1: Figure 2.

Bowls are only found in the graves from the Pandhof cemetery. The middle Roman specimen from Pandhof grave 10435 is East Gaulish samian ware can be classified as type Dragendorff 33. It has a stamp inside of the potter *Buccus* from *La Madeleine*, dating between 130 and 160.⁴³⁷ This bowl was found in a grave which furthermore contained a Merovingian plate buckle. It is a reused object in the Merovingian period.

The two late Roman bowls that were found in the Pandhof cemetery are different from Merovingian bowls because of their well-defined foot base/bottoms and the applied red or orange engobe which is typical for the late *terra sigillata*. The bowls have a shiny red appearance because of the relatively high quality engobe and are of a fine burnished ware, features which are lacking on the later fifth century and Merovingian bowls. They were probably produced in the Argonne region and can be dated in the fourth and first half of the fifth century. The Argonne products are of a better quality than the later products from the Meuse valley, but of a poorer quality than the middle Roman products of samian ware from Southern and Central Gaul.

The bowl from Pandhof grave 11236 differs from the two bowls described before because of the roulette decoration applied on the lower wall. It is classified as type Chenet 320 and dates in the second half of the fourth and first half of the fifth centuries. This date is partly based on the pattern of the roulette decoration: two rows with a sequence of three small rectangles, which can be ascribed to group Hübener 2.⁴³⁸ It was found together with a pottery and a glass vessel, which date in the late-Roman period or fifth century. It seems plausible to date this grave in the fourth and beginning of the fifth century.

⁴³⁵ Brulet 1990, 38, planche 1, 304.

⁴³⁶ Ypey/Glazema 1955, 74.

⁴³⁷ Oswald/Pryce 1966, 189-191, plate LI. The stamp BVCCVSF is a die variety of *Buccus* and resembles other stamps from London, Arentsburg and Vechten (Hartley/Dickinson 2008, 124-126, die 2c⁵).

⁴³⁸ Chenet 1941, 69-72 type 320, planche 14; Hübener 1968, 258-259, 279 ff; Dijkman (1992, 151 fig. 19) proposed a revised chronology of the Hübener groups, which dates group 2 roughly between 325 and 450.

Bowl 535-1 is classified as type Chenet 324 and dates from the fourth century.⁴³⁹ It is an isolated find without context information from the Pandhof cemetery.

Most of the graves from Krefeld-Gellep with an Argonne *sigillata* bowl of type Chenet 320 with roulette decoration are dated in the fourth century; some of such graves date from the first half of the fifth century.⁴⁴⁰ Recent studies of the chronology of Argonne *sigillata* point out that its production continued during the entire fifth century and even in at least the first half of the sixth century.⁴⁴¹ Therefore, the dating of late Roman grave contexts with Argonne *sigillata* should not be restricted to the fourth century.

Bowls: pseudo terra sigillata

Pandhof: 10056 (19-1); 10799 (128-2).

Appendix 1: Figure 2.

The bowls from Pandhof graves 10056 and 10799 are in a light brown fabric and have a red of red-brown engobe. Their form derives from the above mentioned bowl Chenet 320, but these specimens are without decoration. During the fifth century late Roman *sigillata* started to be produced outside of the Argonne production centres as well, among other on a small scale in the Meuse valley. Because of the poor quality of these products they are often referred to as pseudo *terra sigillata* or *dérivé de la terre sigillée*.⁴⁴² The two bowls from the Pandhof can also be considered as derivatives of the late Roman *sigillata* and are therefore classified as Brulet 420. They not only appear in grave contexts of the (later) fifth century but as well in Merovingian graves of the first half of the 6th century.⁴⁴³

The bowl from grave 10056 was found together with a pottery dish and two glass vessels. Both the glass vessels are difficult to date; they date either in the fifth century or are Merovingian in date, as does the other accompanying pottery bowl. Because only glass and pottery vessels are known from this grave, it probably dates in the later fifth or first half of the sixth century, a period that can more justifiably be considered a transition phase between the late Roman and Merovingian period.

The bowl from grave 10799 was found together with a glass vessel from the late-Roman period, various beads of which some can be dated in the late Roman period or fifth century and some in the Merovingian period, and a Merovingian plate buckle. This bowl seems an antique in this grave, but there is a possibility the grave goods are contemporaneous and date around the middle of the sixth century.

Bowl on a foot stand

Pandhof: 19999 (444-1).

Appendix 1: Figure 2.

This Pandhof bowl (context unknown) is different from the above discussed bowls by its pronounced foot stand and the slightly s-shaped profile. It has a height of 6.7 cm and a mouth diameter of 10.6 cm. It is made of a fine orange fabric and is not decorated. No other finds can be associated with this object. The bowl can be classified as the type Gellep 131.⁴⁴⁴ It bears resemblance to the late Roman *Fußschale* in late *terra nigra* of the type Chenet 342 and Gellep 273,⁴⁴⁵ or to Rhineland type Sha.2.11 (although a grey colour is a specific feature for these bowls). Bowls of this type date in Rhineland phase 2 (440-485).⁴⁴⁶ A close parallel is known from the cemetery of Müngersdorf.⁴⁴⁷

⁴³⁹ Chenet 1941, 73, 75, planche 14; Brulet 1990, 35, planche 1, 324.

⁴⁴⁰ Pirling/Siepen 2006, 63-65.

⁴⁴¹ Bayard 1998.

⁴⁴² Brulet 1990, 64-66.

⁴⁴³ Tilkin-Peters 1986, 228, fig. 11, 1-3; Brulet 1990, 39, planche 3, 420.

⁴⁴⁴ Pirling 1966, 128-129, Typentafel 11, 131a-b.

⁴⁴⁵ Pirling/Siepen 2006, 189, Gellep 273.

⁴⁴⁶ Siegmund 1998, 154.

⁴⁴⁷ Fremersdorf 1955, Tafel 25, 148-1.

Beakers

Seven beakers, various in form, were found in the Pandhof cemetery and one was found in the Vrijthof cemetery. Beakers can best be defined as pottery vessels from which one could drink, although this definition is at times somewhat ambiguous. Beakers from the late Roman period are of various fabric and shapes. All the pottery vessels that cannot be identified as a bowl (because they are higher, have a mouth that is relatively narrow compared to bowls, and have an obvious 'drinking' function (i.e. were not used to pour out liquids like jugs, jars or bottles) are here discussed as beakers.

Beakers: terra sigillata

Pandhof: 10136 (112-2)⁴⁴⁸; 11236 (393-3)⁴⁴⁹; 11225 (383-4).⁴⁵⁰

Appendix 1: Figure 3.

Three small globular beakers of fine terra sigillata ware on a relatively high foot and with an outwards folded rim are known from the Pandhof cemetery. The beaker from Pandhof grave 10136 has a height of 9.5 cm and was found with a pottery flask, also from the late Roman period (second half of the fourth century). The other terra sigillata beaker from Pandhof grave 11236 has a height of 9.9 cm and was found with three other pottery vessels and a glass vessel from the late-Roman period on the basis of which the grave is regarded as a fourth century or early fifth century grave. The beaker from Pandhof 11225 has a height of 9.8 cm. It was found in a grave with a glass vessel and two pottery vessels, all from the late Roman period or beginning of the fifth century.

The shape of the three beakers from the Pandhof cemetery corresponds with type Chenet 334 and the pale orange fabric can be described as late antique Argonne sigillata. The Chenet 334 beakers are also known as painted or barbotine decorated specimens and they also occur in colour-coated ware and in terra nigra.⁴⁵¹ Ten terra sigillata beakers of this type were found in the so-called south-west cemetery at Tongeren, where they belong to fourth century graves.⁴⁵²

Within the group of *terra sigillata* pottery from the cemetery of Krefeld-Gellep, Pirling and Siepen described the beakers of the type Chenet 334 as their type 14, which is considerably similar to the Pandhof specimens, except for the shape of the neck and foot. The graves in which type Gellep 14 was found all date in the fourth century.⁴⁵³ It seems plausible, also in view of the accompanying finds, to date the three Pandhof beakers in the fourth century.

Beakers: dark-colour-coated wares

Vrijthof: 75 (1377-1). Pandhof: 10344 (570-1).

Appendix 1: Figure 3.

A beaker with dark engobe is known from Pandhof grave 10344. It has a height of 7.3 cm, a slight globular shape, no rim and stands on a simple foot. It is of a white fabric and has a cover of dark engobe; a technique which in this case possibly can be identified as a product from Cologne.⁴⁵⁴ Similar beakers are classified as type Oelmann 30 and are dated in the second half of the second and in the first half of the third century.⁴⁵⁵ The content of the grave is quite peculiar because, next to another middle Roman period object -the *terra sigillata* plate Dragendorff 36- it furthermore consists of two Merovingian pottery vessels, one Merovingian glass vessel and a Merovingian belt and knife. The deposition of multiple vessels of pottery and glass in graves of the Merovingian period was rather unusual.

Another beaker with a dark engobe was found in Vrijthof grave 75. This beaker has a height of 11.4 cm, a globular belly, and stands on a foot. The belly shows two horizontal carved bands. It is of a white

⁴⁴⁸ Ypey/Glazema 1955, 76.

⁴⁴⁹ Ypey/Glazema 1955, 74.

⁴⁵⁰ Ypey/Glazema 1955, 75.

⁴⁵¹ Chenet 1941, 84; Vanvinckenroye 1984, 163, afb. 9 nr. 7; 156, afb. 6 nr. 6.

⁴⁵² Vanvinckenroye 1984, 154, afb. 5 nr. 14.

⁴⁵³ Pirling/Siepen 2006, 47, Gellep 14.

⁴⁵⁴ Cf. Oelmann 1914, 35, technique a; Vilvoder/Bocquet 1994.

⁴⁵⁵ Brunsting 1937, 75-76, pl. 3, type 3; Haalebos 1990, 141, type 2030; Vanvinckenroye 1991, 46, plate 19, nos. 204-208.

fabric and its surface has the remains of black, metal-glazed engobe. Similar beakers are classified as type Oelmann 33a, but the Vrijthof specimen lacks the typical rounded rim. Because of the fabric, which probably derives from the production centres in the Argonne,⁴⁵⁶ this particular form can be dated to the first half of the third century and possibly somewhat later.⁴⁵⁷ This beaker was found in a grave with a dish and belt fittings from the Merovingian period. It is clearly a middle Roman survival in a Merovingian grave.

Beaker: with oval dents, straight neck, dark grey varnish

Pandhof: 10136 (112-1).⁴⁵⁸

Appendix 1: Figure 3.

Pandhof grave 10136 contained the third beaker of dark colour-coated ware. The dark grey engobe is heavily weathered to such a degree that the light-grey fabric underneath can be observed. The beaker has a height of 21.8 cm and a globular belly with six oval dents. The grave contained also a small globular *terra sigillata* beaker which dates from the fourth century (see above) and resembles the type Unversagt 16, what makes an identification of this grave as late Roman likely.⁴⁵⁹

Similar beakers appeared frequent in the late Roman period and derive in shape from the well-known middle Roman type Oelmann 33c.⁴⁶⁰ For the late Roman period several sub-types can be defined on the basis of the shape of the neck, body, dents and the presence of a decoration of craved lines, as well as the particular colour of the fabric and engobe.⁴⁶¹ For instance, the Pandhof beaker can be placed in the by Vanvinckenroye discussed group of beakers with globular body's and a straight neck of a light-grey paste with dark grey engobe, which he dates in the first half of the fourth century.⁴⁶² Within this group the Pandhof beaker resembles the Tongeren specimens for which the large oval dents are characteristic. The cemetery of Krefeld-Gellep provides just one parallel; it belongs to a grave that dates from the beginning of the fourth century.⁴⁶³

Jugs and jars

The terms jugs and jars are variably used to refer to groups of Roman pottery with one or two handles and with or without spout. The distinction between these two categories is more strictly defined for the Merovingian period (see the section on jugs and jars of the Merovingian period). Jugs will here be referred to as specimens with one or more handles and a spout. They are used to pour liquids. Jars are here referred to as vessels with one or two handles but without a spout. They might have a relatively wide mouth. Jars were rather used for storage purposes, although, of course, they might have been used to pour out liquids.

Jugs: with handle and spout

Vrijthof: 168 (1536-1); Pandhof: 11236 (393-7).⁴⁶⁴

Appendix 1: Figure 3.

Two smooth walled Roman jugs with handle and spout are known from the Vrijthof and Pandhof. The jug from Vrijthof grave 168 is of a fine white fabric, has a globular body, a foot stand, and a relatively thin neck with spout. A remarkable feature is that the spout can be found near the beginning of the handle, not opposite to it. The handle is applied just underneath the rim and ends at the shoulder of the vessel.

⁴⁵⁶ Vilvorder/Bocquet 1994. Although this fabric resembles other products from the Argonne, other workshops in Eastern Gaul must not be excluded as a possibility. Cf. Symonds 1992, 39 ff.; Vilvorder 1999.

⁴⁵⁷ Vanvinckenroye 1991, 48-49, plaat 20, types 216, 220, 221; Van Enckevort 2003, 242-244, type 3060; Pirling/Siepen 2006, 81, Gellep 362-363.

⁴⁵⁸ Ypey/Glazema 1955, 76.

⁴⁵⁹ Unverzagt 1916, 21, Tafel 2, type 16;

⁴⁶⁰ Oelmann 1914, 40-41, tafel 2, type 33c.

⁴⁶¹ Cf. Symonds 1992, 63-67, especially Group 62.

⁴⁶² Vanvinckenroye 1984, 157-158, fig. 7, 9a-c; Vanvinckenroye 1991, 50-51, plate 21, types 232-239.

⁴⁶³ Pirling/Siepen 2006, 84, Gellep 371.

⁴⁶⁴ Ypey/Glazema 1955, 74.

This specimen can be classified as type Oelmann 64 and resembles other jugs like the type Brunsting 19 or Vanvinckenroye 1991.369, which can be dated in the end of the third and possibly in the beginning of the fourth century.⁴⁶⁵ This jug was found in a grave with characteristic items of the Merovingian period such as a seax, a knife, two rods with a loop and a pottery bowl. The object is obviously an antique in this grave.

The jug from Pandhof grave 11236 is of a fine white/yellowish fabric with several red-brown painted bands applied on the belly. Typical for this form are the wide mouth and the small ridge on the neck. It is found together with four pieces of pottery and one glass vessel from the late Roman period, as described above. Jugs like the Pandhof specimen are very common in the late Roman cemetery of Krefeld-Gellep,⁴⁶⁶ but they are among others also found in the cemeteries of Tongeren⁴⁶⁷ and Nijmegen.⁴⁶⁸ They can be identified with the type Gellep 79/80, which generally dates in the first half of the fourth century, although the form was already popular in other fabrics (*terra sigillata*, marbled and coarse wares) from the early third century onwards. Comparison with late Roman painted pottery analyzed by Liesen points out this jug is probably produced in Cologne.⁴⁶⁹

Jars, narrow mouth

Vrijthof: 255 (1699-1). Pandhof: 11236 (393-4).⁴⁷⁰

Appendix 1: Figure 3.

Two jars with one handle and without spout were found in Maastricht. The jar from Pandhof grave 11236 is of a fairly fine fabric with some coarse inclusions, has a light brownish colour and a height of 17.1 cm. The handle is relatively short, fixed beneath the rim and ending on the shoulder. The body is globular with a narrow neck and outwards folded thick rim. The shape of this specimen resembles certain types of middle Roman jars like type Oelmann 62, but does certainly not match this type in every aspect.⁴⁷¹ It can best be compared with types Vanvinckenroye 416-418 from the Tongeren cemeteries and later examples of type Gellep 77, which can be dated between the end of the third century and middle of the fourth century, although they have slightly different rim shapes than the Pandhof jar.⁴⁷² Considering its grave context, a date for this Pandhof jar in the first half of the fourth century seems plausible. This jar was found with three other ceramic vessels and one glass vessel, which all date in the late-Roman period.

The second smooth-walled Roman jar is known from Vrijthof grave 255. This specimen has a short handle, fixed to the neck and ending on the shoulder. The jar has a globular body on a foot stand and a long profiled neck without clear rim. It is of a fine white fabric. This type of jar and its smooth fabric is not only fairly common in the middle Roman cemeteries of e.g. Tongeren, but also in the larger area between Tienen and Maastricht. Therefore, they are also known as 'Haspengouw' jars. The best known production centre of these jars is located in the *vicus* of Tienen.⁴⁷³ The specimen from the Pandhof cemetery in particular can be classified as type Vanvinckenroye 1967.71/72, which dates in the second half of the second century.⁴⁷⁴ This jug is the only find from this grave, and although it is difficult to establish whether the grave belongs to the late Roman or Merovingian period, it is fairly safe to suggest that it is a Roman survival in a Merovingian grave, for the Vrijthof cemetery was not used as a burial ground as early as the second century.

⁴⁶⁵ Oelmann 1914, 59, Tafel 3, type 64; Cf. Brunsting 1937, 103, pl. 4, type 19, Vanvinckenroye 1991, 80-81, plaat 36, no. 369.

⁴⁶⁶ Pirling/Siepen 2006, 145, Gellep 79/80.

⁴⁶⁷ Vanvinckenroye 1991, 56-57, type 265.

⁴⁶⁸ Steures in press., 137, nos. 82-83 (Gellep 79 and 80).

⁴⁶⁹ Liesen 1999, 787-789.

⁴⁷⁰ Ypey/Glazema 1955, 74.

⁴⁷¹ Oelmann 1914, 58-59, type 62.

⁴⁷² Vanvinckenroye 1984, 175, fig. 13.6; Vanvinckenroye 1991, 92-93, plate 42, no. 416-418; Pirling/Siepen 2006, 142-143, Gellep 77.

⁴⁷³ Willems 2005, 66-67.

⁴⁷⁴ Vanvinckenroye 1967, 43-44, pl. 14, type 71/72; Vanvinckenroye 1991, 94-95, plaat 43, type 423.

Jar, wide mouth

Pandhof: 11225 (383-2)⁴⁷⁵; 11325 (417-4).⁴⁷⁶

Appendix 1: Figure 3.

The two jars with handle and relatively wide mouth without spout are both of coarse ware. The jar from Pandhof grave 11225 is of yellow-grey, quartz and volcanic glass tempered fabric, with a yellowish surface. It has the characteristics of the so-called fabrics of the Eifel area, especially those from Mayen.⁴⁷⁷ It has a globular body with a flat bottom, an inverted neck and a thickened straight cut rim. The mouth is relatively wide compared to the maximum width of the body and the vessels can therefore be called an 'open-shaped' jar. It was found together with a pottery beaker and plate and a glass vessel, all late Roman in date. Similar jars can be classified as type Gellep 109 and are normally dated in the fourth century, in particular before the last quarter of this century.⁴⁷⁸ This jar seems to be contemporaneous with the other finds from this grave.

Both wide-mouthed jars from the Pandhof originally derive from type Oelmann 95, which dates towards the end of the third century and eventually developed into type Unverzagt 30 from the later fourth century and early fifth century.⁴⁷⁹ The typological development of this kind of jars can be followed in the cemeteries of Tongeren and Krefeld-Gellep.⁴⁸⁰ The other jar from Pandhof grave 11325 -in an oxidised fabric- fits at the very end of this sequence with its more closed appearance. The handle is fixed underneath the rim and ends more or less at the middle of the body. The neck is inverted and the rim thickened and slightly folded outwards. This jar also has its probable provenance in the Eifel region and can be considered as a later variant of the above mentioned type, such as the type Gellep 108.⁴⁸¹ However, this object does also resemble the Frankish coarse ware specimens from the Rhineland, like the type Böhner D4a.⁴⁸² These are dated by Siegmund and Pirling during the ongoing fifth and the early sixth century. Considering the grave goods assemblage from grave 11325, consisting furthermore of an early biconical pot and two glass vessels (a jug and a hemispherical cup), which date in the fifth century, it is not absolutely certain this jar was an antique from the late fourth or early fifth century in an early Merovingian grave. On the contrary, it seems plausible that this grave was filled with more or less contemporaneous grave goods during the second half of the fifth or early sixth century.

Merovingian pottery

The Merovingian pottery vessels of the Vrijthof and Pandhof cemeteries can be categorized in the basic groups of plates, bowls, jars and jugs, bottles, beakers, biconical pots and *Wölbwandtöpfe* or egg-shaped pots. A general consensus exists, except for the category dishes/bowls, regarding the criteria that define these categories. Differences in the typological classifications within these broad groups, however, can be observed in numerous publications of Merovingian cemeteries and pottery. The biconical pots have been the favourite subject in early medieval pottery research because it is the most characteristic element of Merovingian material culture. They are produced in enormous quantities during a period of nearly 200 years and are dispersed as a characteristic shape all over the Merovingian world. The other vessel forms have been found in lesser quantities.

Dishes / bowls

Evident criteria to distinguish between dishes and bowls are lacking. Siegmund refers to both shapes as *Schalen* because, according to him, a division between these shapes does not serve any chronological

⁴⁷⁵ Ypey/Glazema 1955, 75.

⁴⁷⁶ Ypey/Glazema 1955, 83.

⁴⁷⁷ Willems 2005, 90-91.

⁴⁷⁸ Pirling/Siepen 2006, 198-199, Gellep 109.

⁴⁷⁹ Cf. Oelmann 1914, 74, tafel 4, type 95; Unverzagt 1916, 35, Tafel 2, type 30.

⁴⁸⁰ Vanvinckenroye 1984, 166-168, fig. 10a-b; Pirling/Siepen 2006, 198-200, Gellep 107-109.

⁴⁸¹ Pirling/Siepen 2006, 200, Gellep 108.

⁴⁸² Böhner 1958, 52, Tafel 4, type D4a; Pirling 1966, 140-141, Typentafel 13, type 154 (Trier D4a); Siegmund 1998, 146-147, type Kru 1.2, Rhineland phase 1-2 (400-485).

purpose. He recognizes, however, that such a division can be useful for research that focuses on functional explanations.⁴⁸³ It can be imagined that this division serves even more research goals; especially those concerned with the understanding of the Merovingian funerary rite and the choice of the objects involved in it. Legoux, Périn and Vallet only distinguish between oxidized or reduced atmospheres of production; shape or decoration are not considered as typological criteria.⁴⁸⁴ Although regarded as one category, Siegmund offers the most recent and extended typology for dishes and bowls from the Merovingian period. These vessels are divided in two groups, those with carinated walls, and those without.⁴⁸⁵ In general, most of the carinated dishes/bowls seem to date later than the dishes/bowls without carinated walls, although the chronological distinction is not very obvious but rather fluid.

Siegmund makes a further distinction on the basis of the shape of the foot/bottom, the fabric and surface treatment (fine, burnished or coarse), the shape of the upper wall and the shape of the rim. This resulted in the identification of 17 types, of which four types are without carinated wall and 13 types are with carinated wall. Siegmund considers the shape of the foot to be an important typological criterion for the dishes/bowls with carination. Five foot-shapes are identified; the foot stand, the foot plate, the ring stand, the flat bottom and the sagging bottom (Fig. 19). For the Vrijthof and Pandhof cemeteries all these shapes, except the sagging base, are relevant.

The Franken AG adopted Siegmund's classification nearly completely. Next to a minor alteration in Siegmund's typology (see type Sha 2.41) they dated most of the types to longer periods.⁴⁸⁶

Tilkin-Peters addressed the problem of the chronological evolution of Merovingian dishes and bowls of the Meuse-region.⁴⁸⁷ She mentions that the earliest Merovingian dishes and bowls were produced in an oxidised atmosphere and that their colour and shapes refer to late Roman types (*terra sigillata* ware).⁴⁸⁸ Later on, especially in the seventh century, bowls and dishes can also be of a grey and black fabric. Tilkin-Peters observed some general developments; an evolution from certain foot forms to a flat bottom, the decoration moves in time from the lower part of the wall to the upper part of the wall or disappears, and fine burnished ware is replaced by a coarser ware. Further chronological refinement or alterations to existing typo-chronologies were not proposed by her.

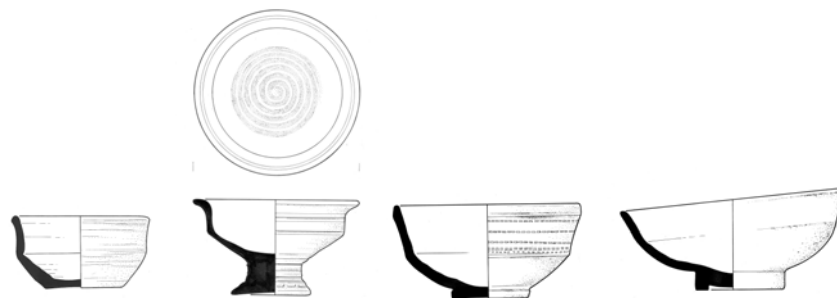


Figure 14. Various foot shapes of Merovingian bowls/dishes. 1: flat bottom. 2: foot stand. 3: foot plate. 4: stand ring.

All the dishes (except for one) from the Vrijthof and Pandhof cemeteries have carinated walls and are made of a fine burnished red/orange fabric of which only two specimens, both from the Vrijthof, are decorated. Four of the five foot types such as identified by Siegmund are present in the collection from Maastricht. These serve to classify this group of fifteen dishes and bowls. Siegmund did not describe the shapes of the foot-types in an unambiguous way, and the examples for each type (except the

⁴⁸³ Siegmund 1998, 153 (note 128).

⁴⁸⁴ Legoux/Périn/Vallet 2004, type 403 and 406, 20,46.

⁴⁸⁵ Siegmund 1998, 155, Abb. 67 (classification scheme).

⁴⁸⁶ Müssemeier *et al.* 2003, 67-68.

⁴⁸⁷ Tilkin-Peters 1986, 228.

⁴⁸⁸ Tilkin-Peters 1986, 228; 238 fig.11.

uncomplicated shape of the flat bottom) show some differentiation within the group and similarities with the examples of the other groups. An unambiguous foot-shape description, on the basis of Siegmund's foot-types, will be attempted here (Fig. 14). The foot stand is here referred to as a foot with a considerable height that can be distinguished from the other types because it has the appearance of a (short and thick) stem (Fig. 19.2). This is the rarest type within the category of dishes and bowls. The form foot plate is here referred to as a plate, clearly separated from the wall by a constriction, with a flat or nearly flat bottom (Fig. 19.3). The foot plate is clearly less high than the foot stand. The stand ring is also separated from the lower wall, but the bottom of the foot is concave so that the dish or bowl stands on a 'ring' (Fig. 19.4). This 'ring' can have different morphological appearances. A fluid transition from a stand plate to a stand ring can be observed, also in the group of dishes and bowls from the Vrijthof and Pandhof cemeteries. Finally, there is the dish/bowl with a flat bottom (Fig. 19.1). These foot-types will be used for the classification of the bowls and dishes from the Vrijthof and Pandhof cemeteries.

Bowls: with carinated wall and foot stand

Vrijthof: 79 (1420-1).

Appendix 1: Figure 4.

The bowl of fine grey fabric from Vrijthof grave 79 is placed on a high foot stand. The bowl has a height of 7.8 cm and a mouth diameter of 13.5 cm. The foot and the outer surface of the wall shows some decoration of incised lines and the inner surface of the dish shows a vague engraved spiral of points. Some marks of use are also visible on the inner surface of the bowl. The bowl appears, especially compared to the Pandhof specimen (which resembles the Vrijthof bowl to some degree, but is discussed in the group of fifth century pottery, see above), to be of high quality. The Vrijthof bowl is found between the feet of the deceased and is part of a grave goods assemblage that consists of a knife, a fire-steel with flint and a bronze plate buckle (lost, photograph available) with strap end. In view of these finds the bowl is most likely deposited in the grave of a man. Parallels for this specific bowl are rare.

One bowl on a foot that resembles the Vrijthof specimen is known from the cemetery of Grez-Doiceau.⁴⁸⁹ This bowl does not show any decoration and has a somewhat plainer appearance and is of a lesser quality (it is somewhat asymmetric) than the Vrijthof bowl, but the shape shows considerable similarities with the Vrijthof bowl. Another parallel is known from Risstissen in the Alamannic area.⁴⁹⁰ This dish is also of a grey fabric. It has a decoration of an engraved undulating line along the vertical upper wall, and one on the upper surface of the horizontal outwards folded rim.

This form of bowl may be a continuation of the Roman *Räucherkelche* that date from the first to the fourth century.⁴⁹¹ Gose states that in the course of time the upper part of the wall becomes more vertical, such as can be observed on the Vrijthof specimen.

The Vrijthof bowl cannot be classified as type Siegmund Sha 2.11, such as the already discussed Pandhof bowl, but is probably a later, according to the finds from Grez-Doiceau, variant of this bowl. Similar bowls are not known from the research area of Siegmund or the Franken AG, nor do Legoux, Périn and Vallet identify them. According to the remarks made above it seems plausible to date this dish after the Pandhof bowl on a foot stand (see the section above) which dates in the second half of the fifth century. A date in the first half of the sixth century is therefore proposed.

Bowls: foot plate

Vrijthof 291 (1804-1). Pandhof 10056 (19-2).

Appendix 1: Figure 4.

⁴⁸⁹ Vrielynck 2007, 39, fig. 10.

⁴⁹⁰ Quast 2001, 180-181, Abb. 188.

⁴⁹¹ Gose 1976, nrs. 443-448.

The bowl from Pandhof grave 10056 has a shiny red engobe, a carination and a horizontal outwards folded rim. This bowl was found with two glass vessels that are difficult to date more precisely than to the fifth and sixth centuries. The gender of the deceased is difficult to establish on the basis of these finds alone. The bowl resembles the bowl from Geilenkirchen grave 4 (nr. 5) that is an example for Siegmund's type Sha 2.13 (identified as plates on a foot stand), which dates in Rhineland phase 7 (585-610).⁴⁹² The other examples (especially the one from Geilenkirchen grave 4 (nr. 4) does not resemble the Pandhof specimen. The foot of this example is much higher and pronounced and can be identified as a foot stand. It must be concluded that this category (dishes with foot stands) is not unambiguously defined in Siegmund's classification scheme. It is therefore proposed to classify the Pandhof bowl as a one with a foot plate, and not with a foot stand. Apart from this one example in Siegmund's overview no other parallels were found till now. On the basis of the associated finds it is proposed to maintain Siegmund's dating in the end of the sixth and beginning of the seventh century.'

A bowl with a shiny red engobe but of poor quality was found in grave 291, no other finds are known from this grave. It is a slow wheel thrown bowl, asymmetric in height and the foot plate is poorly finished. It is suggested that this bowl, on the basis of the foot plate⁴⁹³, dates in the second half of the sixth century and first half of the seventh century, although parallels from the Rhineland and Meuse valley are not available.

Especially the corpus of bowls from the Pandhof and Vrijthof cemeteries make it apparent that a Meuse valley typo chronology of grave goods is required on the basis of which distribution patterns of these specific objects which are not known from other regions can be created.

Bowls: red, carinated wall, undecorated, straight to inward curved upper wall, foot plate

Vrijthof: 18 (1661-1); 0 (1683-1). Pandhof 10634 (433-4).

Appendix 1: Figure 4.

It is difficult to make an exact distinction between bowls on a foot stand and those on a stand plate following the description and examples of Siegmund.⁴⁹⁴ The identification of the four Maastricht specimens as bowls on a foot plate is based on the relatively high foot of these bowls, next to their straight to slightly inward curved upper wall, pronounced carination and thickened lip. Siegmund describes that these elements are characteristic for bowls with a foot plate (Sha 2.21).⁴⁹⁵ Because of their relatively high foot (compared to the other specimens on a foot plate from the Pandhof and Vrijthof, see below) a classification as bowls on a foot stand seems also possible for these bowls. The concave bottom of three of the four bowls also shows some resemblance to ring stands (see below). Criteria to distinguish foot plates from foot stands and rings stands need further refinement.

The bowls from Pandhof grave 10635 and Vrijthof grave 18 show a high degree of similarity because of their pronounced carination, straight upper wall and rounded lip. Only the Pandhof bowl has a clearly thickened lip, for the Vrijthof bowl this characteristic is not obvious. The bowl from Pandhof grave 10635 was found together with various glass beads, on the basis of which the grave is identified as that of a woman. The bowl from Vrijthof grave 18 is part of an assemblage which only consists of pottery (next to the bowl there is a trefoil jug). The gender of the deceased cannot be established on the basis of these finds.

Bowl 1683-1 from the Vrijthof cemetery (context unknown) is larger and has a relatively higher upper wall. No other finds can be associated with this bowl.

Similar red bowls on a foot plate are identified by Siegmund as type Sha.2.21 (on the basis of their pronounced carination and straight to slightly incurved upper wall) and date in Rhineland phases 5 to 8

⁴⁹² Siegmund 1998, 154.

⁴⁹³ Siegmund 1998, 155, Abb. 67.

⁴⁹⁴ Siegmund 1998, 154-156.

⁴⁹⁵ Siegmund 1998, 154-156.

(555-bis610/640).⁴⁹⁶ The Franken AG maintained Siegmund's type Sha 2.21 and date these bowls in their phases 4 to 7 (510/25-640/50).⁴⁹⁷

Plates/bowls: red, undecorated, carinated wall, outwards curved upper wall, foot plate

Vrijthof : 19 (1606-1); 0 (1838-5); 75 (1378-1). Pandhof: 10148(36-1); 10031 (71-1); 10074 (27-5); 10635 (432-1).

Appendix 1: Figure 4.

Seven red undecorated bowls, three from the Vrijthof and four from the Pandhof, are identified as bowls on a foot plate. Their foot shapes, except for Pandhof bowl 432-1, are more or less comparable to the foot shapes of the specimens described in the section above. The bowls are distinguished from this group by their less pronounced carination, outwards curved upper wall and thin rims. The bowl from Pandhof grave 10635 is the only bowl with a clearly distinguishable foot plate. For the other bowls this is not so obvious, but their plates are too low to classify them as foot stands. Some bowls seem to have a foot form that can be identified as precursors of a ring stand, but they are not as pronounced as the rings stands of the two specimens discussed below. For now they are considered to be bowls on footplates.

The bowl from Pandhof grave 10635 was found in a grave with various glass beads on the basis of which this grave is identified as that of a woman. The bowl from Pandhof grave 10148 was associated with a glass vessel which dates in the sixth century. The gender of the deceased is difficult to establish on the basis of these finds. The bowl from Pandhof grave 10031 is part of an assemblage that consists of two pottery vessels that date in the fifth and sixth century. The bowl from Pandhof grave 10074 is found together with three glass vessels, a string of beads, a disc of antler, and bronze belt fittings of shoes, which can be identified as the grave goods of a woman. These objects date mainly in the sixth century. The bowl from Vrijthof grave 19 was found in a grave with a biconical pot and a seax (lost). These objects date in the sixth and seventh century. The bowl from Vrijthof grave 75 was found with iron belt fittings, a knife and another pottery vessel. The finds date mainly in the sixth century. The context of bowl 1838-5 is not known, and other finds could not be associated with this bowl.

According to Siegmund's typology these bowls can be classified as type Sha 2.21, just as the forgoing group, which dates them in Rhineland phase 5-8 (555-610/640).⁴⁹⁸ This coincides well with the dates of the finds that are associated with the Maastricht bowls.

Bowl: red bowl, carinated wall, footplate, roulette stamp decoration.

Vrijthof: 168 (1535-1).

Appendix 1: Figure 4.

This bowl is the only specimen from the Vrijthof and Pandhof cemeteries which has a clear distinguishable footplate and is decorated. The bowl could possibly be related to the local production of *pseudo-sigilée* in Maastricht, known from at least one kiln dating in the second half of the fifth century.⁴⁹⁹ The decoration consists of a single line of roulette stamped decoration of small rectangles applied on the upper wall. The bowl is part of a grave goods assemblage of a man (based on the presence of a seax) and was found together with a jug near the feet.⁵⁰⁰ The seax dates in the sixth century, the iron buckle in the second half of the fifth and first half of the sixth century, the other finds (a knife and iron rods) are difficult to date precisely. According to Siegmund this bowl should be classified, as the bowls described above, as type Sha 2.21. The bowls without decoration date in Rhineland phase 5-8, those with roulette decoration in Rhineland phase 6-8 (570-640).⁵⁰¹

⁴⁹⁶ Siegmund 1998, 154-156.

⁴⁹⁷ Müssemeier *et al.* 2003, 67.

⁴⁹⁸ Siegmund 1998, 154-156.

⁴⁹⁹ Van Ossel 1985; Dijkman 1993.

⁵⁰⁰ Pottery vessels are often considered to be 'neutral' grave goods. The correlation of decoration patterns and colour with the gender of the deceased has only scarcely been investigated.

⁵⁰¹ Siegmund 1998, 154-156.

Plates/Bowls: carinated wall, ring stand

Vrijthof: 110 (1541-1); 279 (1797-1).

Appendix 1: Figure 4.

One of the Vrijthof bowls on a ring stand is not decorated, the other one is decorated with a roulette stamp decoration of multiple lines of rectangles applied on the upper wall. Both the bowls have a rim which is not thickened and a slightly outward curved upper wall. The decorated bowl from Vrijthof grave 110 is part of the grave goods assemblage of a woman which consists furthermore of various glass beads, a biconical pot and a number of simple bronze and iron rings. These finds date mainly in the sixth century. The bowl without decoration, from Vrijthof grave 279, was found with a knife, which is difficult to date precisely.

Bowls of this kind can best be classified as Siegmund's Sha 2.31, although this type is characterised by a straight or slightly inward curved upper wall.⁵⁰² This type dates in Rhineland phase 4 (530-555). The decoration is not considered to be a chronological significant feature for these bowls. This is difficult to substantiate on the basis of the small sample from Maastricht. The Franken AG maintained this type and date it to their phases 3-5 (460/80-580/90).⁵⁰³

Bowls: flat bottom

Vrijthof: 0 (1838-4). Pandhof: 19999 (438-1).

Appendix 1: Figure 4.

The context and associated finds of the bowl of fine burnished red/orange fabric from the Pandhof cemetery remains unknown. The bowl has a height of 5.8 cm and a flat bottom. Parallels for this bowl are not known to me. Because of the flat bottom, straight upper wall and relatively wide mouth it is for now classified as Siegmund's type Sha 2.5 and accordingly dated in Rhineland phase 7-8 (585-640).⁵⁰⁴ No other finds are associated with this bowl.

The context of the Vrijthof bowl (1838-4) with flat bottom is also unknown. It remains uncertain whether the four other vessels and glass vessel with which it was associated belonged to the same context. The bowl is of a fine grey fabric and has a carinated wall. The Vrijthof bowl resembles the examples of type Sha 2.5 from Siegmund's research area, although these are often baked in an oxidised atmosphere. Moreover, the straight or slightly outward curved upper wall and slightly thickened rim do not correspond with Siegmund's description of this type. Similar bowls are not identified by the Franken AG, neither are they by Legoux, Périn and Vallet. Both bowls are probably local products, and are for now difficult to date more precisely.

Plate: coarse ware

Pandhof: 10500 (469-2).

Appendix 1: Figure 4.

The plate of reduced and lightly smoked coarse ware from Pandhof grave 10500 has a slightly concave bottom, a diameter of 18 cm, a low wall and an open shape. It was found with a biconical pot which dates to the first half of the seventh century and a bronze finger ring. The shape of this plate bears great resemblance to type Unverzagt 34.⁵⁰⁵ It is a well known form from fourth century grave contexts in the cemetery of Krefeld-Gellep.⁵⁰⁶ Although the quartz fabric of this specimen is probably no product from Mayen, the production of similar plates continued here into the early seventh century.⁵⁰⁷ In Siegmund's classification of dishes without carination the Pandhof specimen fits the description and examples of his

⁵⁰² Siegmund 1998, 156.

⁵⁰³ Müssemeier *et al.* 2003, 67-68.

⁵⁰⁴ Siegmund 1998, 156.

⁵⁰⁵ Unverzagt 1916, 36, Tafel II.

⁵⁰⁶ Pirling/Siepen 2006, 236-237, Gellep 126.

⁵⁰⁷ Redknap 1999, 182, 183-184, Abb. 30, Form A7.

type Sha 1.1.⁵⁰⁸ The straight outward bending wall with incurved rim is a characteristic feature of this type, a feature which can be observed on the Pandhof dish. It seems however that the Pandhof dish is generally lower than the examples of this type given by Siegmund, but it can be assumed that it dates to the same period. Siegmund dates these dishes to Rhineland phase 4-5 (530-570) of which it can be concluded that this dish is considerable older than the biconical pot it was found with. The Franken AG maintained this type and date it to their phases 3-5 (460/80-580/90).⁵⁰⁹ On the basis of the parallels this plate can either be dated in the later fifth century or the sixth century. The grave context itself, makes a date in the sixth or early seventh century possible.

Bottles

All the vessels without handles with a more or less spherical/globular body and a relatively narrow long neck are here referred to as bottles (the terminology used for Roman pottery can be different in this respect). It is regularly mentioned that the category bottles is scarcely incorporated in typochronological analysis.⁵¹⁰ It is however generally acknowledged that the majority of the bottles date in the seventh century, a few somewhat earlier. A development from elongated bottles to thickset specimens and from relatively narrow necks to wider necks can be observed in the course of the seventh century.⁵¹¹ For the classification of the Vrijthof and Pandhof bottles the typology of Siegmund and the Franken AG is used. Legoux, Périn and Vallet defined only one type that covers all bottle shapes.⁵¹² They date bottles to the late sixth and first half of the seventh century.

Only three bottles were found, all in the Pandhof cemetery. The identification of one of these, however, remains ambiguous for a distinct part (the neck) is absent of this specimen. One Vrijthof vessel is for now identified as a bottle. It remains questionable if this vessel ought to be identified as Merovingian.

Bottles: elongated, narrow neck

Pandhof: 10037 (108-2⁵¹³); 19999 (118-1); 19999 (429-1).

Appendix 1: Figure 5.

Two bottles from the Pandhof cemetery can both be identified as elongated specimens despite their dissimilarities regarding the shape of their body, their bottom and colour. Both are made of a fine burnished fabric. The bottle from grave 10037 has a light brownish colour, and bottle 429 a red orange colour. They both have more or less the same height (12.7/12.6 cm) and a relatively narrow neck. Both have a globular shaped body, but the body form of bottle 429 is wider and more sagging. The bottle from Pandhof grave 10037 was found in a grave of a woman, which also contained a decorative disc of antler and a silver finger ring. Bottle 429 is a stray find, as is Pandhof bottle 118-1. It remains uncertain (the top of the bottle is lost) whether bottle 118-1 has a narrow or wide mouth. This specimen is of a grey fabric and has a roulette stamp decoration of lines of rectangles on the upper part of the body. No other finds are associated with this bottle.

The shapes of the bottoms form the main difference between the bottles. The bottom from bottle 429 is simple and nearly flat, bottle 108 on the other hand has a worked foot which can be classified as a foot plate. The bottom of bottle 118-1 is a more pronounced foot plate.

As Siegmund mentions, a bottle with a foot plate was found in Müngersdorf-Cologne grave 118, which dates early in the sixth century.⁵¹⁴ The two Pandhof bottles with stand plate probably date earlier than the other Pandhof specimen. This can not be substantiated by associated finds for two bottles are stray

⁵⁰⁸ Siegmund 1998, 154.

⁵⁰⁹ Müssemeier *et al.* 2003, 67.

⁵¹⁰ Siegmund 1998, 143; Koch 1977; Pescheck 1996.

⁵¹¹ Siegmund 1998, 143-145.

⁵¹² Legoux/Périn/Vallet 2004, 20, 46 (type 407).

⁵¹³ Ypey/Glazema 1955, 78.

⁵¹⁴ Fremersdorf 1955, Tafel 21, 118.7.

finds. Siegmund identified early bottles, such as the one from Müngersdorf-Cologne grave 118, as a separate group; the bottles of the fifth and sixth centuries.

The bottle from Pandhof grave 10037 can be classified as Siegmund's Fla 1.1, mainly on the basis of its relatively narrow neck. Bottles of this type date in Rhineland phase 8 (610-640) and can sometimes be found in earlier contexts.⁵¹⁵ The Franken AG maintained this type although the remark is made that numerous variants could be recognised in this typological group. They date this type in their phases 5-7 (565-640/50).⁵¹⁶ On the basis of the associated decorative disc it can be assumed that this bottle dates to the end of the sixth and beginning of the seventh century.

Beaker/Bottles: globular, wide neck

Vrijthof: 258 (1839-1). Pandhof: 19999 (264-1).

Appendix 1: Figure 5.

The beaker or bottle from Vrijthof grave 258 is of a very hard and compact fine shiny dark grey ware and is a unique specimen for the Merovingian period as far as it is known. It was found in an undisturbed grave near the feet of the deceased, together with a pottery jar (Rhineland phase 5: 555-570). This bottle can therefore without doubt be dated in the second half of the sixth century and thereafter. A necklace of beads and a bronze ring are also known from this grave, which are indications for the burial of a woman.

On formal grounds it is possible to place this bottle in Siegmund's typology. The indexes point towards type Fla 2.2 (bottle with a relatively wide neck and globular belly) although the sagging base and hollow rim are absent.⁵¹⁷ This type of bottles is dated in Rhineland phase 11 (705-740) what would make the accompanying jar an antique in this grave. This seems unlikely because of the plain appearance of the jar. Moreover, in view of the differences between the Vrijthof bottle and the examples brought together by Siegmund under his type Fla 2.2, identification as this type is unlikely. Probably this bottle should be dated earlier than phase 11. However, no parallels were found, and its appearance is rather different from ceramic forms and ware that are known from the Merovingian period. An error in the assignation of this bottle to Vrijthof grave 258 should be kept in mind.

The upper part of pottery vessel 264 from the Pandhof cemetery (context unknown) is lost. Because of the absence of a handle and the shape of the remaining lower part of the neck this vessel is identified as a bottle with a relatively wide neck, but a biconical pot with a relatively high neck is another option for its classification. It is baked in a reduced atmosphere and it is of a fine and hard paste. Some spots of the white past can be observed underneath the black surface. No other finds can be associated with this bottle. Because of its wide neck it could be classified as Siegmund's type 2.1 (although the belly shapes of the examples of this type are different from the Pandhof specimen) and accordingly dated in Rhineland phase 10 (670-705).⁵¹⁸ For now this remains uncertain.

Jugs and jars

The number of handles and the presence or absence of a spout makes the distinctions between Merovingian jugs and jars (this is different from the terminology for Roman jugs and jars, see section above). Jugs never have more than one handle, and are distinguished from jars by the presence of a spout. For the Merovingian period jugs are usually divided into two groups based on the shape of their spout: jugs with a trefoil spout and jugs with a little spout (formed by the slight outwards bending of the rim).⁵¹⁹ From the Vrijthof and Pandhof cemeteries only jugs with a trefoil spout are known, with the exception of one jug from the Pandhof of which the spout is much smaller and the rest of the mouth is a

⁵¹⁵ Siegmund 1998, 145.

⁵¹⁶ Müssemeier *et al.* 2003, 64.

⁵¹⁷ Siegmund 1998, 146.

⁵¹⁸ Siegmund 1998, 145-146.

⁵¹⁹ Siegmund 1998, 146-153

nearly full round. In the category of trefoil jugs a distinction is made between the elongated and the spherical body shapes.⁵²⁰ It appears that the elongated types are more frequent in the Pandhof cemetery and the globular types more frequent in the Vrijthof cemetery.

Jars can have one or more handles, but from the two cemeteries in Maastricht only specimens with one handle are known. The criteria by which they are classified are the relative width of the mouth (narrow mouthed specimen are early, wide mouthed are later) and the shape of the body.⁵²¹

Jugs and jars are often of a grey and coarse fabric and as a consequence regularly regarded as ordinary objects, which received little specialized scholarly attention, opposed to the biconical pots (see section below) which are of a fine fabric and are often polished and with decoration. Was the selection only related to their contents, or were the morphological differences between biconical pots and jugs and jars decisive for their selection as grave goods?

Trefoil jugs: elongated

Vrijthof: 18 (1662-1). Pandhof: 10031 (71-2); 19999 (57-1); 19999 (120-1).

Appendix 1: Figure 5.

The relation of body height to belly diameter served Siegmund to divide between elongated jugs and globular jugs. Jugs with an index less than 1 are considered to be elongated specimens, those with an index which equals or is more than 1, are identified as globular jugs.⁵²²

The only elongated specimen from the Vrijthof cemetery was found in grave 18 and is a relatively small jug (height: 10 cm). It was found with a glass palm cup which dates in Rhineland phase 9 (640-670). The three other elongated jugs are all known from the Pandhof cemetery.

The jug from Pandhof grave 10031 was found with three other pottery vessels which date in the seventh century. The contexts and associated finds of the other two jugs of the Pandhof cemetery are unknown.

The elongated jugs are according to Siegmund (type Kan 1.12) deposited in Rhineland phases 2-4 (440-555) although mainly in phase 3 (485-530).⁵²³ The two jugs from contexts (Vrijthof grave 18 and Pandhof grave 10031) can be considered relatively old objects or survivals in these graves, what is in contrast with the earlier made remark that these grey jugs are somewhat ordinary vessels for which a motivation for their prolonged curation is difficult to perceive from a modern perspective.

The Franken AG, however, question the validity of the index to distinguish the elongated specimen so strictly from the globular specimens.⁵²⁴ The Franken AG did not apply this strict classification on a considerable number of trefoil jugs because their index lies close to 1. They are not used as datable objects for graves. Accepting a transitional zone in which also the associated grave finds are used to date the jugs concerned seems a plausible solution. The two elongated jugs from Maastricht of which the find contexts are known, could be dated somewhat later than Siegmund's classification suggests. Their indices, however, are not very close to 1. Types Siegmund Kan 1.11 and 1.12 are united by the Franken AG as one type which dates to their phases 2-4 (400-565).⁵²⁵ Legoux, Périn and Vallet also make a difference between elongated and squat trefoil jugs, but clear criteria to distinguish them are not provided. Elongated jugs are classified as type 401, which dates in their phases PM1 (440/450-470/80) and more sporadically in phase MA1 (470/80-520/30).⁵²⁶ Because both the assemblages which are associated with elongated jugs date to the seventh century, a problem with regard to the classification and dating of these objects became apparent. Or they are old components in the grave, or local production resulted in considerably different appearances. One way or the other, this category of pottery requires further thought.

⁵²⁰ Siegmund 1998, 151.

⁵²¹ Siegmund 1998, 146.

⁵²² Siegmund 1998, 150-151.

⁵²³ Siegmund 1998, 151.

⁵²⁴ Müssenseimer *et al.* 2003, 66.

⁵²⁵ Müssenseimer *et al.* 2003, 66.

⁵²⁶ Legoux/Périn/Vallet 2004, (type 401), 20, 46, 55.

Trefoil jugs: squat

Vrijthof: 78 (1524-1); 85 (1421-1); 300 (1805-1). Pandhof: 10511 (446-1); 10858 (127-2).

Appendix 1: Figure 5.

In the category of trefoil jugs the globular vessels are more numerous in the Vrijthof cemetery than the elongated ones. Of the three globular jugs from the Vrijthof cemetery the one from grave 300 can without doubt be classified as such. The two other jugs show an index close to the index determined to distinguish elongated from globular types, what makes their strict classification as Siegmund type Kan 1.2 somewhat arbitrary.⁵²⁷

The jug from Vrijthof grave 85 was found together with a globular glass beaker which dates in Rhineland phase 7 (585-610) and various glass beads. The jug from Vrijthof grave 78 is associated with a biconical pot which dates in Rhineland phases 7-8 (585-640). The jug from Vrijthof grave 300 was found in a grave which also contained a head of a lance (lost, date cannot be established).

Of the two globular trefoil jugs from the Pandhof the one from grave 10858 is also difficult to classify strictly to type Kan 1.2, because it has an index of exactly 1. This jug was found with a biconical pot which dates towards the end of the fifth and first half of the sixth century. It can therefore be assumed that this jug dates earlier than the proposed date of Siegmund for globular jugs of type 1.2 (610-640), and should better be classified, as the jugs in the section above, as type 1.12 (440-555).

The upper part of the jug from grave 10511 is lost, and it is not clear whether we deal with a trefoil jug. Siegmund, however, mentions that trefoil jugs are more often associated with relatively long handles than jugs without trefoil spouts.⁵²⁸ This jug was associated with a glass vessel, which dates to the first half of the fifth century. This does not match with Siegmund's dating of globular trefoil jugs in Rhineland phase 8 (610-640).⁵²⁹

The Franken AG maintained this type but date it to their phases 5-7 (565-640/50).⁵³⁰ Similar jugs are classified as type 402 in the typology of Legoux, Périn and Vallet, which dates to their phases MA2-MA3 (520/30-600/10), they can also sporadically occur in the phase before and thereafter.⁵³¹

The dates of Siegmund and the Franken AG do not match with the other finds from the Pandhof graves. Either these jugs are deposited in graves of which the other finds are relatively old, or the classification according to the typologies of Siegmund and the Franken AG does not apply to these jugs. Legoux, Périn and Vallet date the onset of these jugs earlier what is more in line with the Pandhof finds.

Jugs: one handle

Pandhof: 10344 (569-3).

Appendix 1: Figure 6.

Because of its small spout, this Pandhof jug cannot be classified as 'trefoil jug' according to the typology of Siegmund. This jug was found together with three vessels of pottery, a glass vessel, a belt and a knife. Most of the finds date in the sixth century, two pottery vessels are survivals of the Roman period. The Pandhof jug can be classified as Siegmund's Kan 2.1 although not all his defining criteria can be observed. Jugs of this kind date in Rhineland phase 10 (670-705).⁵³² This date is not in accordance with the associated grave finds (mostly second half of the sixth century), and it should be questioned if this jug should not be classified as a trefoil jug of Siegmund type 1.2 which dates in Rhineland phase 8 (610-640).

On the other hand, it can be assumed that such jugs are often part of assemblages that are relatively older. The other finds could have been in circulation for some time before the burial, the jug was selected from the pottery in circulation at that moment.

⁵²⁷ Siegmund 1998, 150-151; Müssemeier *et al.* 2003, 66.

⁵²⁸ Siegmund 1998, 150.

⁵²⁹ Siegmund 1998, 151.

⁵³⁰ Müssemeier *et al.* 2003, 66.

⁵³¹ Legoux/Périn/Vallet 2004, (type 402), 20, 46, 55.

⁵³² Siegmund 1998, 153.

Similar jugs are classified as type 402 in the typology of Legoux, Périn and Vallet, which dates to their phases MA2-MA3 (520/30-600/10), they can also sporadically occur in the phase before and thereafter.⁵³³ This date is more in accordance with the other finds from this grave.

With regard to the chronological phasing of the jugs from the Pandhof and Vrijthof cemeteries according to the typo-chronologies of Siegmund, the Franken AG and Legoux, Périn and Vallet, it can be questioned whether their typological criteria apply to jugs outside their research area's.. None of the grave goods that were associated with the jugs date in accordance with them. It can be suggested that this pottery form knows considerable regional differences and that these are difficult to transform into supra-regional typo-chronologies. Broadly defined types and considerable date ranges are more suitable for this category of pots. For now the jugs are not considered as significant chronological indicators for the typo-chronology of the grave goods from the Vrijthof and Pandhof cemeteries.

Jugs: carinated wall

Vrijthof: 228 (1644-1); 273 (1828-1).

Appendix 1: Figure 6.

The red jug of fine burnished ware with a carinated wall from Vrijthof grave 288 is exceptional considering the repertoire of shapes and colours generally associated with Merovingian jugs. The jug has a height of 15.2 cm, it has a flat base and a trefoil spout. The handle is fixed at the rounded rim and ends approximately at the middle of the body. It has a decoration of five grooves applied to the upper wall. No parallels for this jug are known to me until now and because no other finds can be associated with this jug it is difficult to date it more precisely than the period during which elongated jugs were generally deposited in graves (Rhineland phases 2-4: 440-555; however, see the remarks with regard to the accuracy of the typo-chronology of jugs above).

The black jug with carinated wall of fine burnished ware from Vrijthof grave 273 is exceptional since similar vessels are not known to me until now. It has the appearance of a fusion of a biconical pot with a sharp carination with the pronounced trefoil spout and handle as known from Merovingian trefoil jugs. At the spout and on the carination underneath the spout, some remains of a liquid that was once poured out of the jug can be observed. Because the traces are visible it is likely that it was of an oily or greasy substance. Considering the shape of the jug it can be assumed that it was intended to imitate the shape of bronze jugs, for which this shape was more common. This suggestion is inspired by the presence of two bulbs on the handle, where it is fixed to the rim, that seem to imitate bronze rivets by which the handle was fixed to the body on bronze specimens. Comparable bronze jugs of this kind are known from the collection of the Valkhof museum in Nijmegen, such as for example jug 233.⁵³⁴ This specific bronze specimen dates probably from the second century. No other finds are known from this grave. Considering the character of the cemetery it can be assumed that the grave is Merovingian, but the jug can date from an earlier period.

Jar

Vrijthof: 258 (1840-1).

Appendix 1: Figure 6.

The Vrijthof jar (without spout) is of a coarse, grey fabric. It has a height of 11.3 cm and a relatively short handle. The jar has an open appearance because of the relatively large diameter of the mouth. It was found in a grave which also contained a pottery bottle and various beads. This jar can be classified as Siegmund Kru 1.3 and dates in Rhineland phase 5 (555-570).⁵³⁵ The Franken AG did not identify this type.

⁵³³ Legoux/Périn/Vallet 2004, (type 402), 20, 46, 55.

⁵³⁴ Den Boesterd 1956, 67-68, plate X.

⁵³⁵ Siegmund 1998, 147.

Legoux, Périn and Vallet classified similar jars as type 400, which dates to their PM-MA1 (440/50-520/30).⁵³⁶ The pottery bottle which is associated with the jar is a unique specimen which was at first identified as an example of the late Merovingian period. On the basis of this jar it can be assumed that this bottle needs to be dated differently, possibly much earlier. Both the pottery vessels from Vrijthof grave 258 remain difficult to date. The beads from this grave show a wide dating range but it is likely that the complete string dates to the first half of the sixth century. For now the jar is dated to the sixth century.

Jar: one handle, elongated with narrow neck

Pandhof: 10944 (224-2⁵³⁷).

Appendix 1: Figure 6.

The jar from Pandhof grave 10944 has a pear-shaped belly with the largest diameter in the lower part of the vessel. It has a relatively long handle fixed at the neck and ending just above the largest diameter of the belly. This vessel is of a fine red-brownish paste. No early medieval parallels are known for this jar. It was found together with a glass vessel (a globular bottle) which is identified as a late Roman specimen (fourth century). Late Roman parallels for this jug, however, are neither known to me. For now it remains questionable whether this jar should be dated in the Merovingian period. Ypey and Glazema suggested a dating in the third and fourth century, probably on the basis of the associated globular glass vessel.

Beakers, ribbed wall

Vrijthof: 87 (1393-1); 0 (1691-1). Pandhof: 10743 (122-1); 10031 (71-3)⁵³⁸.

Appendix 1: Figure 6.

Four beakers of both the Vrijthof and Pandhof cemeteries have a ribbed wall but are not exactly similar in their appearance. The beaker from Pandhof grave 10743 has a height of 11.9 cm and is of a fine grey fabric. The ribs are carefully formed on the larger part of the outer surface of the beaker. It is placed on a foot stand (see for the form of foot types Fig. 19).

Beaker 1691 from the Vrijthof cemetery (unknown context) is nearly similar, but is smaller (height 9 cm), has fewer ribs and is less carefully made. Spots of the white paste underneath the grey/black surface can be observed. For both these Pandhof and Vrijthof beakers associated finds are not known.

The beaker from Vrijthof grave 87 is also grey, the ribs are less rounded than those of the other two beakers, and the fabric is much harder. The beaker has a height of 13.3 cm and the ribs cover the larger part of the outer surface. A good parallel for this beaker is known from Nittel-Junkertswies grave 8.⁵³⁹ This beaker has a clearly pronounced foot and concave bottom and its ribs are more carefully applied. Böhner makes the remark that the ribs do not form one part with the Nittel-Junkertswies beaker but are fixed onto it. Böhner refers to Belgium and France as the main distribution area of such beakers and dates them in his Stufe IV (seventh century).⁵⁴⁰ The Vrijthof specimen was found together with a glass vessel which dates in the end of the sixth and beginning of the seventh century.

The beaker from Pandhof grave 10031 is of a fine grey ware and has a height of 10.1 cm. It has the most pronounced and carefully made ribs of the four ribbed beakers. It is found in a grave with three other pottery vessels which date in the sixth and seventh century.

Legoux, Périn and Vallet identified beakers with a ribbed wall as type 398 and date them in their phases MR1-MR2 (600/10-670).⁵⁴¹ It seems plausible to date the Maastricht beakers in the seventh century.

⁵³⁶ Legoux/Périn/Vallet 2004, type 400, 20, 46, 55.

⁵³⁷ Ypey/Glazema 1955, 79.

⁵³⁸ Ypey/Glazema 1955, 80.

⁵³⁹ Böhner 1958, 46, Taf. 3, nr. 3 (type B3: *Zylindrische Fussbecker*).

⁵⁴⁰ Böhner 1958,

⁵⁴¹ Legoux/Périn/Vallet 2004, type 398, 20, 46, 55.

Ribbed beaker such as the ones found in Maastricht are sometimes referred to as beakers of 'type Beerlegem', after biconical pots with a ribbed upper wall which were found in a high concentration in the cemetery of Beerlegem.⁵⁴² This is a misconception for the beakers such as found in Maastricht cannot be identified as biconical pots or variants of this form.⁵⁴³ The parallel in Nittel-Junkertswies is also thought to be of type Beerlegem or a variant of this type, although not explicitly mentioned as such, by referencing to the main distribution area of resembling beakers in Belgium and France.⁵⁴⁴ Further research into the different forms of ribbed beakers, their distribution patterns and associated finds is required. For now the four beakers are not identified as Beerlegem types, but nonetheless regarded as forms of the seventh century.

Beakers, various

Vrijthof: 299 (1816-1). Pandhof: 10037 (108-1)⁵⁴⁵.

Appendix 1: Figure 6.

The beaker/goblet from Vrijthof grave 299 is of Mayener coarse ware, is orange/red and has a height of 6.8 cm. It has a small foot stand from which the wall extends in a globular shape with an inverted neck and slightly thickened outwards folded rim. Exact parallels for this beaker are not known. It can be compared with Krefeld-Gellep type 100/101 (Pirling/Siepen), although the examples of this type are only scarcely of Mayener ware and have a less thick wall.⁵⁴⁶ This type dates in around the middle and in the second half of the fourth century. No other finds are associated with this beaker, and it remains difficult to date this Vrijthof specimen precisely; it can be an older specimen in a younger grave or it might be a later variant of the Gellep types, on the basis of which it can be proposed that it dates in the earliest phases of the Merovingian period.

The beaker from Pandhof grave 10037 is also one of a kind. It is of a fine burnished red/brown ware. Because Merovingian beakers are only known from the sixth and seventh centuries, this beaker is dated accordingly. This beaker was found with a ceramic bottle, a decorative disc of antler and a silver ring. The decorative disc dates to the end of the sixth and beginning of the seventh century, the bottle dates accordingly and it seems plausible to date the beaker in the same period.

Wölbwandtöpfe (egg-shaped vessel).

Pandhof: 10031 (71-4).

Appendix 1: Figure 6.

One *Wölbwandtöpfe* was found in the Pandhof cemetery. This is in accordance with Siegmund's observation that egg-shaped vessels are rare in his research area.⁵⁴⁷ This pot of coarse ware (produced in a reduced atmosphere) can be classified as Siegmund Wwt 2.21 and dates in Rhineland phase 8B-9 (625-670).⁵⁴⁸ It was found with three pottery vessels which mainly date to the seventh century. It appears that this is one of the latest Merovingian graves of the Pandhof cemetery. This is peculiar regarding the deposition of four pottery vessels in one grave, whereas the deposition of one or two vessels was a general practice in the Merovingian period and the deposition of multiple vessels occurred regularly in the late Roman period.

Globular pot

Vrijthof 36 (1622-1).

Appendix 1: Figure 6.

⁵⁴² Van Bostraeten 1967.

⁵⁴³ See for example the difference between type 397 and 398 of Legoux, Périn and Vallet. Some examples of their type 397 are clearly variants of biconical pots and have ribs on the upper wall. The example of type 398 is a beaker on a foot and resembles the Vrijthof and Pandhof specimens.

⁵⁴⁴ Böhner 1958, 46.

⁵⁴⁵ Ypey/Glazema 1955, 78.

⁵⁴⁶ Pirling/Siepen 2006, 193.

⁵⁴⁷ Siegmund 1998, 142.

⁵⁴⁸ Siegmund 1998, 142.

A black globular pot of a coarse, hard baked ware was found in Vrijthof grave 36. Some organic fired residue can be observed on the pot. It has clearly observable horizontal production ribs on the outer surface. Although globular, the form of this pot does not resemble the egg-shaped vessels. The globular pot from Vrijthof grave 36 was found in a grave with a glass palm cup which dates in the second half of the seventh century. Resembling pots are not known to me, and for now it is dated in the seventh century.

Biconical pots

Thirty-five biconical pots were found in the Vrijthof and Pandhof cemeteries. Biconical pots, with their carinated wall as characteristic feature, are the most common pottery type in Merovingian cemeteries. This pottery has formerly been considered as a 'luxurious' product, especially made for the deposition of food and liquids in graves. Research of pottery remains from early medieval settlements showed that biconical pots were used outside funerary rites as well.⁵⁴⁹ The question remains whether a distinction can be observed between the biconical pots that were used in funerary contexts and those that were used in more mundane contexts and which are archeologically retrieved as fragments from excavated settlements.⁵⁵⁰

As a result of the contrast between the condition of pottery remains from settlements and graves, the chronological research on morphological properties has mainly been executed on the basis of complete or nearly complete pots from graves. The descriptive criteria are based on the pot shapes and decoration.⁵⁵¹ Siegmund revised these morphological criteria, established and used for a long time by German scholars, on the basis of the tests that established their chronological significance.⁵⁵² Some specific morphological and decorative developments, according to Siegmund's analyses, are considered to be chronologically significant for the lower Rhine area. For Siegmund's research area this resulted in a number of features that can be considered either as evidently early or late, and others that are more difficult to place in the chronological sequence. The evident chronological features identified by Siegmund are the shape of the upper wall (concave or straight), the pronunciation of the carination (sharp or rounded), the decoration (not decorated, grooves, single stamps or roulette) and the general shape (squat or elongated), although these criteria were already identified as chronological indicative. Siegmund captured these features in five basic form groups and four groups with specific chronological features; in combination this resulted in 28 new types with a presumed chronological significance.⁵⁵³ The adjustments of this classification by the Franken AG (their classification is based on decoration groups), resulted in a typology of 22 pot types.⁵⁵⁴

Legoux, Périn and Vallet on the other hand made a classification of twelve biconical pot types on the basis of finds from northern France, although the variation in pot forms is comparable to Siegmund's research area.⁵⁵⁵ Périn thinks that the classification of this variation would result in a detailed and thus unworkable typology, hence his identification of a limited number of pot types.⁵⁵⁶ Legoux, Périn and Vallet defined proportional metric criteria, similar to those of Siegmund, with the one difference that they are more descriptive in their definitions while Siegmund provides us with strict values for the assignation of pottery vessels to specific typological groups. Although described differently, the main chronological marker, which is the general pot shape (squat or elongated), is central to both typology

⁵⁴⁹ See for instance Cuisenier 1988, 318-331; Will 2005, 69-71; Van Wersch 2006. It is also regularly present in settlements of the Southern Netherlands.

⁵⁵⁰ This question can of course be resolved by investigating the similarities and differences between pottery from cemeteries and from settlements.

⁵⁵¹ Böhner was the first to pay extensive attention to the typo-chronology of pottery. For a more extensive bibliography of early medieval pottery research see Verhoeven 1998.

⁵⁵² Siegmund 1998, 119-135. See chapter 4 for a short discussion of Siegmund's methodology.

⁵⁵³ Siegmund, 120-135.

⁵⁵⁴ Müssemeier *et al.* 2003, 56-63.

⁵⁵⁵ Legoux/Périn/Vallet 2004, type 386-397, 20, 44-46.

⁵⁵⁶ Périn 1980, 238.

schemes.⁵⁵⁷ The elements in which Legoux, Périn and Vallet differ from Siegmund are the significance of the position of the carination, the base/carination diameter ratio, the lower wall shape, and the indifference between ridges on the upper wall and those at the neck (*wulst* according to for example Siegmund).⁵⁵⁸ Legoux, Périn and Vallet provide us with an additional classification of the various decorations applied by stamps. The variation in the stamped decorations on the Maastricht pots, however, is restricted and this classification has limited use for their typo-chronological analysis.

The most recent work on the characteristics of biconical pots is provided by Will who concentrated on finds from Worms and surroundings.⁵⁵⁹ He identified various features (mainly on the basis of the work of Böhner and Hübener) of biconical pots with the aim to discover, by statistical processing, certain correlations between them. Numerous distribution maps of these specific features can as a result be consulted in this study. The formerly neglected features of biconical pots that are discussed by Will are the rim-shape, bottom-shape and the decoration schemes applied (combination of various decorations and their place on a single pot). Will's work is interesting because of the identification and subsequent correlations of various characteristics in his research area, but does not offer new clear cut typo-chronological groups of biconical pots.

Various interesting research questions for this specific pot form are defined, but for now, also in view of the remarks made above, the typologies of Siegmund, the Franken AG and Legoux, Périn and Vallet will form the basis for the classification of the biconical pots from Maastricht. In view of their work it can be concluded that from a typo-chronological perspective the pottery from Maastricht should be classified on the basis of generally acknowledged chronological criteria and compared with their associated finds. The biconical pots from Maastricht will be placed in the five basic form groups of Siegmund and further classified on the basis of the by him defined chronological features. Do the associated finds provide us with enough information to decide whether the Maastricht pots can be classified according to the Rhineland typo-chronology? The five basic pot forms of Siegmund are distinguished on the basis of their proportional measurements (table 17).

	Belly/Height	Mouth/Belly	Basic Shape	Rhineland Phases
Basic group 1	≥ 1.27	≥ 0.85	Squat and open	3-7 (485-610)
Basic group 2	≥ 1.27	< 0.85	Squat and more closed	4-8 (530-640)
Basic group 3	$1.27 > \geq 1.07$	≥ 0.85	Elongated and open	4-8 (530-640)
Basic group 4	$1.27 > \geq 1.07$	< 0.85	Elongated and more closed	4-8 (530-640)
Basic group 5	< 1.07	-	Elongated	4-9 (530-670)

Table 17. The five basic biconical pot groups according to Siegmund.

These five groups are supposed to represent a general chronological development (table 17). This general development is refined by the combination of specific chronological features such as the shape of the upper wall and decoration patterns (the chronological sequence of types).⁵⁶⁰

There are however problems. Pots of very different sizes and colours, and therefore with very divergent appearances, can be classified, on the basis of proportional indices and identified chronological features, as examples of the same type. In the typo-chronologies of biconical pots, size and colour do rarely matter, but whether they matter from a chronological perspective remains to be seen. They are not distinguishing criteria for Siegmund and the Franken AG, neither are they for Legoux, Périn and Vallet. Furthermore it is always ambiguous to draw sharp typological lines between certain groups of objects which are defined on the basis of metric criteria.

⁵⁵⁷ It is generally accepted that there is a chronological development from open wide forms to more closed and elongated forms.

⁵⁵⁸ Legoux/Périn/Vallet 2004, 20 (type 386-397); Siegmund 1998, 120-135.

⁵⁵⁹ Will 2005.

⁵⁶⁰ Siegmund 1998, 120-135.

Colour is an aspect that until now is hardly used as a typological criterion. Sporadically it is mentioned as a cultural aspect of the funerary rite. Basically two colours can be identified; the red/orange pottery that gained its colour by being fired in an oxidizing atmosphere, and the grey/black pottery that is produced in a reducing atmosphere. The way of firing was a deliberate choice of the potter, the deposition of a certain pot was the choice of the persons responsible for the burial. Interesting research questions for future research could concern the correlations between colour and other characteristics of biconical pots (or other forms of pottery) such as size, and between colour and other aspects of the burial ritual or biological features (such as for example age at death) of the deceased.⁵⁶¹ The majority of the Vrijthof and Pandhof pots are grey/black. Regarding the colour, it appears that all the Maastricht pots with a rounded carination are red. These are two relatively rare features that show a strong correlation. More variation can be observed in the absolute heights of the pots. How does this relate to the five basic form groups and identified types? Do the groups of basic pot forms and the groups of types from entities with certain coherence? If too many differences in height and colour can be observed in the groups of types, how should these features be considered?

Biconical pots of group 1: squat and open

Vrijthof : 274 (1793-1); 187 (1639-1); 0 (1838-1). Pandhof: 10024 (82-1); 11325 (417-3⁵⁶²); 10858 (127-1); 10048 (72-19⁵⁶³).

Appendix 1: Figure 7.

This basic pot form is considered to be an early characteristic (fifth-sixth centuries) of biconical pots. The seven pots of this group differ in height from 5.9 to 10.4 cm and are thus relatively small pots (Table 18). A majority of the pots was baked in a reduced atmosphere. In spite of the variability in their heights and colours, a considerable coherence in shape can be recognised in this group. Three types are identified in group1 of the Maastricht pots.

Context	Pot	Type	Phase	Height	Colour	Decoration	Gender
P-10048	72-19	1.12	3-4	8,4	black	Single stamp	Man
P-11325	417-3	2.21	3-4	10,4	black	Single stamp	Neutral
P-10858	127-1	2.21	3-4	9,0	black	Single stamp	Neutral
P-10024	82-1	2.21	3-4	7,1	yellow	Single stamp	Neutral
V-0	1838-1	2.21	3-4	5,9	red	Single stamp	Unknown
V-187	1639-1	2.31	5	9,9	black	Groove	Woman
V-274	1793-1	2.31	5	8,5	black	Groove	Woman

Table 18. The biconical pots of group 1 from the Vrijthof and Pandhof cemeteries. Type and phase after Siegmund 1998 (lower Rhineland phases); gender established on the basis of the associated finds.

The biconical pot from Pandhof grave 10048 is, on the basis of its incurved upper wall, the only one identified as Siegmund type 1.12.⁵⁶⁴ The decoration consists of single stamps formed by two columns of rectangles. This grave contained also five glass vessels and bronze fittings of an elaborate belt. The glass vessels range in date from the second half of the fifth to the sixth century and the belt fittings in the sixth century. Biconical pots of Siegmund's type Kwt 1.12 date in Rhineland phases 3-4 (485-555). It resembles type 1B of the Franken AG which dates in their phase 4 (510/25-565) and are thereby dated in a shorter period than by Siegmund.⁵⁶⁵ The decoration pattern can be classified as type 409 (two

⁵⁶¹ See also the discussion of the tensed relation between typology and the knowledge of chronological and cultural parameters in chapter 1 of this thesis.

⁵⁶² Ypey/Glazema 1955, 83.

⁵⁶³ Ypey/Glazema 1955, 73.

⁵⁶⁴ Siegmund 1998, 127.

⁵⁶⁵ Müsseseimer *et al.* 2003, 58.

vertical rows) of Legoux, Périn and Vallet and dates to their phase MA1 (470/80-520/30).⁵⁶⁶ A date towards the end of the fifth and first half of the sixth centuries is likely for this Pandhof pot.

Four pots (three from the Pandhof and one from the Vrijthof) are classified as Siegmund's type 2.21.⁵⁶⁷ This type is characterized by a straight upper wall and a single stamp decoration. The Maastricht pots of this type show a considerable variety in both their height and colour (table 18).

The pot from Pandhof grave 11325 has a decoration of applied single stamps that consist of three columns of rectangles. This stamp can be identified as type 410 (multiple columns) of Legoux, Périn and Vallet, which dates in their phases MA2-MA3 (520/30-600/10).⁵⁶⁸ The other finds from this grave are two glass vessels and a pottery jug. The glass vessels are a Roman jug and a hemispherical bowl which dates in the fifth and beginning of the sixth centuries, the pottery jug is also Roman.

The decoration on the pot from Pandhof grave 10858 consists of single stamps with the shape of a crescent, applied oppositely to one another. The shape of this stamp can be classified as type 410 of Legoux, Périn and Vallet, which dates in their phases MA2-MA3 (520/30-600/10).⁵⁶⁹ The only other find from this grave is a pottery jug of which its dating to the beginning of the seventh century can be questioned.

The pot from Pandhof grave 10024 is decorated with a single stamp, which has a rectangular outline and is formed by radial placed triangles. This decoration can be classified as type 409 of Legoux, Périn and Vallet, which dates predominantly in their phase MA1 (470/80-520/30), yet can sporadically occur in the phase before and after.⁵⁷⁰ The other find from this grave is a hemispherical bowl of glass, which dates to the end of the fifth and beginning of the sixth centuries.

Pot 1838 from the Vrijthof cemetery is a stray find. The single stamp decoration consists of two columns of rectangles. In contrast to the other stamps with columns of rectangles, the stamps on this pot are not applied in a horizontal line but stagger. This stamp is identified as type 409 of Legoux, Périn and Vallet, which dates predominantly to their phase MA1 (470/80-520/30).⁵⁷¹ This pot is associated with a glass vessel and four pottery vessels of various dates. It is uncertain whether these objects were originally deposited as one ensemble.

The pots of Siegmund type Kwt 2.21 are assigned to Rhineland phases 3-4 (485-555). Three of them originate from the Pandhof cemetery and are associated with multiple glass and/or pottery vessels, which can be identified as grave goods assemblages of 'late Roman' style. The Maastricht pots that are classified as type Kwt 2.21 can be compared with Franken AG type 2B because they are not decorated with grooves (which are a criterion for their type 2A).⁵⁷² The Franken AG date type 2B in their phases 4-5 (510/25-580/90) and sporadically in phase 6 (580/90-610/20), what is somewhat later than the resembling type is dated by Siegmund. On the basis of the dates provided by the typo-chronology of stamps of Legoux, Périn and Vallet (from 470/80 to 600/10) it can be assumed that the Maastricht pots of type Siegmund 2.21 date in the end of the fifth century and can occur during the course of the entire sixth century, somewhat later than the Pandhof pot classified as Siegmund's type 1.12.

Two pots of basic group one are on the basis of their decoration of grooves identified as Siegmund's type 2.31.⁵⁷³ Both the pots were found in Vrijthof graves. The pot from Vrijthof grave 187 has a decoration of relatively deep grooves, which are applied as a spiral that covers the entire outer surface of the upper wall. Similar groove decorations are not present on the other pots from the Pandhof and Vrijthof cemeteries. This pot is found in a relatively 'rich' grave of a woman, which contained various beads, garnet disc brooches, golden filigree pendants and two silver earrings with garnets.

The grooves of the pot from Vrijthof grave 274 are a few slightly discernable horizontal lines. This decoration is associated with a more pronounced but disordered zigzag line, which is applied just above

⁵⁶⁶ Legoux/Périn/Vallet 2004, 20, 47, 55 (type 409).

⁵⁶⁷ Siegmund 1998, 129.

⁵⁶⁸ Legoux/Périn/Vallet 2004, 20, 47, 55 (type 410).

⁵⁶⁹ Legoux/Périn/Vallet 2004, 20, 47, 55 (type 410).

⁵⁷⁰ Legoux/Périn/Vallet 2004, 20, 47, 55 (type 409).

⁵⁷¹ Legoux/Périn/Vallet 2004, 20, 47, 55 (type 409).

⁵⁷² Müssemeier *et al.* 2003, 58.

⁵⁷³ Siegmund 1998, 129.

the carination. This zigzag line could be a secondary alteration. This grave is that of a woman, it contained two garnet disc brooches, amber beads and one earring.

The Franken AG claims that grooves can appear both on broad open pots and on closed elongated pots.⁵⁷⁴ Grooves are also present on some of the Maastricht pots of groups 2 and 4, but not on the pots of group 5. It can therefore be assumed that the application of grooves was in use for a relatively long time, which is also proven by the association of grooves with both single stamp and roulette stamp decoration (table 18). Type Kwt 2.31 is considered to be somewhat younger than the other two types discussed before. This type dates in Rhineland phase 5 (555-570).⁵⁷⁵ It can be compared with Franken AG type 3A, which dates in their phases 4 to 5 (510/25-580/90) and sporadically in phase 6 (580/90-610/20).⁵⁷⁶ It is probably no coincidence that the two pots of this type originate from the Vrijthof cemetery and are associated with a grave goods assemblage of 'Merovingian' style.

In regard of the colour and size it can only be mentioned that the pots as a group are relatively small, but that no correlation between the height and colour with the identified types within this group can be observed.

Biconical pots of group 2: squat, more closed than those of group 1

Vrijthof: 84 (1379-1); 110 (1626-1); 230 (1756-1); 287 (1784-1); 288 (1785-1). Pandhof: 10145 (55-1); 10213 (304-1); 10344 (568-2).

Appendix 1: Figure 7.

The eight biconical pots of this group have a squat appearance such as the pots of group 1, but have a more narrow mouth (identified on the basis of the mouth/belly index). There is less coherence in the appearances of the pots of this group than in group 1. The pots of this group vary in height from 7.6 to 12.8 cm; they are not significantly higher than the pots of group 1. The height of the pots shows no significant correlation with their type assignment and dating (table 19). All the pots are decorated with a roulette stamp decoration and/or grooves. It appears that the majority of the groove-decoration can be found on the Vrijthof pots (as it is also observed in the other basic groups of biconical pots of the two cemeteries). These are also the oldest pots of group two. The majority of the pots of this group is black, only two pots are red and one is of a yellowish/light brown colour. A significant variation in the shape of the carination can be observed. It ranges from sharp to rounded, and the height of the carination ranges from beneath the middle towards the middle of the pot. Siegmund and the Franken AG do not regard the position of the carination as a significant chronological criterion, the rounded carination, however, is (Siegmund types Kwt 4.11/4.12).⁵⁷⁷ Three types are identified in this group: Siegmund's types Kwt 2.31, 3.21 and 4.11.⁵⁷⁸

Context	Pot	Type	Phase	Height	Colour	Decoration	Gender
V-110	1626-1	2.31	5	7,6	Black	Groove	Female
P-10145	55-1	2.31	5	8,2	Light	Groove	Neutral
V-230	1756-1	2.31	5	9,7	Black	Groove	Male?
P-10344	568-2	4.11	7-8A	9,1	Red	Roulette	Neutral
V-84	1379-1	4.11	7-8A	9,2	Red	Roulette	Neutral
V-288	1785-1	3.21	7-8	9,8	Black	Roulette	Male
V-287	1784-1	3.21	7-8	11,8	Black	Roulette	Neutral
P-10213	304-1	3.21	7-8	12,8	Black	Roulette	Neutral

Table 19. The biconical pots of group 2 from the Vrijthof and Pandhof cemeteries. Type and phase after Siegmund 1998 (lower Rhineland phases); gender established on the basis of the associated finds.

⁵⁷⁴ Müssemeier *et al.* 2003, 56-57.

⁵⁷⁵ Siegmund 1998, 129.

⁵⁷⁶ Müssemeier *et al.* 2003, 59.

⁵⁷⁷ Siegmund 1998, 131-132.

⁵⁷⁸ Siegmund 1998, 129-132.

The two smallest biconical pots (pots 1626-1 and 55-1) and one with an average height (pot 1756-1) have a decoration of grooves on the upper wall and are on the basis of this feature classified as Siegmund's type Kwt 2.31. The pot from Vrijthof grave 110 is part of an extended grave goods assemblage of a woman that consists of a string of glass beads, a gold pendant, a pendant of a ball of iron in a silver casing, several bronze and iron rings, some belt fittings and a pottery bowl, all of the Merovingian period. The pot from Pandhof grave 10145 cannot be associated with other finds. The pot from Vrijthof grave 230 is part of an extended grave goods assemblage, probably of a man, consisting of several objects (comb, knife, flint, key etc.) and purse mounts. Type Kwt 2.31 dates in Rhineland phase 5 (555-570).⁵⁷⁹ The Franken AG identified these pots as type Kwt 3A and date them in their phases 4-5 (510/25-580/90) and sporadically in phase 6 (680/90-610/20).⁵⁸⁰ Grooves are a decoration that can, according to the Franken AG, be found on pots of all basic shapes (groups 1-5) and are therefore dated over a longer period in their research area than in the Rhineland.

According to both Siegmund and the Franken AG, pots with groove decoration date earlier in group 2 than pots with a rounded carination and roulette decoration (table 19). Because of the lack of supporting evidence (lack of associated finds) this is hard to substantiate for the pots of group 2 of the Vrijthof and Pandhof cemeteries. Only graves 110 (pot with groove decoration), 230 (pot with groove decoration) and 288 (pot with roulette decoration) from the Vrijthof cemetery and from Pandhof grave 10344 (red pot with roulette decoration) contained other finds. The other finds from Vrijthof grave 110 date in Rhineland phases 4-8 (530-640) and the other finds from Vrijthof grave 230 date in Rhineland phases 6-9 (470/80-670/80). Vrijthof grave 288 contains a *francisca* of which the date (485-570) is more in accordance with that of the pots with grooves. This grave also contains a seax (lost) what indicates that the *francisca* might have been an older object within this assemblage of grave goods. The other finds of Pandhof grave 10344 date in Rhineland phases 4-11 (530-740). On the basis of this evidence it is difficult to establish whether the pots with grooves of the Vrijthof and Pandhof cemeteries of group 2 date earlier than the other pots of group 2.

The three largest pots of group 2 can be classified as Siegmund's type Kwt 3.21 on the basis of their roulette stamp decoration.⁵⁸¹ Within this group the shape of the carination creates some difference in the appearance of the pots. The carination of the pot from Vrijthof grave 287 (pot 1784) is not as sharp as the carination of the pot from Pandhof grave 10213 (pot 304). The carination of both these pots can be found on the middle of the wall. The carination of the pot from Vrijthof grave 288 (pot 1785) is also sharp, but divides the pot in a relatively short lower wall and high upper wall, which gives the pot a somewhat sagging appearance. The pot from Vrijthof grave 288 was found in a grave which also contained a seax, *francisca*, fire steel, flint and belt fitting (lost, no further significant information available). The biconical pot from Vrijthof grave 287 cannot be associated with other finds, such as the pot from Pandhof grave 10213. Pots of Siegmund's type Kwt 3.21 date in Rhineland phase 7-8 (585-640).⁵⁸² This type can be compared to type Kwt5B of the Franken AG which dates in their phases 5-7 (565-640/50).⁵⁸³

The two pots identified as Siegmund's type Kwt 4.11 have a rounded carination (Pandhof grave 10344 and Vrijthof grave 84). The other pot with a rounded carination is assigned to group 4 (see the section below). With three pots, a rounded carination is a rare feature in the Servatius complex. It is remarkable that this feature is an element of the only two red pots of basic group 2, a feature which is also rare in the Servatius complex.⁵⁸⁴ Both pots with a rounded carination of group 2 have a roulette stamp decoration of multiple lines of rectangles and have approximately the same height. The pot from Vrijthof grave 84 is found in a grave that is distorted and of which the outline is difficult to establish. No other

⁵⁷⁹ Siegmund 1998, 129.

⁵⁸⁰ Müssemeier *et al.* 2003, 59.

⁵⁸¹ Siegmund 1998, 130-131.

⁵⁸² Siegmund 1998, 130-131.

⁵⁸³ Müssemeier *et al.* 2003, 61.

⁵⁸⁴ The other pot with a rounded carination (group 4) is also red, what could indicate that these two features have a strong correlation. The pot from group 4 is higher and has a single stamp decoration combined with grooves.

objects are known from this grave and it seems that the pot was buried near the left foot of the deceased, although this remains uncertain. The pot from Pandhof grave 10344 is part of a grave goods assemblage consisting furthermore of a Merovingian pottery jug and glass vessel and two late Roman pottery vessels, a Merovingian knife and a belt elements (buckle and back plate). Pots with a rounded carination date in Rhineland phase 7-8A (585-625).⁵⁸⁵ The Franken AG do not identify this feature as type-defining and the two pots from the Servatius complex should be listed as their type Kwt 5B.⁵⁸⁶ This type dates in Franken AG phase 5-7 (565-640/50). The short deposition period of the pots with a rounded carination, such as identified by Siegmund, disappears in the typo-chronology scheme of the Franken AG. What can be noticed in the list of pots from Maastricht, although this picture does not have to be significant, is that the height of the pots correlates with the types. The earliest type consists of the smallest pots, the latest types consists of the largest pots. The height of biconical pots probably requires some further investigation with regard to its chronological development.

Biconical pots of group 4: elongated, more open than the pots of group 5

Vrijthof: 19 (1607-1); 78 (1525-1); 88 (1416-1); 88 (1395-1); 218 (1686-1); 0 (1829-1); 0 (1175-2); 0 (1645-1); 0 (1755-1); 0 (1838-3). Pandhof: 10097 (45-4); 10418 (557-1); 19999 (341-6).

Appendix 1: Figure 8.

The 13 pots that fit the indexes of basic form group 4 of Siegmund show a considerable variety in height (from 7.6 to 14.2 cm). Two red pots belong to this group, the rest is grey or black. The two red pots do not show any correlation with their classification according to Siegmund's typology, nor with the height of the pots. Only one pot of this group is without decoration.

The single undecorated pot is also the smallest pot (table 20). The three largest pots seem to be unique specimens considering their decoration and, in the case of pot 1775, wall shape (rounded carination). The pots with roulette decoration have a height that lies in the middle, and a decoration of grooves is mainly associated with the smallest pots of this group. The combination single stamp with groove decoration can be identified on two pots, which are also the largest pots of this group (table 20). It can be assumed that in basic form group 4 the smallest pots are generally the oldest; the larger pots are generally the youngest. Here an opposite observation than the one in the previous section is made. According to Siegmund's typology six types can be identified in this group of 14 pots from Maastricht.

Context	Pot	Type	Phase	Height	Colour	Decoration	Gender
V-88	1416-1	2.12	4	13.2	black	Single, groove	Neutral
P-19999	341-6	2.32	4-5	8.1	black	Groove	Unknown
V-0	1838-3	2.32	4-5	9.1	black	Groove	Unknown
V-0	1829-1	2.32	4-5	9.2	black	Groove	Unknown
V-88	1395-1	3.12	6-7	13.9	black	Roulette, complex	Neutral
V-19	1607-1	2.42	7	7.6	black	-	Man
V-0	1755-1	4.11	7-8A	14.2	red	Single, groove	Neutral
V-0	1645-1	3.22	End7-8B	8.6	black	Roulette, groove	Unknown
P-10097	45-4	3.22	End7-8B	9.2	Black	Roulette	Man?
P-10418	557-1	3.22	End7-8B	10.6	black	Roulette	Man
V-218	1686-1	3.22	End7-8B	11.0	black	Roulette	Neutral
V-0	1175-2	3.22	End7-8B	11.9	black	Roulette	Unknown
V-78	1525-1	3.22	End7-8B	13.1	black	Roulette, groove	Neutral

Table 20. The biconical pots of group 4 from the Vrijthof and Pandhof cemeteries. Type and phase after Siegmund 1998 (lower Rhineland phases); gender established on the basis of the associated finds.

⁵⁸⁵ Siegmund 1998, 131-132.

⁵⁸⁶ Müsseseimer *et al.* 2003, 61.

The pot from Vrijthof grave 88 is classified as Siegmund's type Kwt 2.12 on the basis of the combined decoration of single stamps with grooves. The single stamp decoration consists of vertical undulating lines. The grooves are applied both above and below the zone with single stamp decoration. This pot is found together with a glass vessel and another biconical pot which is also placed in group 4 (see below). Pots of this type date in Rhineland phase 4 (530-555).⁵⁸⁷ The Franken AG identified these pots as type Kwt 2B and date them mainly in phases 4-5 (510/25-580/90).⁵⁸⁸ This pot therefore dates early in this group of pots from the Vrijthof and Pandhof cemeteries.

Three relatively small and black pots are identified as Siegmund's type Kwt 2.32 on the basis of their groove decoration.⁵⁸⁹ The groove decoration of Vrijthof pot 1838-3 (context unknown) consists of two separate fields of three lines on the upper wall. The decoration of Vrijthof pot 1829 (context unknown) and Pandhof pot 341-6 (context unknown) consists of one field of two or three horizontal lines on the upper wall. No other finds can be associated with these biconical pots. These pots can be identified as type Kwt 2A of the Franken AG.⁵⁹⁰ Siegmund dates these pots in Rhineland phases 4-5 (530-570) and the Franken AG in their phases 4-5 (510/25-580/90).

The other biconical pot from Vrijthof grave 88 is classified as Siegmund's type Kwt 3.12 because of the 'complex' roulette stamp decoration. One line consists of down- and upward alternating V-shapes with a single line of rectangles above it. This is the only pot from the Vrijthof and Pandhof which has a shiny black surface. Type Kwt 3.12 dates predominantly in Rhineland phases 6 (570-585) and sporadically in phase 7 (585-610).⁵⁹¹

The only pot without decoration in this group is classified as Siegmund's type Kwt 2.42. This is also the smallest pot of this group. The biconical pot from Vrijthof grave 19 was found together with a seax (lost) and a pottery bowl. It can be assumed that this pot was part of a grave goods assemblage of a man. The pot was found in between the feet of the deceased. Biconical pots of type Kwt 2.42 date in Rhineland phase 7 (585-610).⁵⁹²

Pot 1755-1 of the Vrijthof cemetery (context unknown) is exceptional in this group because it is red, has a rounded carination and shows two differential single stamp decorations in combination with grooves. Again we see the combination of red colour and rounded carination. One of the single stamp patterns consists of a grid of rectangles, the other of an undulating line of triangles. Because of the rounded carination this pot is classified as Siegmund's type Kwt 4.11 and dates in Rhineland phases 7-8A (585-625).⁵⁹³ No other finds can be associated with this pot. As already mentioned in the discussion on the two other pots with rounded carination of the Servatius complex (see the section above) the Franken AG did not identify this feature as type-defining, and should on the basis of other features be identified as Franken AG type Kwt 5B and accordingly be dated in their phase 5-7 (565-640/50).⁵⁹⁴

Six pots are identified as Siegmund's type Kwt 3.22 on the basis of their roulette stamp decoration. A combination with grooves can be observed on the pots from Vrijthof grave 78 and Vrijthof pot 1645-1 (context unknown). Some of these roulette stamps are carefully applied (as on pot 1645-1). On some pots the outlines of the rectangles are vague and the number of applied lines is difficult to distinguish. The roulette stamp decoration on the pot from Pandhof grave 10418 consists of elongated triangles. This pot was found with a seax, and is part of the grave goods assemblage of a man.

Of the five pots with roulette stamp lines of rectangles the pots 1645-1, 1175-1 (contexts unknown) and the pots from Vrijthof grave 218 cannot be associated with other finds. Vrijthof grave 78 contained also a trefoil jug of pottery and Pandhof grave 10097 bronze belt fittings.

⁵⁸⁷ Siegmund 1998, 129.

⁵⁸⁸ Müssemeier *et al.* 2003, 58-59.

⁵⁸⁹ Siegmund 1998, 129-130.

⁵⁹⁰ Müssemeier *et al.* 2003, 58.

⁵⁹¹ Siegmund 1998, 130.

⁵⁹² Siegmund 1998, 130.

⁵⁹³ Siegmund 1998, 131-132.

⁵⁹⁴ Müssemeier *et al.* 2003, 61.

Siegmunds Type Kwt 3.22 dates in Rhineland 7 to 8B (585-640).⁵⁹⁵ These pots can be identified as type Kwt 5B of the Franken AG, which dates in their phases 5-7 (565-640/50).⁵⁹⁶

Biconical pots of basic group 5: elongated and closed

Vrijthof: 11(1666-1); 105 (1472-1); 223 (1650-1); 292 (1790-1); 0 (1838-2). Pandhof: 10500 (469-1); 10634 (433-3, 5).

Appendix 1: Figure 8.

This basic form group is characterized by a relatively narrow mouth and elongated body. The pots of the Vrijthof and Pandhof cemeteries in this group show a high degree of similarity, just as the pots of group one (see the section above). Their height varies from 6.9 to 9.8 cm and all the pots of this group are thus relatively small. The majority is black and not decorated. The two decorated pots have a roulette stamp decoration. The carination of the pots can be more or less found on the middle of the pot wall, except for one pot of which the carination divides the wall in a short lower wall and a high upper wall (Pandhof grave 10500). In this group two Rhineland types can be identified (table 21).

Context	Pot	Type	Phase	H	C	Decoration	Gender
P-10500	469-1	3.23	8	9,3	Black	Roulette, triangles	Woman?
V-11	1666-1	3.23	8	9,8	red	Roulette	Man
V-105	1472-1	2.43	8-9	6,9	black	-	Man
V-223	1650-1	2.43	8-9	7,7	black	-	Neutral
P-10634	433-3	2.43	8-9	8,3	black	-	Neutral
P-10634	433-5	2.43	8-9	00	black	-	Neutral
V-292	1790-1	2.43	8-9	9,1	black	-	Man
V-0	1838-2	2.43	8-9	9,5	red	-	Unknown

Table 21. The biconical pots of group 5 from the Vrijthof and Pandhof cemeteries. Type and phase after Siegmund 1998 (lower Rhineland phases); gender established on the basis of the associated finds.

The black pot from Pandhof grave 10500 shows a vague decoration of lines of impressed triangles of which one line is clearly visible and the others remain vague. It is part of an assemblage that consists of a fragment of a finger ring which is difficult to date, and a pottery plate, which dates in the sixth century. It is difficult to identify the gender of the deceased on the basis of these finds alone. The decorated red pot from Vrijthof grave 11 was found in a grave that contained a seax and accompanying bronze scabbard fittings. These finds date in the seventh century.

Siegmund makes a distinction between the early and late roulette stamp groups whereby a pattern of multiple lines of rectangle/triangle decoration, such as on the two pots of group 5, is defined as the late group.⁵⁹⁷ Both these pots are classified as Siegmunds group Kwt 3.23 and dated accordingly in Rhineland phase 8 (610-640).⁵⁹⁸ The Franken AG has put considerable effort into the identification of significant patterns in the group of roulette stamped decorations. The roulette pattern of the pots of group 5 can be identified as their '*mehrzeitlige rechteckrollrädchen*' and be classified as type Kwt 5C.⁵⁹⁹ The Franken AG date this type in their phases 7-8 (610/20-670/80).

A strong correlation between the absence of decoration and elongated pot shapes can be observed for the biconical pots from the Vrijthof and Pandhof cemeteries. Other pots without decoration can be found

⁵⁹⁵ Siegmund 1998, 131.

⁵⁹⁶ Müssemeier *et al.* 2003, 61.

⁵⁹⁷ Siegmund 1998, 126-127.

⁵⁹⁸ Siegmund 1998, 131.

⁵⁹⁹ Müssemeier *et al.* 2003, 61.

in group 4 (see the section above). Three of the undecorated pots of group 5 are black, one is red. The red undecorated Vrijthof pot 1838-2 (context unknown) was found together with four other pottery vessels and one glass vessel. It remains uncertain whether these were part of one assemblage of grave goods. The black undecorated pot from Vrijthof grave 105 was found in a grave which also contained iron belt- and shoe fittings with silver and brass inlay, a seax, a glass vessel and fire steel with flint. The datable finds from this grave all date in the seventh century. The pot from Vrijthof grave 223 was from a grave in which also a foot fragment of a glass vessel (fifth and sixth century) was found. The pot from Vrijthof grave 292 was associated with a seax and a knife. The seax dates towards the end of the sixth and in the seventh century. The pot from Pandhof grave 10634 was found with a small bronze plate buckle and strap end and two other pottery vessels, of which one is missing the bottom but which can also be assigned to this group of biconical pots. The other finds from this grave date in the sixth and seventh century.

All the undecorated specimens of group 5 of the Vrijthof and Pandhof cemeteries are classified as Siegmund's type Kwt. 2.43 and date in Rhineland phases 8 to 9 (610-670).⁶⁰⁰ This type is maintained by the Franken AG and dates in their phases 6-8 (580/90-670/80).⁶⁰¹

⁶⁰⁰ Siegmund 1998, 130.

⁶⁰¹ Müssemeier *et al.* 2003, 59.

Glass vessels

In cooperation with M. Tolboom.⁶⁰²

Twenty-one complete or nearly complete glass vessels are known from the Vrijthof cemetery and forty-four from the Pandhof cemetery (table 22). Within this collection of glass vessels a distinction can be made between glass of the Roman period and glass of the early medieval period. The work of Isings is still the main source for the classification of glass from the Roman period.⁶⁰³ For the Merovingian period different typologies are available. Next to the work of Siegmund (lower Rhine area) some studies that are specifically concerned with early medieval glass are consulted. Feyeux established a detailed typo-chronology on the basis of the glass finds from the cemeteries of the Meuse region in northern France.⁶⁰⁴ The publication of Alénus-Lecerf is an important reference work for the Belgium Meuse region, although she did not create a typo-chronology but presented an overview of early medieval glass vessels from Belgium.⁶⁰⁵ Another important reference work is the publication of Koch in which the glass finds of the *Runde Berg* near *Urach* (Southern Germany) are published along with references to glass finds of numerous other locations in Germany.⁶⁰⁶ Pirling's publications of the cemetery of Krefeld-Gellep are indispensable since a high variety of glass vessels from both the late Roman and Merovingian period were found in this cemetery.⁶⁰⁷ The most recent work is that of Maul, in which the typo-chronology of bell beakers (*Stürzbecher* and *Glockenförmige Becher*) and palm cups (*Tümmeler* and *Glockentümmeler*) are discussed.⁶⁰⁸ These studies give access to a detailed typo-chronology of early medieval glass.

Middle Roman/ late Roman glass vessels	Vrijthof	Pandhof	Total
Hemispherical cups	-	2	2
Jug with 'chain handle'	-	1	1
Handled bottle (hexagonal)	-	1	1
Handled bottle (rectangular)	-	1	1
Bulbous flask	-	1	1
Total	-	6	6
Merovingian glass vessels	Vrijthof	Pandhof	Total
Hemispherical bowls with glass threads	1	2	3
Hemispherical bowl with hollow rim	-	1	1
Bowl with vertical ribs	1	-	1
Kettle shaped beaker	-	2	2
Kempston beaker	-	1	1
Bell beakers	1	1	2
Squat jars with short neck	6	4	10
Squat jars with long neck	3	1	4
Goblet with hollow stem and foot	-	1	1
(Bell) beaker on foot	-	1	1
Stemmed flask	-	1	1
Cylindrical bottles	1	2	3

⁶⁰² Tolboom 2005; 2006. Unpublished master-thesis (AAC, University of Amsterdam) of the glass finds from the cemeteries Maastricht-Vrijthof and Maastricht-Pandhof (supervised by Dr. S.M.E van Lith of the Amsterdam Archaeological Centre, University of Amsterdam).

⁶⁰³ Isings 1957.

⁶⁰⁴ Cabart/Feyeux 1995; Feyeux 2003.

⁶⁰⁵ Alénus-Lecerf 1993; 1995.

⁶⁰⁶ Koch 1987.

⁶⁰⁷ Pirling 1966; 1974; 1979; 1989; 1997; 2000; 2003.

⁶⁰⁸ Maul 2002. A univocal definition of the basic glass groups does not exist. For the Vrijthof and Pandhof cemeteries no differentiation in the groups of 'Bell beakers' and 'Palm cups', as Maul suggests, is applied because the numbers are too small.

Unguent bottles	4	13	17
Unguent bottles with vertical ribs	-	2	2
Palm cups with plain rim	1	1	2
Palm cups with outward folded rim	1	1	2
Total	19	34	53
Late Roman / Merovingian glass	Vrijthof	Pandhof	Total
Unguentaria	2	4	6
Total	21	44	65

Table 22. The distribution of Roman and Merovingian glass vessels over the Vrijthof and Pandhof cemeteries.

The vessels from the Roman and Merovingian period will be discussed separately, although for some vessels an unambiguous assignation to either the late Roman or Merovingian period is difficult to determine. Some glass forms are long-living forms, and a transitional phase (the fifth century) instead of a sharp division between the two periods should be considered. The majority of the types, however, can unambiguously be identified as Roman or Merovingian. The Roman glass vessels are less well represented in Maastricht.

Roman glass

In the graves of the Pandhof cemeteries a small number (six) of Roman glass vessels was found. An interesting subject to explore is whether these vessels were actually found in Roman graves or that they were reused as antiques in Merovingian graves (table 23).⁶⁰⁹ It appears that only two vessels were found in late Roman graves, for four vessels their reuse in Merovingian graves can be attested, for one vessel (Pandhof grave 10968) this is questionable (is this vessel actually late Roman in date? (See the section 'late Roman / Merovingian glass')).⁶¹⁰

Grave/context	Glass vessel	Date	LR grave	Merovingian grave
P 11236 (393-5)	Hemispherical bowl (Isings 96b)	Third century	1	-
P 10968 (245-8)	Hemispherical bowl (Isings 96)	Late fourth, first half fifth	-	1
P 11325 (417-2)	Jug with chain handle (Isings 121)	Third-fourth century	-	1
P 10799 (128-15)	Handle bottle hexagonal (Isings 50)	Middle first-middle third	-	1
P 11225 (383-3)	Handled bottle rectangular (Isings 90)	Second-third	1	-
P 10944 (224-1)	Bulbous bottle (Isings 101)	Third-fourth	-	1
Total			2	4

Table 23. The number of Roman glass vessels deposited in Roman and Merovingian graves.

⁶⁰⁹ The graves are identified as (late-) Roman on the basis of their grave goods. It can be argued, however, that graves with only (late-) Roman finds (in a cemetery with predominantly Merovingian graves) could have been created in the Merovingian period as well. For now they are identified as Roman graves, but hard evidence can only be provided with the analysis of the stratigraphy of graves.

⁶¹⁰ See also the reuse of late Roman pottery (in the discussion of the pottery finds from the Servatius complex) and the reuse of antiques in Merovingian graves in chapter 3 of this thesis.

Hemispherical bowls

Pandhof: 11236 (393-5); 10968 (245-8).

Appendix 1: Figure 9.

Two hemispherical cups or bowls were found in the Pandhof cemetery. The cup from Pandhof grave 10968 is not decorated and made of light blue-green glass. It has a height of 6 cm. The rim is outplayed and unworked. The base is slightly concave. It was found together with four glass unguent bottles to the left of the head. At the feet of the skeleton a silver finger ring and two decorative silver pins were found. Despite this unusual find location, the grave seems undisturbed. The four unguentaria are difficult to date either to the late Roman or Merovingian period, the other finds are Merovingian in date.

The cup from Pandhof grave 11236 is decorated with three zones of 5 horizontal engraved lines. This beaker also is of light blue-green glass, has a slight concave bottom and a height of 6 cm. It was found together with four pottery vessels of the late Roman period.

Cups of this kind are in Isings typology classified as type 96 which she dates predominantly to the fourth century, yet cups of this kind appear already in the third century and can also be found in the first half of the fifth century.⁶¹¹ The cup from Pandhof grave 11236 probably dates, because of the engraved decoration, rather to the third century than to the fourth century according to Isings typo-chronology.⁶¹² Similar specimens of blue-green glass, with and without engraved lines, are known from Krefeld-Gellep.⁶¹³

Feyeux also incorporated hemispherical bowls (undecorated and decorated with engraved lines) in his typology although they fall, as he mentions, only just inside the by him studied chronological period.⁶¹⁴ Feyeux dates these bowls to the second half of the fourth century but mentions that they can also be found in contexts that date to the beginning of the fifth century.

The Pandhof bowls can also be compared with Siegmund's type Gla 3.1 which dates to Rhineland phase 1 (400-440).⁶¹⁵ Siegmund claims that the specimens of the early fifth century can be distinguished from their late Roman counterparts by their thicker wall, the coloured glass and the presence of bubbles in the glass. The sections of both the Pandhof cups, however, show comparable measurements and both are of more or less the same colour. Koch classifies these bowls as type IIC, but only mentions examples from her research area that are of an olive or olive-yellow colour.⁶¹⁶ Koch regards these cups as variants of Isings 69 and dates them accordingly.

Regarding these dates and the grave assemblages the bowls are associated with, it can be stated that the decorated bowl from the Pandhof is an earlier specimen than the undecorated one. The decorated bowl can be identified as an Isings type 96b which dates, on the basis of the engraved lines, to the third century.⁶¹⁷ Also on the basis of the other finds Pandhof grave 11236 can be dated to the late Roman period. The undecorated specimen can, according to Feyeux and Siegmund, be dated to the end of the fourth and beginning of the fifth century. Numerous fragments of undecorated hemispherical bowls were found in Maastricht in several late Roman settlement contexts.⁶¹⁸ The other datable finds from Pandhof grave 10968 are of the early Merovingian period and it can therefore be assumed that the cup from this grave dates to the end of the fourth and beginning of the fifth century and can not unambiguously be identified as either late Roman or Merovingian. To consider this cup as a genuine late Roman antique in this grave is ambiguous, yet it can be a somewhat older element in this grave goods assemblage.

Jug with 'chain handle'

⁶¹¹ Isings 1957, 113-114.

⁶¹² Isings 1957, 114-116.

⁶¹³ Pirling 1989, 54, grave 2967, Tafel 8,6.

⁶¹⁴ Feyeux 2003, 37, Fig. 13, type 54, 130.

⁶¹⁵ Siegmund 1998, 166.

⁶¹⁶ Koch 1987, 53-55.

⁶¹⁷ Isings 1957, 115.

⁶¹⁸ Van Lith 1987, 51-53; Van Lith/Sablerolles 1995, 43; 47, fig. 3; Van Dijk 1999, 35 (unpublished master-thesis, University of Amsterdam).

Pandhof: 11325 (417-2).⁶¹⁹

Appendix 1: Figure 9.

The mould-blown jug from Pandhof grave 11325 has a height of 16 cm and is made of very thin light blue-green glass which shows some iridescence. It has a spherical belly placed on a foot ring. The neck is cylindrical and becomes funnel shaped towards the top. A thick similar coloured glass thread is applied underneath the rim and some thinner glass threads are applied halfway the neck. The handle can be described as a 'chain handle' consisting of two thick glass threads that are squeezed towards each other six times. The body has vertical ribs.

This jug can be considered as a variant of type Isings 121 (bulbous jugs; dated to the third and fourth century) with the chain handle as deviant characteristic.⁶²⁰ Jugs with chain handles are characteristic for the second half of the third and first half of the fourth century of which a high find concentration is known from Mainz.⁶²¹ In Mainz two forms are identified; the jugs with an egg-shaped to conical body and those with a bulbous body which are similar to the specimen from the Pandhof. The forms with a bulbous body are in Mainz less frequently found (three specimens, all from one grave) than those with an egg-shaped body. The chains of the three Mainz specimens with a bulbous body are different from the Pandhof chain. On two vessels the chains are squeezed together four times, on one vessel the chain is squeezed together three times. Resembling jugs are found in Krefeld-Gellep.⁶²² A fragment of a chain handle which was squeezed six times was found in a grave in Stein (prov. Limburg, the Netherlands) and another similar handle, although of an egg-shaped jug, is known although its provenance is unknown.⁶²³

The Pandhof glass jug is found together with two vessels of pottery (a biconical pot which dates to the end of the fifth and first half of the sixth century and a jar which dates to the end of the fourth and beginning of the fifth century) and one glass vessel (a hemispherical cup with opaque white spiral thread which dates to the late Roman period). This (fragile) jug with chain handle can be identified as an antique in this grave, which probably dates to the fifth century.

Handled bottles

Pandhof: 10799 (128-15)⁶²⁴; 11225 (383-3).⁶²⁵

Appendix 1: Figure 10.

Two intact Roman handled bottles were found in the Pandhof cemetery. The hexagonal bottle from Pandhof grave 10799 is of blue-green glass and has a height of 10 cm. The bottle has one angular shaped handle with two slightly discernable ribs which is attached underneath the rim and at the shoulder of the bottle. The bottle has a cylindrical neck. The edge of the outward folded broad rim is bend inward again. The bottom of the bottle carries a mark consisting of a cross surrounded by a circle. More examples of six-sided bottles with circles as base mark are known from the surroundings of Maastricht.⁶²⁶ Similar base markings are also known from England but these are mainly applied to the base of square bottles.⁶²⁷ This bottle is found together with a silver plate buckle with filigree decoration, a string of beads and a pottery vessel, all of the early Merovingian period. This hexagonal bottle can be classified according to Isings' typology as type 50 and dates from the middle of the first century to the middle of the third century.⁶²⁸ The glass bottle is an antique in this grave and the length of the period between its production and deposition in a Merovingian grave is remarkable (as it also is for the chain handled jug described above). No graves of this period are known from the Servatius complex or its

⁶¹⁹ Ypey/Glazema 1955, 82, 83

⁶²⁰ Isings 1957, 152.

⁶²¹ Zobel-Klein 1999, 91-105, afb.18; Harter 1999, 136-137, Kat.nr. 896-898, Form G19a, Formentafel 8.

⁶²² Pirling/Siepen 2000, part 1, 63, grave 2720, Typentafel 19, type Gellep 808, T. 17,6.

⁶²³ Isings 1971, 36-37, cat.nr. 117 (Stein), Pl. 3; cat.nr. 118 (herkomst onbekend), fig.7.

⁶²⁴ Ypey/Glazema 1955, 84.

⁶²⁵ Ypey/Glazema 1955, 75, 84

⁶²⁶ Isings 1971, 30-33, nr. 100-107; Sablerolles 2006, volume II, 15-67.

⁶²⁷ Charlesworth 1966, 33-34, Fig. 11-12.

⁶²⁸ Isings 1957, 63-67.

surroundings, so it seems unlikely that this bottle was a grave find discovered by people that were digging graves in the early medieval period. Probably it was curated for a considerable amount of time.⁶²⁹

The rectangular two-handled bottle from Pandhof grave 11225 with a height of 19.2 cm is made of blue-green glass and has two angular shaped handles. The handles are attached to the neck just underneath the rim and at the shoulders at the narrow sides of the bottle. Both handles consist of three ribs. The neck of the bottle is slightly concave, the rim is folded outward and inward again. The base mark consists of the capital letter 'B' in a rectangle. This bottle was found together with only two late Roman pottery vessels (a jar and a small terra sigillata beaker which both date to the fourth century). A parallel for the base mark on this bottle is known of a bottle from a grave context in Lillebonne (north-western coast of France)⁶³⁰ and a rectangular bottle with a capital B in a rhomboid as bottom mark is known from Poitiers (central France).⁶³¹ Bottles of this kind are classified as Isings type 90 and date predominantly in the second and third century.⁶³² Pandhof grave 11225 can on the basis of the other finds be dated to the late Roman period; the rectangular glass bottle is an older element in this assemblage of grave goods.⁶³³

Bulbous flask

Pandhof: 10944 (224-1).⁶³⁴

Appendix 1: Figure 10.

The flask with a spherical body from Pandhof grave 10944 is of colourless glass and has a height of 7.2 cm. The rim is folded outward and inward again. Bottles of this kind are known from the Roman period but are a form that continued to exist into the early medieval period. These bottles can be classified as type Isings 101 or type Gellep 198/199.⁶³⁵ Isings and Pirling date this type to the third and mainly fourth centuries. This glass vessel was found with a jug which could not unambiguously be ascribed to either the Roman or Merovingian period. It remains uncertain to which period this grave should be dated.

Merovingian Glass

The majority of the glass vessels from the Vrijthof and Pandhof cemeteries, namely fifty-three specimens, can be dated to the Merovingian period (only six vessels are Roman or late Roman (table 23)). For most of the glass vessel categories discussed in this section their assignation to the Merovingian period is reasonably unambiguous. The glass vessels will be classified according to the typologies of Siegmund and the Franken AG, and will be compared with the typo-chronology of Legoux, Périn and Vallet. The results will be complemented with the more specific and detailed typologies of Koch, Feyeux and Maul.⁶³⁶ The work of Maul can for now be regarded as the most recent work on some common Merovingian glass forms. It offers a detailed typology of bell beakers and palm cups with an extended overview of various finds throughout Germany, Belgium, Northern France and England. Next to the typological and chronological discussions, in which an extended research history of Merovingian glass is incorporated, Maul also discussed interesting subjects such as the general find position of glass vessels in the grave, the function of various glass vessels, the association in graves with other food- and drink related objects, the variation in glass colour etc. For now chronological questions are the main focus in the discussion of the glass vessels from the Vrijthof and Pandhof cemeteries, although as much information as possible will be presented to enable further research such as Maul has initiated.

⁶²⁹ See chapter 3 in thesis for a discussion of the deposition of antiques in Merovingian graves.

⁶³⁰ Foy/Nenna 2006, 115, no. 43, Pl. 47.

⁶³¹ Simon-Hiernard 2000, 157, no. 88.

⁶³² Isings 1957, 108.

⁶³³ Sablerolles 2006, volume II, 37, NI 79, pl. 9.

⁶³⁴ Ypey/Glazema 1955, 79.

⁶³⁵ Isings 1957, 119-120; Pirling 1966, I, 103, Tafel 16.

⁶³⁶ Koch 1987; Maul 2002.

Bowls: hemispherical, with an opaque white spiral thread underneath the rim

Vrijthof: 309 (1732-1). Pandhof: 10508 (451-1⁶³⁷); 11325 (417-1)⁶³⁸.

Appendix 1: Figure 10.

Three rather similar bowls were found: two in the Pandhof cemetery and one in the Vrijthof cemetery. The bowl from Vrijthof grave 309 is of a very light blue-green glass. It has a hemispherical shape with a convex bottom. Underneath the rim an opaque white glass thread consisting of two windings is applied. It is the only find from this grave.

The hemispherical bowl from Pandhof grave 10508 has a very light purple colour which is exceptional for the Merovingian period. It occurs when the amount of manganese which is added to obtain colourless glass is too high. A spiral thread of opaque white glass was applied underneath the rim. The bowl is asymmetric and has an average height of 3.8 cm. The only other find from this grave is an unguent bottle, which dates to the fifth and sixth century. The shape of the bowl from Pandhof grave 11325 also can be described as hemispherical, although the sides of the bowl are less curved than usual. This bowl is asymmetric and has an average height of 3.5 cm. The glass is yellow-green and the bowl has an opaque white thread underneath the rim, which is a prominent characteristic of these bowls. It was found with a Roman jug with chain handle, an early biconical pot (which dates to the end of the fifth and first half of the sixth century), and a pottery jug (which dates to the end of the fourth and beginning of the fifth century).

The three hemispherical bowls can be classified as Siegmund's type Gla 1.3.⁶³⁹ The most important characteristics are the hemispherical shape and the opaque white threads underneath the rim. Despite the variation in the colour of the bowls, as can be observed on the bowls of the Vrijthof and Pandhof cemeteries (all three hemispherical bowls have a different colour), the main colour of the glass seems an irrelevant variable for the identification of this type in Siegmund's classification. Although colour is not considered to be an important typological criterion, it does not imply that colour was an insignificant factor in the choice for these glass vessels in the burial rite. Siegmund dates these bowls in Rhineland phase 2 (440-485). The examples Siegmund mentions for this type are, however, somewhat arbitrary. The two bowls from the cemetery of Krefeld-Gellep that are included in Siegmund's typological research have glass threads of the same colour as the bowl itself.⁶⁴⁰ In the typology of Koch a distinction is made between bowls with glass threads of opaque white glass and those made of glass of the same colour as the bowl.⁶⁴¹ Koch dates hemispherical bowls with white opaque threads underneath the rim in the second half of the fifth century and the first quarter of the sixth century (450-525).⁶⁴² The Franken AG maintained Siegmund's type 3.1 although they rightly make the remark that glass threads of the same colour as the bowl can also be observed.⁶⁴³ The Franken AG date this type in their phases 2 and 3 (c. 440-510/25). Legoux, Périn and Vallet classify hemispherical cups as type 437 and date them in their phases PM-MA1 (440/50-520/30).⁶⁴⁴ Regarding these dates, the assignation of this type by Siegmund to Rhineland phase 2 can be considered to be too limited.

Bowl: hemispherical with hollow rim

Pandhof: 10024 (82-2)⁶⁴⁵.

Appendix 1: Figure 11.

A hemispherical bowl for which no parallels are known was found in Pandhof grave 10024. It is light yellow-brown, has a concave bottom, a hollow rim, a mouth diameter of 11.6 cm and a height of 6.8 cm. The hollow rim was formed by bending the rim inward and downward. The bowl was found together with

⁶³⁷ Ypey/Glazema 1955, 89.

⁶³⁸ Ypey/Glazema 1955, 83.

⁶³⁹ Siegmund 1998, 164.

⁶⁴⁰ Siegmund 1998, 164; Pirling 1966, 154-155, grave 5, Taf. 8,3, grave 407, Taf. 34,8, type 239, Typentafel 19.

⁶⁴¹ Koch 1987, 206-207, 208-210.

⁶⁴² Koch 1987, 208-210, type Koch IV H, Abb. 88.

⁶⁴³ Müssenseier *et al.* 2003, 69.

⁶⁴⁴ Legoux/Périn/Vallet 2004, 20, 49, 55 (type 437).

⁶⁴⁵ Ypey/Glazema 1955, 88.

a biconical pot next to the left foot of a child. No other finds are known from this grave. The biconical pot dates to the end of the fifth and first half of the sixth century.

Bowls of this kind are not identified by the Siegmund, the Franken AG and Legoux, Périn and Vallet. The Pandhof bowl can be compared to type Koch IV M which has a resembling form but in addition elaborate decorations of glass threads. Type Koch IV M is defined by the hollow rim and the applied decoration. The decorated specimens mainly occur in the Belgian Meuse region and date to the end of the fifth and beginning of the sixth century.⁶⁴⁶ On the basis of the dating of the associated biconical pot it can be assumed that the undecorated Pandhof bowl dates more or less to the same period as type Koch IV M and is therefore considered to be a variant of this type.

Bowl: vertical ribs

Vrijthof: 0 (1838-7).

Appendix 1: Figure 11.

One bowl with vertical ribs is known from the Vrijthof cemetery (find context unknown). This mould-blown bowl is light blue-green, is somewhat asymmetric, and has conical sides with vertical ribs and an indented base with pontil mark. It is a complete bowl with a height of 4.7 cm. No other finds can be associated with this bowl.

Similar bowls are not known from the Rhineland and the Belgian Meuse region. Neither are they identified as a type by Pirling, Koch and Legoux, Périn and Vallet. A comparable specimen, however, is known from the cemetery of Aulnizeux 'La Vignette' (prov. Marne, north-eastern France).⁶⁴⁷ Feyeux dates type 81, the general group of which the bowl from Aulnizeux (sub-type 81.3k) forms a part of, in the sixth century, sporadically they occur thereafter.⁶⁴⁸

Palm cups

Siegmund established an index by which high, slim palm cups are distinguished from the lower, broad palm cups.⁶⁴⁹ The higher, slim palm cups are generally described as '*Glockentümmeler*' (bell cups). All the four specimens from the Vrijthof and Pandhof cemeteries belong to the group of low and broad palm cups. Within this group Siegmund identifies palm cups with simple rims (slightly pronounced and not folded) as type Gla 2.1, and those with broad and outward folded rims as type Gla 2.2, a classification which is maintained by the Franken AG.⁶⁵⁰ Koch also makes this distinction.⁶⁵¹ Maul presents an exhausting list of palm cups and identified two main groups, predominantly on the basis of the mouth/belly ratio.⁶⁵² Feyeux classifies palm cups as general types 55, 57 (bell cups) and 60 (bell cups with folded rim).⁶⁵³ In these groups some sub-types are identified, mainly on the basis of the decoration.⁶⁵⁴ On the basis of these classifications, two forms of low and broad palm cups can be identified in the Vrijthof and Pandhof cemeteries.

Palm cups: low and broad with plain rim

Vrijthof: 87 (1392-1). Pandhof: 10074 (27-22)⁶⁵⁵.

Appendix 1: Figure 11.

Two squat palm cups with simple rims were found in the Vrijthof and Pandhof cemeteries. The palm cup from Vrijthof grave 87 has a height of 4.6 cm and a mouth diameter of 8.3 cm. The cup from the Pandhof has a height of 5.6 cm and a mouth diameter of 6.5 cm. The colour of the Vrijthof specimen is

⁶⁴⁶ Koch 1987, 242-246, afb. 103.

⁶⁴⁷ Cabart/Feyeux 1995, 29f., nr. 54, fig. 14; Feyeux 2003, 28, fig. 3, T.81, 39, fig. 15; 173, nr. 669, Pl. 61, type 81.3k.

⁶⁴⁸ Feyeux 2003, 39-40, fig. 15, type 81, 165, 173, type 81.3k.

⁶⁴⁹ Siegmund 1998, 165-166.

⁶⁵⁰ Müssemeier *et al.* 2003, 69-70.

⁶⁵¹ Koch 1987, 253-257.

⁶⁵² Maul 2002, 68-79.

⁶⁵³ Feyeux 2003, 21, 28, fig. 3.

⁶⁵⁴ Feyeux 2003, 21, 37, fig. 13, type 55, 38, fig. 14, type 57, type 60.

⁶⁵⁵ Ypey/Glazema 1955, 86.

light blue, whereas the colour of the Pandhof specimen is brown. The palm cup from the Vrijthof cemetery is more conical shaped than the palm cup from the Pandhof which has a nearly straight wall. The main differences between the two cups, however, is the presence of 12 ribs at the base of the cup from the Pandhof grave and the remarkable small size of this cup. The palm cup was found together with multiple beads, a decorative disc of antler, a shoe buckle with strap end, a glass flask on foot, an unguent bottle and a pottery dish; a grave goods assemblage which can be identified as that of a woman. Most of these finds date roughly to the seventh century. The Vrijthof grave contains furthermore a pottery beaker which dates to the seventh century.

The palm cups from Vrijthof grave 87 and Pandhof grave 10074 both can be classified as Siegmund's Gla 2.1. Siegmund dates these palm cups in Rhineland phase 7 (585-610).⁶⁵⁶ Other typological studies identify more types in the group of palm cups. Feyeux for example classifies palm cups as the one from Vrijthof grave 87 as type 55.0, whereas the specimen from the Pandhof can be placed in Feyeux's sub-group 55.3k.⁶⁵⁷ The specimen from the Vrijthof cemetery knows a number of similar specimens in the Middle Meuse area and north-eastern France. Feyeux (north-eastern France) dates these palm cups in the second half of the sixth century till the beginning of the seventh century. The specimens from the Middle Meuse area are dated to the seventh century.⁶⁵⁸ The palm cup from Pandhof grave 10074 dates, according to Feyeux, to the second half of the sixth century and the beginning of the seventh century. The palm cup from Vrijthof grave 87 resembles type Koch VB, although one of the characteristics of this type, the inward folded hollow rim, is not present.⁶⁵⁹ Koch type VB dates to the first half of the seventh century. According to the typology of Maul, the palm cup from the Vrijthof cemetery can be classified as type B1a (low and broad with a smooth surface).⁶⁶⁰ This type appears in the second half of the sixth century, but dates predominantly to the end of the sixth century and beginning of the seventh century and can sporadically be found towards the end of the seventh century.⁶⁶¹ The palm cup from the Pandhof grave can be ascribed to type B1b (low and broad with a ribbed surface) in Maul's typology.⁶⁶² According to Maul it dates to Stufe AM III (560/70-600).

Thus, despite their morphological differences both the palm cups are dated by Siegmund, Feyeux, Alénus-Lecerf and Maul (although she claims that type B1b can also appear somewhat later than type B1a) in the same chronological period. It is therefore justifiable to consider Siegmund's criteria for these palm cups as valid chronological indicators and place the two specimens in his group Gla 2.1.

Palm cups: low and broad with outward folded rim

Vrijthof: 36 (1623-1). Pandhof: 10510 (450-1).

Appendix 1: Figure 11.

The main characteristic of these two palm cups is the broad outward folded rim which resulted in a rounded cavity or hollow rim. The palm cup from Vrijthof grave 36 is yellow-green, has a height of 5.1 cm and a mouth diameter of 9.9 cm. It was found together with a pottery vessel which is Merovingian but is difficult to date more precisely. The palm cup from Pandhof grave 10510 is green and has a height of 6.3 cm and a mouth diameter of 11.3 cm. The rim is broad and folded outward, but not hollow. It can be assumed, regarding the multiple resembling specimens that are known from Merovingian graves, that the purpose was to create a cavity in the rim just as it can be observed on the Vrijthof specimen.⁶⁶³ The other finds from this grave are two bird brooches which are completely covered with garnet and one large amber bead. On the basis of these finds this grave can be identified as the grave of a woman.

Both the palm cups can be identified as Siegmund's type Gla 2.2, Feyeux's type-group 60.0, Koch's typological group VA and Maul's type B2a. Siegmund dates these palm cups in Rhineland phase 9 (640-

⁶⁵⁶ Siegmund 1998, 166.

⁶⁵⁷ Feyeux 2003, 37, Fig. 13, T.55, T55.3k.

⁶⁵⁸ Alénus-Lecerf 1995, 68.

⁶⁵⁹ Koch 1987, 255-256.

⁶⁶⁰ Maul 2002, Band 1, 153, 154-155.

⁶⁶¹ Maul 2002, Band 1, 154.

⁶⁶² Maul 2002, Band 1, 153-154.

⁶⁶³ See for example the examples of Maul's type *Tümmeler* B2a (20002, Band 2, Tafel 96-110).

670) and the Franken AG, who maintained this Rhineland type, date them in their phases 7-8 (610/20-670/80).⁶⁶⁴ Koch dates them in the period 650-700⁶⁶⁵, as does Feyeux although he expands this date to the beginning of the 8th century.⁶⁶⁶ Maul's type dates mainly to the JMII (630/40-670/80) but can, although sporadically, also be found in contexts of the JMIII (670/80-720).⁶⁶⁷

Kettle shaped beakers

Pandhof: 10511 (446-2); 10885 (139-8).⁶⁶⁸

Appendix 1: Figure 11.

The two kettle shaped beakers that were found in the Pandhof cemetery have a spherical, slightly squat shape, with indented bottom at which a pontil mark can be observed. The beaker from Pandhof grave 10511 is light green and has a height of 6.5 cm. The rim is widely bent outward. Grooves are present in the zone underneath the rim in which threads of glass have been applied. The original colour of these glass threads is not identifiable anymore. This glass vessel was found with a jug of pottery that dates to the beginning of the seventh century.

The beaker out of Pandhof grave 10885 is of light blue-green glass and with a height of 4.5 cm it is smaller than the other kettle shaped beaker. Underneath the widely outward bent rim a spiral thread of opaque white glass was applied. The beaker was found together with another glass vessel, belt fittings, a knife, a finger ring and a bronze coin which was used as a pendant. These finds date predominantly to the sixth century. The gender of the deceased is difficult to ascribe to this grave on the basis of these finds alone, but a burial of a woman can be suggested.

Kettle shaped beakers are not known from Siegmund's research area, nor are they identified by the Franken AG. Pirling identified three types of kettle beakers for the cemetery of Krefeld-Gellep, which are all characterized by the glass threads underneath the rim, either of opaque white glass or of similarly coloured glass (type Gellep 190 (c.400 AD), type Gellep 236 (first half of the fifth century), type Gellep 237 (Stufe II, 450-525)).⁶⁶⁹ Koch combined these three specimens in her type Koch II G (*bauchige Becher*) which she dated in the first half of the fifth century and sporadically thereafter.⁶⁷⁰ The specimens mentioned by Koch have an average height of 6 cm and a mouth diameter between 7 and 10 cm. The beaker from Pandhof grave 10511 fits well into this picture. The beaker from grave 10855, however, is much smaller than the examples described by Koch. The beakers from the Pandhof cemetery are considered to be variants (they are to some extent deviant from these types) of the types Krefeld-Gellep 190 and 237 and Koch II G. Similar beakers are not known from the rest of the Meuse area. Koch mentions for example specimens from Rhenen, Wageningen, Nijmegen, Echternach and Alzey.⁶⁷¹ Feyeux described a beaker which is probably from Waben (northwest coast of France, type 90.1a).⁶⁷² He dates this vessel in the first half of the fifth century. The specimens of the Pandhof cemetery resemble type 439 of Legoux, Périn and Vallet which dates predominantly in their phase MA1 (470/80-520/30) but can sporadically also be found in phase PM (440/50-470/80) and MA2 (520/30-560/70).⁶⁷³ It remains uncertain if this type 439 (the defining characteristics are poorly described) can be compared to the types described above.

Regarding the dates given by Pirling, Koch and Feyeux, the two vessels of the Pandhof are both relatively old pieces in their assemblages of grave goods. A date between 400 and 450 can be suggested for these specimens.

⁶⁶⁴ Siegmund 1998, 166; Müssemeier *et al.* 2003, 69-70.

⁶⁶⁵ Koch 1987, 253, type VA.

⁶⁶⁶ Feyeux 2003, 151-158.

⁶⁶⁷ Maul 2002, 155-159.

⁶⁶⁸ Ypey/Glazema 1955, 88.

⁶⁶⁹ Pirling 1966, 100, 153 (grave 15660), Typentafel 15, Typentafel 19; 1966, part 2, 147, grave 1237, Taf. 109,8.

⁶⁷⁰ Koch 1987, 59-61.

⁶⁷¹ Koch 1987, 59-62, Abb. 19.

⁶⁷² Feyeux 2003, 40, fig. 16, type 90.1a, 178, 181, cat.nr. 705, Pl. 66.

⁶⁷³ Legoux/Périn/Vallet 2004, 20, 49, 55.

Globular beakers with short neck

Vrijthof: 39 (1574-1); 85 (1422-1); 88 (1390-1); 99 (1852-1); 116 (1564-2); 235 (1750-1); 0 (1522-1). Pandhof: 10129 (21-5); 10148 (36-2); 11217 (341-8)⁶⁷⁴ Unique but comparable form: 10048 (72-7).

Appendix 1: Figure 12-13.

Globular beakers are well-represented in the graves of both the Vrijthof and Pandhof cemeteries. A total of fourteen specimens (both with short and long necks) were found, nine in the Vrijthof cemetery and five in the Pandhof cemetery. Beakers with a short neck (11x) can morphologically be distinguished from beakers with a long neck (4x). It is generally accepted that these beakers develop from squat forms to more elongated beakers with a long cylindrical or conical neck.⁶⁷⁵ Four beakers with a short neck are known from the Pandhof cemetery and seven from the Vrijthof cemetery. These beakers are characterized by their squat appearance, their globular or sometimes biconical body, their short and straight or slightly outward bent neck, and their concave bottom. All these beakers are made of bluish or greenish coloured glass, with the exception of beaker 1522-1 from the Vrijthof cemetery (without context), which is made of dark brown glass. The height of the beakers lies between 7.6 and 10.9 cm; only the neck-less mould-blown specimen from Pandhof grave 10048 is somewhat smaller with a height of 6.4 cm. One beaker, from Vrijthof grave 88, has a decoration of faintly observable diagonal ribs.

The position of these beakers in the graves is only known for Vrijthof graves 85, 39, 99, 235 and Pandhof grave 10129. In these graves the glass vessels were always positioned near the feet. In three graves the beaker was found near the right foot together with pottery (in Vrijthof graves 85 and 235) or an unguent glass bottle (in Vrijthof grave 99). The graves 85 and 235 can be identified as those of women (the sex determination is based on the presence of beads), for grave 99 this remains indefinite. The beaker that was found near the left foot of the buried person in Vrijthof grave 39 is part of the grave goods assemblage of a man (identified on the basis of a seax). In one grave (Pandhof 10129) the beaker seems to have been placed between the feet of the buried man, although it must be noticed that the right lower leg of this person is missing, probably because of a disturbance of the grave. The grave goods assemblage contains also a seax with associated scabbard fittings.

The globular beaker from Pandhof grave 10048 has a height of 6.4 cm and is made of olive green glass. In contrast to the other beakers described, this specimen has no neck. The upper wall is bending inward and the rim is slightly thickened. This vessel has vertical ribs from the bottom halfway up the wall. It was found together with four other glass vessels (cylindrical bottle, cone beaker, two unguent bottles) and a ceramic biconical pot (missing) near the left foot of a man (sex determination on the basis of the elaborate bronze belt which forms also part of the inventory of this grave). The beaker from Pandhof grave 10048 is placed in this group because of the globular shape that resembles the specimens described above, but is a unique specimen because of the absence of a neck. Such beakers are, until now, not known from Merovingian graves.

The globular beakers with short neck can be placed in Siegmunds typological group Gla 3.2 which is defined by the narrow mouth and concave bottom of the vessels.⁶⁷⁶ This implies that a variety of shapes can be placed within this group and that decoration is not considered as a variable of importance, although the majority of the specimens that are assigned to this type show some decoration.⁶⁷⁷ Furthermore, Siegmund does not make a distinction between beakers with a long or short neck. These summarily defined criteria, as Siegmund already refers to himself, resulted in a broadly defined typological group. The beakers of this group are dated in Rhineland phase 7 (585-610). The Franken AG maintained this type but mention that it is an inconsistent group and that a date more precise than their phases 4-8 (510/25-670/80) can not be given.⁶⁷⁸ Only a small number of undecorated globular beakers

⁶⁷⁴ Ypey/Glazema 1955, 87.

⁶⁷⁵ Alénus-Lecerf 1995, 61-62.

⁶⁷⁶ Siegmund 1998, 166-167, type Gla 3.2.

⁶⁷⁷ La Baume 1967, Tafel 16, 232.2; Siegmund 1998, Tafel 182, 15; Tafel 185, 7.12.

⁶⁷⁸ Müssemeier *et al.* 2003, 70.

are known from the French Meuse region. Feyeux classified globular beakers as his general type 90 and identified eight sub-types, mainly on the basis of the decoration applied, although various wall/body shapes can be observed in the illustrated examples.⁶⁷⁹ The undecorated globular beakers with a short neck can be classified as his sub-type 90.0 (based on the absence of decoration) of which five examples are mentioned.⁶⁸⁰ They are dated to the sixth and seventh century. Diagonal ribbed beakers are not known from this area. Alénus-Lecerf discussed undecorated globular beakers from the Meuse region in Belgium and dated them to the fifth, sixth and seventh centuries.⁶⁸¹ Legoux, Périn and Vallet did not identify globular beakers, nor did Koch in her detailed study of the glass finds from *Der Runde Berg*. With regard to the mentioned dates it is concluded that the globular beakers with a short neck from the Vrijthof and Pandhof cemeteries cannot be dated more precisely than to the sixth and seventh century.

Globular beakers with long neck

Vrijthof: 21 (1619-1); 105 (1471-1); 116 (1564-1). Pandhof: 10790 (88-1).⁶⁸²

Appendix 1: Figure 13.

Three beakers from the Vrijthof cemetery and one from the Pandhof cemetery have the same features as the beakers described above, but they have a long cylindrical or conical neck. The beaker from Pandhof grave 10790 has a distinct conical neck and the beaker from Vrijthof grave 105 has a straight and more cylindrical neck. The shape of the neck of the other two beakers falls in between these two forms. The beakers have a pronounced lip, except for the specimen from Vrijthof grave 21. The beaker from Vrijthof grave 116 has slightly discernable diagonal ribs on the belly as decoration. For two beakers it was established that they were placed near the left foot of the deceased (Vrijthof graves 21 and 105). From Vrijthof grave 21 the skeleton is missing, but it seems that the beaker was found at the original position in the grave (northeast, i.e. near the feet), if it is assumed that the body was deposited with the head to the west. No other objects are found in this grave. The beaker from grave 105 was found with a biconical pot near the left foot. The rest of the objects (seax, fire-steel, etc.) indicate that it was the grave of a man. This coincides with the image described above (for the globular beakers with a short neck) that squat jars were placed near the right foot when buried with a woman, and at the left foot when buried with a man.

Because Siegmund does not make a distinction between globular beakers with a short and a long neck, these beakers can be classified as his type Gla 3.2 which dates in Rhineland phase 7 (585-610), although globular beakers with a long neck are not known from this research area. Feyeux also makes no explicit distinction between the short and long necks and regards the globular beaker without decoration as one type (type 90.0, see above), which he dates in the sixth and seventh century.⁶⁸³ The form of one of the illustrated beakers (although it has a decoration of vertical ribs) which is an example for his sub-type 90.3I shows great resemblance with the specimens from Maastricht (especially the beaker from Vrijthof grave 116).⁶⁸⁴ This beaker was found in grave 5 of the cemetery 'Le Trou du Loup' in Remicourt (Prov. of Marne, north-eastern France). It dates to the seventh century.⁶⁸⁵

Because of their longer and cylindrical or conical shaped neck and their more elongated appearance it is assumed that these beakers date later than those with short necks.⁶⁸⁶ This seems to be in accordance with the observation that some undecorated beakers with long necks are known from seventh century contexts in the Belgium Meuse area.⁶⁸⁷

⁶⁷⁹ Feyeux 2003, 28, fig. 3, type 90, 40-41, Pl. 16.

⁶⁸⁰ Feyeux 2003, 40, fig. 16, type 90.0, 178-179, Pl. 65.

⁶⁸¹ Alénus-Lecerf 1995, 63.

⁶⁸² Ypey/Glazema 1955, 86.

⁶⁸³ Feyeux 2003, 40, fig. 16, type 90.0, 178-179, Pl. 65.

⁶⁸⁴ Feyeux 2003, 41, fig. 16, type 90.3I, 186, nr. 736, Pl. 69.

⁶⁸⁵ Cabart/Feyeux 1995, 54, nr. 111, 174, fig. 111.

⁶⁸⁶ Alénus-Lecerf 1995, 61-63.

⁶⁸⁷ Alénus-Lecerf 1993, 123, nr. 34; 1995, 63, fig. 9.11.

Bell beakers (*Stürzbecher*)⁶⁸⁸

Vrijthof: 126 (1573-1). Pandhof: 10344 (569-4).

Appendix 1: Figure 14.

The bell beaker from Vrijthof grave 126 is of olive green coloured glass and has a height of 10.9 cm. The rim is slightly thickened. It is decorated with faintly observable diagonal ribs and can be described as a 'low' quality glass because of the high amount of air bubbles within the glass and one glass bulb on the wall. The bottom of the beaker is convex and runs out pointed (has a 'peak'). This bell beaker was found with a knife and a small bronze buckle and strap end, which date to Rhineland phases 8-9 (610-670).

The bell beaker from Pandhof grave 10344 is of yellow-green glass, has a height of 10.9 cm and is of a 'higher' quality than the beaker from the Vrijthof cemetery. The decoration is more pronounced and consists of vertical ribs and a horizontal spiral thread of opaque white glass underneath the rim. The bottom of the beaker is convex with also runs out pointed. The lower wall of the Pandhof beaker is slightly more rounded than the lower wall of the Vrijthof beaker which therefore has a more carinated shape. The Pandhof bell beaker was found with two Roman vessels of pottery (a beaker with black engobe which dates to the end of the second and first half of the third century and a plate which dates to the end of the first and second century), two pots of pottery (one biconical pot and one jug) and bronze fittings of a belt which date to the Merovingian period.⁶⁸⁹ The Merovingian finds are for the majority dated to the seventh century.

Bell beakers are quite common glass finds in Merovingian graves what makes the limited occurrence of such beakers in both the Vrijthof and Pandhof cemeteries remarkable.⁶⁹⁰ Three different bottom shapes have been identified for such beakers. Each seems to have a regional distribution of its own.⁶⁹¹ The beakers with rounded convex bottoms are mainly restricted to the Rhineland. Rounded convex bottoms with a peak are mainly known from the Meuse region in France and those with a drop have their main distribution area in the Belgium Meuse region. In the more recent work of Maul, however, only two types of bottoms are identified; those with a rounded convex bottom and those with a bulge (peak and drops are regarded as one).⁶⁹² It can be assumed that the distinction between drops and peaks is not as unambiguous and that they should be regarded as one form. Cabart and Feyeux support this opinion.⁶⁹³ The bottoms of the specimens in the Vrijthof and Pandhof cemeteries testify to the observation that bottoms with a drop or peak are mainly found in the Meuse valley region and that those with a convex bottom belong to the Rhine valley.

The general shape of bell beakers shows the same chronological development in all the three regions. They develop from short and squat with an s-shaped body to a carinated body and finally to a more cylindrical body.⁶⁹⁴ The height of the beakers increases with time.

Siegmund identified four types of bell beakers on the basis of the relative diameter of their belly in order to avoid the subjectivity of Böhner's more descriptive criteria concerning the shape of the wall.⁶⁹⁵ Siegmund does not consider the shape of the bottom and decoration as chronological relevant criteria. Although the body shapes of the Pandhof and Vrijthof bell beakers show some differences both can be classified as Siegmund's typological group Gla 8.1. These beakers are assigned to Rhineland phase 4-5 (530-570). Regarding this date, the bell beakers from both the Vrijthof and Pandhof graves date to an earlier period than the other Merovingian finds in these graves do. The Franken AG changed the classification of the bell beakers as proposed by Siegmund by introducing a less complicated arithmetic

⁶⁸⁸ In the literature from the German language area a distinction is made between *Stürzbecher* and *glockenförmige Becher*, while in the literature from the English language area both these forms are referred to as 'bell beakers'. For now the beakers of the Vrijthof and Pandhof will be referred to as bell beakers, although in fact they are *Stürzbecher*.

⁶⁸⁹ In the cemetery of Krefeld-Gellep bell beakers were often found with and in biconical pots. The two sorts of objects are considered to form a unity in the Merovingian grave goods ritual (Pirling 1974, Teil 1, 106).

⁶⁹⁰ Maul 2002, 45.

⁶⁹¹ Maul 2002, 46; Koch 1998, 160; Cabart/Feyeux 1995, 58.

⁶⁹² Maul 2002, 44-45.

⁶⁹³ Cabart/Feyeux 1995, 58.

⁶⁹⁴ Böhner 1958, 228-231.

⁶⁹⁵ Siegmund 1998, 170-172.

method to identify the different forms, what resulted in five bell beaker types.⁶⁹⁶ The specimens from the Pandhof and Vrijthof can be identified as type Gla8C and Gla8B. These types date to the same phases and are ultimately regarded by the Franken AG as type Gla8B/C, which dates to their phases 4-6 (510/25-610/20), but predominantly to phase 5 (565-580/90). Legoux, Périn and Vallet identified three types of bell beakers (*gobelets campaniforme*) on the basis of the wall and bottom shape (they do not define the peak or drop at the bottom more precisely than *bouton*). The Maastricht beakers can be classified as their type 449 which dates in the second half of their phase MA2 (520/30-560/70) and in MA3 (560/70-600/10).⁶⁹⁷ The Vrijthof and Pandhof beakers can be classified as Feyeux's general type 52 (bell beaker with a '*bouton*'); the Pandhof beaker more specifically as sub-type 52.3ka and the Vrijthof beaker as sub-type 52.3l on the basis of the decoration.⁶⁹⁸ These beakers date to the sixth century (mainly in the period 530-570).⁶⁹⁹ A general consensus exists considering the discussion on the dates given to bell beakers such as the ones from Maastricht.

Goblet: with hollow stem and foot

Pandhof: 10056 (19-3).⁷⁰⁰

Appendix 1: Figure 14.

The goblet from Pandhof grave 10056 consists of a conical cup with thickened rim on a hollow stem with a round foot base. The beaker is olive-green and has a height of 9.2 cm. The beaker is nearly complete and of good quality glass (no bubbles or pollution). It was found together with a small Merovingian glass bottle, for which the date can not be established more precisely, with a ceramic Roman pot and with a Merovingian pot, which dates to the end of the sixth and beginning of the seventh century.

The shape of this beaker is known from both the Roman and Merovingian periods. In the Roman period this type occurred in the fourth and fifth century in the Mediterranean region (type Isings 111).⁷⁰¹ Thereafter this type is known from Italy and the French Mediterranean. Here they appear regularly in the second half of the sixth and seventh centuries; in less frequent numbers they already occurred towards the end of the fifth century.⁷⁰² Beakers on a stem are rare in the northern regions of the Merovingian world. Four are known from north-eastern France (Feyeux type 43.0); of which two have a conical cup that is similar to the goblet from the Pandhof cemetery.⁷⁰³ Feyeux presumes that this type is contemporary with a specimen (although this specimen is with an S-shaped cup and flat base somewhat different) from the cemetery of *Basel-Bernerring*, which was found in a grave that dates to the second half of the sixth century.⁷⁰⁴ From the Belgium Meuse region no parallels are known until now. Isings dates the Merovingian beakers of type 111 in the sixth and seventh century and refers to parallels in Bülach and Cologne-Junkersdorf although the specimen from Junkersdorf⁷⁰⁵ does not have a stem.⁷⁰⁶ These beakers are not identified by Siegmund; neither are they mentioned by the Franken AG and Legoux, Périn and Vallet. It is a beaker which is scarce in the northern regions of Gaul, and clear associations with their southern counterparts are not established yet. Regarding the remarks above it seems plausible to date the Pandhof specimen in the second half of the sixth century (on the basis of the parallels mentioned by Feyeux). A thorough overview of their distribution pattern and a more detailed typo-chronological analysis is required for this category of beakers.

⁶⁹⁶ Müssemeier *et al.* 2003, 71-72.

⁶⁹⁷ Legoux/Périn/Vallet 2004, 21, 50, 55 (type 449).

⁶⁹⁸ Feyeux 2003, 28, fig. 3, 35-36, Pl. 11-12.

⁶⁹⁹ Feyeux 2003, 90.

⁷⁰⁰ Ypey/Glazema 1955, 86.

⁷⁰¹ Isings 1957, 139-140. Parallels are known for example from Karanis, Syracuse, Rome and Cyprus.

⁷⁰² Foy 1995, 207-209, pl. 15, 176-188.

⁷⁰³ Feyeux 2003, 78, cat.nr. 153-154, Pl. 17, type 43.0.

⁷⁰⁴ Martin 1976, 124-125, grave 42, Taf. 12,1, Farbtafel.

⁷⁰⁵ La Baume 1967, Taf. 13, 207.9.

⁷⁰⁶ Isings 1957, 140.

(Bell) beaker on foot

Pandhof: 11406 (411-1).⁷⁰⁷

Appendix 1: Figure 14.

One beaker on a foot is known from the Pandhof cemetery. This conical beaker with a thickened outspread rim and a height of 7.2 cm has a slim appearance and is placed on a round foot. It is of light green glass and has two zones of applied similarly coloured glass threads. This beaker is the only find, next to some fragments of flint which are now lost, from this context, which was not identified as a grave.

These beakers are considered to develop through time from small and squat to more elongated shapes.⁷⁰⁸ Koch classifies these beakers as type III Q and dates them from 450 to 525.⁷⁰⁹ The squat beakers with two to three zones of glass threads, like the one from the Pandhof, are more specifically dated from 450 to 500.⁷¹⁰ Koch mentions that such beakers are frequently associated with the burials of men and children, although they can also be found in the graves of women. A further observation was that they associate regularly with ceramic jugs.⁷¹¹ Compared to the specimens found elsewhere it can be observed that the specimen from the Pandhof is remarkably small (as was observed for the palm cup from Pandhof grave 1004, see above). Although the information of the find context of this grave is not available, it could be suggested that this beaker was deposited as grave object.

In the Belgium Meuse region a considerable number of similar beakers were found.⁷¹² They date from the second half of the fifth century to the end of the sixth century. These specimens have an average height of 10 cm. In the cemetery of Vieuxville (Belgium) eight foot beakers were found of which one is a close parallel for the Pandhof specimen. This beaker, however, has a height of 10.7 cm. It dates to the end of the fifth and beginning of the sixth century.⁷¹³ Alénus-Lecerf established the chronological development from small squat specimens in the second half of the fifth century to longer and elongated specimens towards the end of the sixth century on the basis of the eight beakers from the cemetery of Vieuxville.⁷¹⁴ The Pandhof beaker should be considered to be a more elongated specimen although its height is not comparable to the more elongated beakers from other cemeteries, which are generally higher.

No parallels are known from the Meuse region in northern France. The comparable forms with decoration (of type-group Feyeux 41 on the basis of the slightly thickened rim) all have threads of opaque white glass as decoration.⁷¹⁵ These resembling beakers date to the end of the fifth and beginning of the sixth century.⁷¹⁶ In the lower Rhine area these beakers are rare, and Siegmund only makes a typological distinction between those that are not decorated and those with a decoration of applied glass threads.⁷¹⁷ Measurements and the shape of the glass are not considered to be chronological relevant indicators. The beaker from the Pandhof, because of the glass thread decoration, can therefore be placed in Siegmund's group Gla 4.1 which is assigned to Rhineland phase 2 (440-485). Siegmund mentions four examples of which one was found in the cemetery of Krefeld-Gellep. Pirling classified this beaker as type 226 and mentions that it is a Frankish form which derives from type Gellep 193 which dates in the first half of the fourth century.⁷¹⁸ Examples of this type, however, often have one zone of spiral threads underneath the rim and are therefore not exact parallels for the Pandhof beaker. The Franken AG maintained this type and date it according to Koch from 450 to 525 (see above).⁷¹⁹ Legoux, Périn and Vallet only defined one

⁷⁰⁷ Ypey/Glazema 1955, 65.

⁷⁰⁸ Koch 1987, 154-155; Alénus-Lecerf 1995, 58.

⁷⁰⁹ Koch 1987, 151-156, type Koch III Q.

⁷¹⁰ Koch 1987, 154-155, 159, nr. 49.

⁷¹¹ Koch 1987, 151-156.

⁷¹² Alénus-Lecerf 1995, 58.

⁷¹³ Alénus-Lecerf 1993, 151, cat.nr. 77.

⁷¹⁴ Alénus-Lecerf 1995, 58.

⁷¹⁵ Feyeux 2003, 34, fig. 10, type 41.1a.

⁷¹⁶ Feyeux 2003, 74-75.

⁷¹⁷ Siegmund 1998, 167.

⁷¹⁸ Pirling 1966, part 1, 148-149, Typentafel 19; part 2, 115, grave 968, T. 78,8.; Pirling/Siepen 2006, 254-253.

⁷¹⁹ Müssemeier *et al.* 2003, 70.

type (443) for beakers on a foot, which dates to their phases PM-MA3 (440/450-600/10).⁷²⁰ The depicted specimen to illustrate this type shows resemblance with the Pandhof beaker. A detailed description of this type and for example its decoration, however, is not offered. Summarizing, these beakers can be dated in the period between 400 and 600, with the most precise dates delivered by Koch (450-525) and Siegmund (440-485).

Stemmed flask

Pandhof: 10074 (18-1).⁷²¹

Appendix 1: Figure 14.

A nearly complete flask with an ovoid body on an asymmetrical high foot with a height of 28.6 cm was found in the Pandhof cemetery. It has an outplayed rim. It is made of dark yellow-green glass of poor quality and is decorated with similarly coloured applied glass threads around the neck and in vertical loops on the body. It is part of a grave goods assemblage of a woman. Next to a necklace of glass beads the assemblage consists of a decorative disc of antler, a set of plate buckles and strap ends that are part of the shoe-or leg wear, an unguent bottle and a palm cup. These finds date mainly in the sixth and first half of the seventh century.

Exact parallels for this bottle are not known until now. A more or less comparable specimen, however, has been found in a cemetery in Bourogne (Territoire-de-Belfort, Fr.), although it has another sort of decoration and it is less high and elongated compared to the bottle from the Pandhof.⁷²² The bottle from the Pandhof cemetery can be considered to be a variant of this bottle which is classified by Feyeux as type 31.2hi. The associated finds in the grave in Bourogne are characteristic for the seventh century.⁷²³

Unguent bottles: spherical and pear shaped with short neck

Vrijthof: 178 (1406-2); 250 (1795-2); 294 (1803-1); 408 (1521-1). Pandhof: 10056 (19-4); 10048 (72-9; 72-10); 10122 (73-4); 10903 (218-1); 10885 (139-9); 10968 (245-6; 245-7); 10252 (333-8); 10508 (451-2); 10360 (575-7); 10399 (589-1); 11217 (341-9).

Appendix 1: Figure 15-16.

Seventeen spherical and 'pear' shaped unguent bottles are identified, four of which were found in the Vrijthof cemetery and 13 in the Pandhof cemetery. All four the Vrijthof bottles are pear-shaped as are four of the Pandhof bottles. Nine of the Pandhof bottles have a spherical-shaped body. All bottles are of light green or blue coloured glass, have a concave bottom, a cylindrical neck, and a height of approximately 8 to 13 cm. Early medieval bottles develop morphologically through time from specimens with spherical shaped bodies to those with more sagging bodies which are referred to as pear shaped bottles.⁷²⁴

It appears that spherical bottles are found in the graves of both men and women. Three of them are part of grave goods assemblages of men, four are part of grave goods assemblages of women, and for two bottles this can not be established on the basis of the associated finds. The spherical bottle from Pandhof 10048 (72-9) was found with four other glass vessels: a pear shaped bottle, a cylindrical bottle, a Kempston beaker and a globular beaker. The other finds are a biconical pot and the fittings of an elaborate bronze belt. On the basis of the belt this grave is ascribed to a man. The flask from Pandhof grave 11217 is part of an assemblage of grave goods which consists furthermore of a globular beaker, two pottery vessels, a seax, a comb with case and iron shoe belt fittings with inlay. On the basis of these finds this grave is identified as that of a man. The spherical bottle from Pandhof grave 10360 was, with some metal fragments, found with two seaxes (of which one is probably wrongly registered), on the

⁷²⁰ Legoux/Périn/Vallet 2004, 20, 49, 55 (type 443).

⁷²¹ Ypey/Glazema 1955, 85.

⁷²² Feyeux 2003, 72, nr. 134, Pl. 15.

⁷²³ Feyeux 2003, 71.

⁷²⁴ Alénus-Lecerf 1995, 61; Cabart/Feyeux 1995, 14.

basis of which this grave is identified as that of a man. The bottle from Pandhof grave 10885 is found with a bronze finger ring, a silver buckle, a knife and the fittings of an elaborate iron belt with silver inlay (the association of the belt with this grave, however, is uncertain). The documentation mentions the finds of several beads in this grave (now lost), so it can be assumed that it was the grave of a woman. The two bottles from Pandhof grave 10968 were part of a grave in which three other glass vessels, a silver finger ring and two silver hair pins were found. It can be assumed, on the basis of these finds, that it was the grave of a woman. The bottle from Pandhof grave 10252 was found with a pottery dish and a string of beads what points towards the burial of a woman. The bottle from Pandhof grave 10508 is only associated with another glass vessel (a hemispherical beaker which dates to the Merovingian period) and the gender of the deceased can not be established on the basis of these finds alone. The bottle from Pandhof grave 10903 was the only find from this grave.

The four unguent bottles from the Vrijthof cemetery are all pear-shaped, as are four of the nine unguent bottles from the Pandhof cemetery. This is in accordance with the observation that the Vrijthof cemetery became in use later than the Pandhof cemetery.⁷²⁵ The bottles from Pandhof grave 10399 and 10048 (72-10) and Vrijthof 408 have a slightly thickened rim, what can not be observed on the other bottles. Of the eight bottles with sagging belly three were found next to the right foot (Pandhof grave 10122 and Vrijthof graves 178 and 250). Vrijthof grave 178 is that of a woman, Pandhof grave 10122 is the grave of a child.⁷²⁶ Apart from the bottles these graves contained several beads. The gender of the person in Vrijthof grave 250 cannot be established on the basis of the grave goods (a bronze shoe buckle). The bottle from Vrijthof grave 294 is found near the right side of the pelvis. Due to a disturbance of this grave the feet of this skeleton are missing so it could be possible that the bottle was originally located near the right foot as it is observed for the other bottles. A pottery fragment and a metal fragment are the only associated grave finds, on the basis of which the gender of the deceased cannot be established. The bottle from Pandhof grave 10056 was found near the right side of the supposed position of the head (no skeletal remains). This grave consisted furthermore of a glass goblet on a stem and two pottery dishes. No other finds are known from this grave. The other two pear shaped bottles from Pandhof grave 10048 and 10399 are both found near the left foot or lower leg. Grave 10048 can be reconstructed as that of a man on the basis of the bronze fittings of an elaborate belt. At the position of the left foot four other glass vessels and one biconical pot were found. From Pandhof grave 10399 no other finds are known apart from the unguent bottle.

The typological distinction between unguent bottles with a spherical body and those with a more sagging body cannot be found in the available classifications although the chronological development from spherical to sagging is generally acknowledged.⁷²⁷ Siegmund classifies bottles of different shapes as type Gla 9.⁷²⁸ Various examples of this type resemble the spherical and pear shaped unguent bottles such as the ones uncovered from the Vrijthof and Pandhof cemeteries. This type dates to Rhineland phase 3 (485-530), although some specimen can sporadically be found in phases 4 to 5 (530-570). The Franken AG included cylindrical bottles in this type, because of which this typological group is too broadly defined to be useful.⁷²⁹ Legoux, Périn and Vallet classified bottles with spherical and pear shaped body's (*panse ovoïde*) as type 440 and date this type to their phases PM-MA1 (440/50-520/30), and sporadically to phases MA2-MA3 (520/30-600/10).⁷³⁰ Feyeux classified these bottles as type 20.0, and mentioned that this simple shape was also widely dispersed in the late Roman period.⁷³¹ Feyeux suggests that late Roman specimens can be identified by their constriction at the base of the neck which is, compared to early medieval specimens, also more cylindrical.⁷³²

⁷²⁵ See chapter 4 in this thesis for a more detailed description of both cemeteries.

⁷²⁶ The majority of the (pear) shaped flasks from the cemetery of Pleidelsheim were found in the graves of young adults and children (Koch 2001, 347-348).

⁷²⁷ See for example Cabart/Feyeux 1995, 14; Alénus-Lecerf 1995, 61.

⁷²⁸ Siegmund 1998, 172.

⁷²⁹ Müssemeier *et al.* 2003, 72.

⁷³⁰ Legoux/Périn/Vallet 2004, 20, 49, 54 (type 440).

⁷³¹ Feyeux 2003, 27, fig. 3, type 20, 51-52.

⁷³² Feyeux 2003, 51.

The unguent bottles from Maastricht are considered to be Merovingian products. This, however, can be interpreted differently in the future. Feyeux dates the early medieval bottles of type 20.0 to the fifth and sixth century. Alénus-Lecerf observed that the flasks from grave finds of the Belgian Meuse region point towards a date for the spherical flasks in the fifth century and for the pear shaped flasks in the sixth century.⁷³³

Unguent bottles: spherical with short neck and vertical ribs

Pandhof: 10074 (27-23); 10307 (571-1).

Appendix 1: Figure 17.

Two spherical bottles with a cylindrical neck are known from the Pandhof cemetery. The shape of these bottles is similar to the group described above with the difference that they are decorated with vertical ribs on the body.

The bottle from Pandhof grave 10074 has a height of 10.6 cm and is of dark yellow-green glass. This bottle is part of a grave goods assemblage of a woman which consists furthermore of a string of beads, bronze shoe buckles, a ribbed palm cup, a stemmed flask and a pottery dish. The finds date to the sixth and seventh century.

The bottle from grave 10307 is more spherical than the other specimen. This bottle has a height of 9.1 cm and is of light yellow-green glass. This bottle was found with bronze fittings of a belt, which date to the end of the sixth century.

Feyeux classified these bottles on the basis of their decoration as type Feyeux 20.3k although the decoration is not a decisive criterion for their dating.⁷³⁴ Like the undecorated specimens, these bottles are dated in the fifth and sixth century, of which the fifth century is especially the period in which the spherical bottles are dated. This is not in accordance with the dates of the finds both flasks are associated with. Are these flasks reused specimens, or is their date assignation still somewhat ambiguous?

Cylindrical bottles

Vrijthof: 66 (1566-1). Pandhof: 10048 (72-8)⁷³⁵; 10420 (579-1).

Appendix 1: Figure 17.

Three nearly identical cylindrical bottles with long narrow necks and concave bottoms were found, one in the Vrijthof cemetery and two in the Pandhof cemetery. The bottle from Vrijthof grave 66 is green, has a remarkable height of 30.4 cm and is a complete specimen of mediocre quality (air bubbles and asymmetric neck). The bottle is the only known grave good from this disturbed grave. It is found at the south-eastern part of the grave so it can be assumed that the bottle was placed next to the right foot or lower leg.

The two bottles from the Pandhof cemetery are smaller than the one from the Vrijthof cemetery. The bottle from Pandhof grave 10048 has a height of 29.2 cm and the one from grave 10420 of 24.5 cm.⁷³⁶ Both bottles are of yellow-green glass. The bottle from the Vrijthof and the one from Pandhof grave 10048 are more alike because of their longer and narrower neck.

Pandhof grave 10048 is a well-furnished grave of a man. Apart from the glass bottle the grave goods assemblage consists of four other glass vessels (a two unguent bottles, a Kempston beaker and a globular beaker), a biconical pot and an extended set of bronze belt fittings. The bottle was found near the left foot of the buried man. The finds from this grave date mainly to the sixth century. The bottle from context 10420 does not belong to a grave context (anymore). It was found as a stray find and no other finds can be associated with this bottle.

⁷³³ Alénus-Lecerf 1995, 61.

⁷³⁴ Feyeux 2003, 32, fig. 8, type 20.3k, 51.

⁷³⁵ Ypey/Glazema 1955, 77.

⁷³⁶ Koch listed the bottle from Pandhof grave 10048 (1987, 42-43, nr. 14). She mentioned a height of 28.3 cm, after the publication of Ypey/Glazema (1955), which is incorrect.

Siegmund considers all bottles as one typological group (Gla 9), but on closer inspection it appears that cylindrical bottles are not known from the Lower Rhineland. The bottles Siegmund refers to are mainly the smaller unguent bottles with a relative narrow and long neck. Feyeux classified cylindrical bottles, which occur quite frequently in the Meuse region of Northern France, as group 10.0 and dates them from 450 to 550.⁷³⁷ In the Belgian Meuse region cylindrical bottles are much rarer than in France. Decorated specimens are known from the cemeteries of Haillot, Mezières and Pry.⁷³⁸ Doppelfeld describes parallels of these high cylindrical bottles from the graves excavated in the cathedral of Cologne of which two are found in the grave of a woman (525-550) and one in the grave of a juvenile man (500-525).⁷³⁹ Koch describes high cylindrical, mainly undecorated bottles from the middle Rhine area as type Koch I F and dates them from 450 to 550.⁷⁴⁰ Decorated bottles are more frequently found in the Meuse region. It is remarkable that three undecorated cylindrical bottles were found in Maastricht, despite their rare occurrence in the middle Meuse region and their more frequent appearance in the upper Meuse region. Legoux, Périn and Vallet classify two types of cylindrical bottles (the larger and smaller ones, a more detailed description is lacking).⁷⁴¹ The specimens from Maastricht are considered to be the larger ones and these date to their phases PM-MA1 (440/50-520/30) and more sporadically to phase MA2 (520/30-560/70).

Cone beaker with decoration of glass threads (Kempston beaker)

Pandhof: 10048 (72-18).⁷⁴²

One cone beaker was found in Pandhof grave 10048. It became lost after the excavation, but some information can be retrieved from the available photographs and drawings.⁷⁴³ The beaker is olive-green, has a height of 12.5 cm and is decorated with a zone of similarly coloured spiral glass threads underneath the rim and vertical loops of also similarly coloured glass threads on the wall.⁷⁴⁴ The beaker is found with four other glass vessels (a globular beaker, a cylindrical bottle and two unguent bottles), a biconical pot and an extended set of bronze belt fittings. The majority of these finds date to the sixth century. The cone beaker was found next to the left foot of the buried man (gender determination on basis of the finds).

Koch classified cone beakers with spiral and vertical glass threads, such as on the one from the Pandhof, as type III N to which both the commonly referred to thin-walled Kempston beakers and thick-walled Rygh type 337 are admitted.⁷⁴⁵ Koch mentions the beaker from Maastricht and listed comparable specimens of which the specific characteristics are the squat appearance, light olive-green colour and a slightly outward bending rim. The cone beaker from the Pandhof cemetery is remarkable small compared to similar specimens (as are the ribbed palm cup and the goblet on a stem; both from Pandhof graves). Koch mentions an average height of 25 cm for these beakers. In her description it is also mentioned that the loops of glass threads on the specimen of Maastricht are relatively thick. Koch dates these cone beakers to the second half of the fifth century (450-500). Koch mentions furthermore that cone beakers of type Kempston are mainly finds from graves of men and are especially associated with a range of weapons. Koch concludes that these beakers were precious objects in Merovingian times (on the basis of the finds assemblages cone beakers are generally found with) which remained in family possession for several generations.⁷⁴⁶ It seems that the cone beaker is a relatively old specimen in the Pandhof grave, what could sustain this supposition. Weapons, however, were not found in this grave. According to the typology of Feyeux, the Pandhof cone beaker can be classified as type 51.2hi.⁷⁴⁷ Two of the three

⁷³⁷ Feyeux 2003, 32, fig. 8, type 10.0, 45.

⁷³⁸ Alénus-Lecerf 1995, 61; Koch 1987, 42-43, Abb. 11.

⁷³⁹ Doppelfeld 1980a, 289-290, T. 22, 27-28; Doppelfeld 1980b, 344-346, Abb. 12, T. 41, 1.

⁷⁴⁰ Koch 1987, 39-42, Abb. 11, type Koch I F.

⁷⁴¹ Legoux/Périn/Vallet 2004, 20, 49, 55 (type 441).

⁷⁴² Ypey/Glazema 1955, 73, 77.

⁷⁴³ Ypey/Glazema 1955, 73, 88.

⁷⁴⁴ This information was obtained from the subscription of photograph 73 in Ypey/Glazema (1955).

⁷⁴⁵ Koch 1987, 116-117.

⁷⁴⁶ Koch 1987, 120.

⁷⁴⁷ Feyeux 2003, 28, type 51, 82-83, 87, nrs. 193-195, Pl. 21.

examples he mentioned are larger than the Pandhof specimen, two are of a yellowish colour and one is colourless. For one of the beakers it is known that it belongs to a finds assemblage that dates to the end of the fifth century.

The beaker from Maastricht can in Siegmund's opinion not be classified as a Kempston beaker because of its deviant height; according to Siegmund Kempston beakers are always higher than 18 cm.⁷⁴⁸ The cone beaker from the Pandhof should therefore be classified as Siegmund's type Gla 7.1, which he identified as the earliest 'Frankish' form of cone beakers. It dates to Rhineland phase 3 (485-530). Height seems to be a strong chronological indicator for cone beakers regarding the resembling small specimens that are dated to the late Roman period.⁷⁴⁹ The Franken AG maintained Siegmund's classification of cone beakers and according to their chronology the Pandhof beaker dates to phase 2 (400-460/80).⁷⁵⁰ Because of the vague type-description of these beakers in the typology of Legoux, Périn and Vallet it is difficult to place the Pandhof beaker in their typo-chronological scheme. All together, a date for this Pandhof beaker in the second half of the fifth century can be proposed.

Roman or Merovingian glass?

Six *unguentaria* of the cemeteries Pandhof and Vrijthof are discussed here as a sub-group because they are difficult to assign unambiguously to either the Roman or Merovingian period. In the Roman period various forms of unguentaria were produced.⁷⁵¹ The forms of the six unguentaria of both the Maastricht cemeteries are long-lasting forms. Moreover, most of their find contexts are Merovingian graves. The poorer quality of the glass, compared to Roman specimens, could, however, also point towards a production of these specimens in the Merovingian period.

Unguentarium: spherical with rounded base

Pandhof: 11273 (394-1).

Appendix 1: Figure 18.

A small bottle, with a height of 5.8 cm and a spherical body with rounded bottom, was found in Pandhof grave 11273. The colour of the glass is difficult to determine because of the strong iridescence and flaking of the outer surface. Parallels for this bottle are not known, and it is not clear whether it should be classified as a bottle of the Roman or Merovingian period. No other finds are known from this context.

Unguentaria with long neck

Pandhof: 10968 (245-4; 245-5); 19999 (9999-13).

Appendix 1: Figure 18.

Three unguentaria with long necks were found in the Pandhof cemetery. The two bottles from Pandhof grave 10968 both have a spherical to pear shaped body with a slight concave base. The neck of bottle 245-4 is for the greater part missing, so it is only assumed that this specimen belongs to this group. It is made of blue glass and has a remaining height of 3.5 cm. Of the other bottle from Pandhof grave 10968 the neck is intact, but the rim is missing. This light green bottle has a remaining height of 12.6 cm of which the neck measures approximately 9 cm. Pandhof grave 10968 consists furthermore of two differently shaped unguent bottles of glass which date to the fifth and sixth century, and two silver decorative pins which date to the sixth and maybe seventh century. Because of the mediocre quality of the glass (a large amount of bubbles can be observed), these specimens seem to have been produced in the Merovingian period, although they are much alike type Isings 82A1 which dates to the third century.⁷⁵² One parallel for these *unguentaria* was found in Trier and was classified as Trier Form 79b.⁷⁵³

⁷⁴⁸ Siegmund 1998, 170.

⁷⁴⁹ Siegmund 1998, 167-169.

⁷⁵⁰ Müssemeier *et al.* 2003, 71.

⁷⁵¹ Isings 1957, 22-27, 40-43, 97-100.

⁷⁵² Isings 1957, 97-99.

⁷⁵³ Goethert-Polaschek 1977, 131-132, 351, nr. 726, T. 55; nr. 727, T. 21, 226a; nr. 728, T. 17, 180l; nr. 735.

Comparable flasks from dateable contexts in this area are dated in the second quarter of the fourth century. On the basis of the parallels and associated finds it can be assumed that the bottles date later than the third century, probably to the fourth and fifth century.

The other *unguentarium* from the Pandhof cemetery (stray find without context) is of light blue glass and has a height of 13.7 cm. It has a conical body of which the upper wall (5 cm) is much longer than the lower wall (1.8 cm). The transition from the body to the neck shows a slight constriction and the neck has a length of 6.9 cm. The rim is horizontally folded outward and inward again.

This specimen can be identified as a variant of Isings type 8, although it is lacking the obvious constriction, which is characteristic for this type.⁷⁵⁴ A resembling flask was found in the cemetery of Vieuxville and regarding this find it is mentioned that several comparable specimens were found in graves that date to the fifth century.⁷⁵⁵ Whether this is an indication for the dating of these flasks remains ambiguous for they can also be Roman survivals. The Pandhof flask probably dates later than Isings type 8 (first to second century) but a more precise date is difficult to establish.

Unguentaria: conical body with a long neck

Vrijthof: 69 (1427-1); 99 (1853-1).

Appendix 1: Figure 18.

Two *unguentaria* with a long neck are characterized by their long neck, their thickened and horizontally folded rim and their conical body. The flask from Vrijthof context 69 (stray find) is made of colourless glass with a greenish tinge. The height of this bottle is 12.1 cm; the neck is 8 cm. The base is slightly concave. The flask from Vrijthof grave 99 is also made of almost colourless glass but it has a bluish tinge. This specimen has a height of 14 cm including a 9.3 cm high neck. The base of this bottle is flat and the conical body is less bulging than that of the bottle from Vrijthof context 69. The outer edge of the horizontally folded rim is curved inwards.

Similar flasks are known from the late first century onwards and hardly change in shape during the Roman period.⁷⁵⁶ Both the Vrijthof bottles can be identified as late varieties of Isings' type 82B2, which dates from the first to the third century.⁷⁵⁷ Two parallels can be found in the cemetery of Krefeld-Gellep, these are classified by Pirling as type 202/804.⁷⁵⁸ These date from the first century A.D. until the first half of the fourth century.⁷⁵⁹ The bottle from Vrijthof grave 99 was found in a grave which consisted furthermore of finds which all date to the Merovingian period. These finds are another glass vessel (squat jar), a bronze key and a bronze plate buckle with strap end. For now these two *unguentaria* are not considered unambiguously as late Roman products, but late varieties of Isings' type 82B. If they are Roman in date, the bottle from Vrijthof grave 99 would be an antique in this grave. However, the picture of the distribution of Roman glass vessels (see above) and their reuse in Merovingian graves is now a specific one. This picture changes when the two Vrijthof bottles are dated to the Roman period.

⁷⁵⁴ Isings 1957, 24.

⁷⁵⁵ Alénus-Lecerf 1993, 139.

⁷⁵⁶ Isings 1957, 97-99.

⁷⁵⁷ Isings 1957, 99.

⁷⁵⁸ Pirling & Siepen 2000, 127-128, grab 5226A, t 79,13, type 804, Typentafel 9; Pirling 1966, 104, Grab 879, type 202, Typentafel 16.

⁷⁵⁹ Pirling 1966, 104 (type 202).

Belts

Belts are identified on the basis of a variety of metal fittings. A belt can, next to a buckle or plate buckle, have additional fittings such as counter plates, back plates, supplementary plates, mounts (*Riemenöse*), belt studs, belt loops and strap ends. These elements are usually made of iron or bronze and, exceptionally, of silver or gold.⁷⁶⁰ Generally, only the metal elements are preserved and these form the basis for the reconstruction of complete belts. Remains of the leather belt itself are only sporadically preserved. The appearance of belts shows a considerable variation throughout the Merovingian period and a significant difference between belts of men and women can also be observed in specific periods of time. Buckles, plate buckles and other belt fittings can usually be attributed to leather belts that were worn around the waist. Similar metal fittings, however, were also part of purses, shoes, leg wear or supplementary belts. Information about the position in the grave is therefore required to ascribe a function to a metal fitting;; if this information is not available, the measurements and typological parallels offer the main indication for their function.

The study of the changes in the morphological features of belt fittings is an important element in chronological studies of Merovingian cemeteries after Christlein's analysis of the belts of *Marktoberdorf*.⁷⁶¹ It is now generally accepted that the morphological development of belt fittings is more or less known, and that this development has supra-regional validity.⁷⁶² The key position of belts in the chronological analysis of cemeteries is commonly acknowledged.⁷⁶³ The typo-chronologies of belts are, next to the material used, decoration and shape, also based on the presence of all relevant fittings of a belt set.⁷⁶⁴ Excavation and post excavation processes create uncertainty about the completeness of the set of fittings, and it is quite likely that a considerable number of the belt sets found is incomplete. Classifications that are based on the belt fittings present should therefore be dealt with cautiously. The type identification on the basis of all the belt fittings thus has to be related to knowledge of the condition of the grave and the post excavation processes. The degree of completeness or incompleteness of the belt set needs to be established.

The belt sets of the Vrijthof and Pandhof cemeteries will be discussed first on the basis of their main fitting, the buckle or plate buckle. The other belt fittings will be discussed in relation to the main fitting and an assessment of the completeness and classification of the belt set will be made.

Belts with simple buckles

Simple buckles have been used for different purposes and this category is therefore probably the most difficult to deal with. Next to their function as fastener for waist belts they are part of shoes, leg wear, purses or leather straps that were attached to the waist belt. Here only the buckles of waist belts are discussed. Twenty-nine simple buckles of waist belts were found in the Vrijthof and Pandhof cemeteries, of which the majority was found in the Pandhof cemetery (table 24).

Buckles are generally classified on the basis of the material used, shape, size, decoration and tongue characteristics. Périn only considers bronze buckles because of the common occurrence and chronological insignificance of iron buckles in his study of Merovingian cemeteries in the Ardenne-Meuse region⁷⁶⁵ A few types of iron buckles are incorporated in the later typological work of Legoux, Périn and Vallet.⁷⁶⁶

⁷⁶⁰ Other materials like *meerscham*, crystal and bone are also known, but rare.

⁷⁶¹ Christlein 1966. See also Siegmund (1996, 698-699) and Schmitt (2005) for a discussion of the chronological sequence of the appearance of belts. Numerous other studies could be mentioned here. The chronological features of iron belt fittings with inlay are for instance discussed in the publication of the cemetery of Erlach of which Groups A and C are interesting for the Vrijthof and Pandhof belt fittings (Marti/Meier/Windler 1992, 34-52; see also Marti 2000, 82-109). Other chronological studies related to individual cemeteries will be used in the analyses presented below.

⁷⁶² Ament, 1976; 1977. The typo-chronology schemes as proposed by Ament in order to refine the *Stufen* system of Böhner (1958) is mainly based on the morphological and decorative change of belt fittings.

⁷⁶³ "Nach diesen vielfältigen Forschungen sind die Allgemeinen Tendenzen der Entwicklung bekannt. Die hier vorgelegten Kartierungen für die rheinländischen Gräberfelder bestätigen die Vermutung, daß sich die Entwicklung am Niederrhein nicht prinzipiell von der anderer Räume unterscheidet" (Siegmund 1998, 18).

⁷⁶⁴ Siegmund 1998, 18-41. Belts are, depending on the belt fittings present, classified as 1-partite, 2-partite, 3-partite or multiple-partite belts. The simple buckles are the exception; they are not classified as such.

⁷⁶⁵ Périn 1980, 231.

⁷⁶⁶ Legoux/Périn/Vallet 2004.

Siegmund acknowledged the common occurrence of simple iron buckles throughout the Merovingian period and the difficulties to date them.⁷⁶⁷ More detailed typologies are available for bronze and silver buckles; these are mainly based on the belt width and tongue shape.⁷⁶⁸ The broad belts (widths of 2.5 to 3.6 cm) are considered to belong to the later phases of the Merovingian period and the simple buckles, of bronze or silver, with a shield- or club tongue are typical for the waist belts of men and women in the early sixth century.⁷⁶⁹

	Silver	Bronze	Iron	Total
Vrijthof	1	7	1	9
Pandhof	5	13	3	21
Total	6	20	4	30

Table 24. The distribution of various types of buckles over the Vrijthof and Pandhof cemeteries.

Buckles with shield tongue: silver

Pandhof: 10102 (23-1); 11321 (418-4); 10561 (522-1).

Appendix 1: Figure 19.

Three silver buckles with a shield tongue are known from the Pandhof cemetery. The buckle from grave 10102 was found on the middle of the pelvis. An identification as buckle of the waist belt is likely. With a belt width of approximately 3.5 cm this buckle is considerably larger than the other silver buckles of the Pandhof cemetery. Although silver buckles of this kind are generally known from 'rich' graves of women, this grave only has three beads, of which one is made of gold wire.⁷⁷⁰

The location of the buckle from Pandhof grave 11321 is uncertain. It is the only belt part from this grave, so a function as fastener for the waist belt is plausible. The shield of the tongue is less pronounced than the shields of the other two silver buckles. This buckle is part of a belt with a width of 1.5 cm. In contrast to grave 10102 this buckle is part of one of the 'richest' graves of a woman of the Pandhof cemetery. The other objects are two gilded bow brooches, two garnet disc brooches, a rock crystal ball, a gold pendant with garnet, a diversity of beads and one golden earring.

The simple decoration of the buckle from context 10561 consists of two engraved/punched in diagonal crossing lines on the base of the tongue and a faceted ornament along the edge of it. The buckle is accompanied by two silver belt studs, which are a strong indication for an identification of this buckle as the fastener of a waist belt. The belt width was approximately 2 cm. The context in which the belt fittings were found is not that of a grave, so the formerly associated grave goods remain unknown. The documentation mentions that these elements were found next to a sarcophagus. Although further information is lacking, it is commonly recognized that buckles with belt studs are part of a belt of a man.⁷⁷¹ An almost identical specimen, including three belt studs, was found in the cemetery of Ciply, grave 878 (Hainaut, Belgium).⁷⁷² A resembling specimen was found in grave 61 of the cemetery of Wünnenberg-Fürstenberg (Kr. Paderborn, Germany). It belongs to the grave goods assemblage of a man which is dated to 550-575.⁷⁷³ This buckle has a length of 3.1 cm and is accompanied with three silver belt studs. Another silver buckle with shield tongue, undecorated, is found in the grave of a boy in the

⁷⁶⁷ Siegmund 1998, 21-22.

⁷⁶⁸ The width of the belt is reconstructed by measuring the width of the inside of the loop of the buckle. The extremity of a leather belt (which passes through the buckle to fasten the belt) can, however, be considerably less wide than the rest of the leather belt. This is especially a feature of belts that consist of multiple (relatively large) fittings.

⁷⁶⁹ Siegmund 1998, 21-22.

⁷⁷⁰ See for example the grave of a woman from Wien-Molding which dates to the sixth century (Menghin 1985, 72). The silver buckle was accompanied by three silver belt studs (violin shaped) and was found in a grave in which furthermore two bow brooches, two garnet disc brooches and some beads were found.

⁷⁷¹ Siegmund 1998, 25.

⁷⁷² Faider-Feytmans 1970, I: 221,2: planche 119. The dating of this grave is problematic because elements of the entire sixth century are included in the set of grave goods.

⁷⁷³ Wieczorek *et al.* 1996, 911-12, 914, 14.g (with a reference to Melzer 1991 81 ff).

cemetery of Krautheim-Klepsau (Hohenlohekreis, Germany). This graves dates to the middle of the sixth century.⁷⁷⁴ Another parallel was found in Hailfingen (Germany) grave 269 and dates to 525-550. It was also found with two silver belt studs.⁷⁷⁵

Summarising, all the silver buckles with shield tongues of the Pandhof cemetery are parts of waist belts. The silver buckles with a shield tongue and with an associated belt width of less than 2.5 cm (Pandhof graves 11321 and 10561) can be classified as Siegmunds type Gür 2.6 and date predominantly in Rhineland phase 4 (530-555) but can also, although more rarely, be found in graves of Rhineland phase 5 (555-570). Siegmund states that the silver buckles of the Rhineland with a belt width of more than 2.5 cm (Siegmund Gür 2.7) were always part of a grave goods assemblage of women.⁷⁷⁶ The beads found in grave 10102 validate this observation. Rhineland buckles of Siegmunds type Gür 2.7 (with a belt width less than 2.5 cm) date in phase 5 (555-570). The Franken AG suggest a different classification of the buckles of Siegmunds type Gür. 2.6 and 2.7. They consider the shape of the tongue base as an important chronological indicator.⁷⁷⁷ The buckles of the Pandhof cemetery can all be classified as buckles with a shield tongue, which coincides with Franken AG type Gür 2.6/7C. Buckles of this kind date in their phases 4-5 (510/25-580/90).⁷⁷⁸ The researchers of the Franken AG observed that silver buckles with shield tongues from their research area are deposited in the graves of women over a longer time (into phase 5) than in the graves of men (restricted to phase 4).

Legoux, Périn and Vallet only identified simple bronze buckles with a shield tongue or club tongue.⁷⁷⁹ Are silver buckles completely absent in the cemeteries of modern Northern France, or are they that rare that classification is refrained from?⁷⁸⁰

Rectangular buckle: silver

Pandhof: 10549 (492-1).

Appendix 1: Figure 19.

The buckle from Pandhof grave 10549 has a decoration of cast grooves and belongs to a belt with a width of 2 cm.⁷⁸¹ A small simple silver tongue was also found in this grave, and it probably belongs to this buckle. The grave also contained a knife (lost), a bronze shield tongue (lost) and a small bronze rectangular buckle which is identified as the fastener of a purse. The exact find location of the silver buckle in the grave is not known, but a function as part of the waist belt is likely.

Buckles of this kind are not identified by Siegmund, nor are they by the Franken AG and Legoux, Périn and Vallet. Exact parallels for this buckle are difficult to find. Rectangular silver buckles, although without grooves such as on the Pandhof specimen, are for example found in grave 129 of the cemetery of Vogelstang (Germany), which dates in the middle of the sixth century⁷⁸², and in grave 6 of the cemetery of Westheim (Kr. Weißenburg-Gunzenhausen, Germany). This is the grave of a man which is dated to 525-550.⁷⁸³ The tongue of this buckle is broad and trapezium shaped. Another rectangular bronze buckle with the same measurements, with shield tongue, is found in grave 41A of the cemetery of Ingelheim (Kr. Mainz-Bingen, Germany), which dates to 625-650.⁷⁸⁴ On the basis of this information it

⁷⁷⁴ Koch 1990, 47 ff.; Taf. 16.

⁷⁷⁵ Stoll 1939; Knaut 1996, 301, Abb. 241.

⁷⁷⁶ Siegmund 1998, 23-24.

⁷⁷⁷ Müssemeier et al. 2003, 16-17.

⁷⁷⁸ Müssemeier et al. 2003, 16-17.

⁷⁷⁹ Legoux/Périn/Vallet 2004, 231.

⁷⁸⁰ Two silver buckles were found in grave 20 of the cemetery of Chaouilley (Fr., Dép. Meurthe-et-Moselle). This grave dates to 525-550. See Voinot 1904; Menghin 1983, 225, Nr. 57 and Périn (1996, 231, Abb. 165).

⁷⁸¹ This buckle was registered as find-number 328 (grave 10250). The original grave finds archive (the Pandhof-archive), however, shows a drawing of this buckle with find-number 492 (grave 10549). From grave 10250 no other finds are present, although the archive mentions a flat iron fragment and a glass vessel. The buckle with find-number 328 is not mentioned. Grave 10549 contained a knife (lost, mentioned in the archive), a small rectangular bronze buckle, and the remnants of a bronze shield tongue (lost). It is decided to follow the information in the grave finds archive and assign the silver buckle to grave 10549.

⁷⁸² Koch 2007, 299, Abb. 14, Grab 129. It is part of a grave goods assemblage of a 1-year old girl.

⁷⁸³ Reiß 1994, 245f.; Abb. 76; Farbabb. 11; 13; Taf. 14, C; 15, A.

⁷⁸⁴ Zeller 1989/90, 350 ff.

can be assumed that silver rectangular buckles date earlier than the bronze specimens. A date to the first half of the sixth century is therefore proposed for the Pandhof buckle.

Various buckles: silver

Pandhof: 10885 (139-4).

Appendix 1: Figure 19.

Because the tongue of this buckle is missing it cannot be classified within the group of silver buckles with shield tongue or '*Kolben*' tongue of Siegmund or the more detailed classification on the basis of the tongue shape by the Franken AG. This buckle is identified as a component of a grave goods assemblage of a woman on the basis of the associated beads. It can not be qualified as the fastener of the waist belt, because the elaborate iron belt fittings with silver inlay that were found in this grave are considered to be the fittings of the waist belt.⁷⁸⁵ The silver buckle is found, together with the tri-partite belt, on the pelvis. It is difficult to establish the function of this small buckle, but probably it served as the fastener of a purse or it was an element of an additional leather strap of which the width was approximately 1 cm. This belt width is in accordance with the buckles that are classified by Siegmund as type Gür. 2.4 (club tongue) or Gür. 2.6 (shield tongue) which date in Rhineland phase 4 (530-555) and more sporadically in phase 5 (555-570).⁷⁸⁶ Considering the classifications of the Franken AG and Legoux, Périn and Vallet the same remarks on silver buckles as above apply.

Silver buckles are rare finds in Merovingian graves, and the number of five silver buckles in one cemetery is remarkable.

Buckles with garnet: silver

Vrijthof: 0 (1487-5, 3).

Appendix 1: Figure 19.

A silver buckle with garnets was found in the Vrijthof cemetery, the context is unknown. The rod and tongue of this buckle are lost. Silver buckles with garnets have either oval or rectangular loops. A close parallel was found in grave 10 of the cemetery 'Vieux Cimetière' in Arlon (Belgium, prov. of Luxembourg). The grave goods assemblage (sword, glass beaker, purse-lid with garnets, axe, pottery, bronze basin, bucket, knife and tweezers) points to a date in the second quarter of the sixth century.⁷⁸⁷ Among the finds bought by the national museum of antiques (Leiden) with a 'Maastricht' provenance, a buckle with garnets is present.⁷⁸⁸

Legoux, Périn and Vallet only identified plate-buckles with garnets, which date predominantly in their phase MA1 (470/80-520/30) and sporadically in the second half of phase PM (440/50-470/80) and in MA2 (520/30-560/70).⁷⁸⁹ They are often associated with a kidney shaped or rectangular plate (see for instance various examples in the Picardy (France)).⁷⁹⁰ Siegmund and the Franken AG do not identify buckles or plate-buckles with garnets. It is unknown whether the buckle of the Vrijthof was part of a plate buckle, but it can be assumed that it dates in the same period as proposed by Legoux, Périn and Vallet for the resembling plate buckles.

Buckles with rectangular loop: bronze

Pandhof: 10186 (26-1, 2, 3); 19999 (524-1, 2).

Appendix 1: Figure 19.

⁷⁸⁵ It remains uncertain, however, if this tri-partite belt is actually part of this grave (see the section on this elaborate belt below).

⁷⁸⁶ Siegmund 1998, 23-24.

⁷⁸⁷ Roosens/Alénus-Lecerf 1963, 52, fig. 30-8, 143-144, fig. 84, 162.

⁷⁸⁸ Rijksmuseum van Oudheden. RMO nr, 1995/12.3 (Theuws in prep.)

⁷⁸⁹ Legoux/Périn/Vallet 2004, (type 142) 16, 31, 53. This type is defined on the basis of the presence of a plate buckle, although a number of buckles without plate are depicted as examples of this type.

⁷⁹⁰ Bayard 1986.

Most of the rectangular bronze buckles from the Vrijthof and Pandhof cemeteries are relatively small and are identified as components of shoes, leg wear or purses. The three rectangular buckles discussed here, are larger in size and their identification as buckles of the waist belt is more likely. The width of the belts ranges from 1.5 to 2 cm. The tongues of all these buckles are lost.

The buckle from Pandhof context 10186 was part of a belt with a width of approximately 1.5 cm. It was found together with two strap ends, the context is not identifiable.

The find location of the two buckles with find number 524 is unknown. They were found together with two simple bronze rings.

Rectangular buckles that served as fastener of the waist belt are not identified as a separate group by Siegmund, nor are they by the Franken AG. Legoux, Périn and Vallet identified two types of buckles with a rectangular loop that are larger than the small rectangular buckles from the Pandhof. The classification of the larger buckles is based on the shape of the tongue, a feature that cannot be identified for the Pandhof buckles. Type 122 is rare, and is assigned to phase MA1 (470/80-520/30). Type 123 dates in the phases MA2-MA3 (520/30-600/10).⁷⁹¹

Buckles with oval/round loop with shield/round tongue: bronze

Vrijthof: 89 (1428-1); 95 (1481-1, 2); 214 (1761-1); 286 (1810-1). Pandhof: 10161 (452-1); 10332 (556-1, 2, 3, 4, 6).

Appendix 1: Figure 19.

Four complete bronze buckles with an oval or round loop and shield or round tongue base were found in the Vrijthof and Pandhof cemeteries; of two buckles only the tongue was found.

The buckle from Vrijthof context 89 is the only specimen with elaborate decoration. The punched in or engraved geometric decoration is applied on both the loop and tongue; such highly decorated buckles seem to be rare. The belt width is approximately 2.3 cm. Unfortunately this buckle was found in a pit that also contained early medieval pottery fragments. It is likely that this buckle originated from the Vrijthof cemetery but got detached from its original grave context. A similar specimen is classified by Böhner as type A6 which mainly dates in his Stufe III (525-600).⁷⁹² According to Legoux, Périn and Vallet decorated buckles of this kind belong to their type 116 which dates predominantly in phase MA2 (520/30-560/70) and more sporadically in phase MA3 (560/70-600/10).⁷⁹³ The Franken AG classify this type of buckle as Gür 2.6/7C which belongs to their phase 4 (510/25-565).⁷⁹⁴ A close parallel is found in grave 85 in the cemetery of Rübenach (Germany).⁷⁹⁵ This grave belongs to phase A3/B1-2 (c. 525/35-600).⁷⁹⁶ The elaborately decorated bronze buckle from grave 224 from the cemetery of Kleinlangheim dates in Stufe AM III (560/70-600).⁷⁹⁷ The shape of the shield tongue and the decoration are, however, not exactly similar to the specimen of the Vrijthof cemetery, a remark that also applies to the buckle from grave 25 of Basel-Bernerring.⁷⁹⁸ The mentioned buckles originate all from the graves of men.

The loop of the buckle from Vrijthof grave 286 shows a simple decoration of cast lines that follow the shape of the loop. The belt width is approximately 1.9 cm. The buckle is located at the upper body, just above the pelvis, it is likely that it was the closure of a waist belt. No other finds, except some pottery fragments, are known from this grave. A parallel for this buckle is known from Rittersdorf grave 102, although it has a more pronounced tongue base. Böhner classified this buckle as type A6.⁷⁹⁹

The third complete shield tongue buckle is ascribed to Pandhof grave 10161. This undecorated buckle belongs to a slim belt with a width of 1.5 cm. The buckle from Pandhof context 10161 is found together with a pottery spindle whorl in an undisturbed sarcophagus, so it is likely that the grave goods

⁷⁹¹ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 122).

⁷⁹² Eisenach grave 07/10 (Böhner 1958, 181-183, Taf. 36).

⁷⁹³ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 116).

⁷⁹⁴ Müssemeier et al. 2003, 17, Abb. 6 (*Schilddornschnalle*).

⁷⁹⁵ Rübenach grave 85 (Neuffer-Müller/Ament 1973, Tafel 6, 85.33).

⁷⁹⁶ Wieczorek 1987, Abb. 25. In his classification the buckle has code 75 (see Abb. 7.75).

⁷⁹⁷ Pescheck 1996, 48, 252, Taf. 51.2.

⁷⁹⁸ Martin 1976, 61-62, Abb. 21-8, Taf. 1.5.6. Other parallels for this buckle are mentioned by Martin.

⁷⁹⁹ Böhner 1958, 181-183, Taf. 36.

assemblage originally consisted of these two finds only. The location of the finds in the grave is unknown. Legoux, Périn and Vallet classify undecorated bronze buckles with shield tongue as type 115 and date them in the second half of their phase MA1 (470/80-520/30) and phase MA2 (520/30-560/70) and more sporadically in phase MA3 (560/70-600/10).⁸⁰⁰ Because of their belt width, all these buckles can be placed in Siegmund's group Gür. 2.6 and dated in Rhineland phases 4 and 5 (530-570).⁸⁰¹

The fourth complete shield tongue buckle is the buckle from Vrijthof grave 95. It belongs to a belt with a width of approximately 2.5 cm and it is found together with a bronze belt stud which is identified as part of this belt. The buckle and belt stud are found just below the pelvis, which makes an identification as elements of the waist belt likely. These belt elements are part of the grave goods assemblage of a woman which furthermore consists of two earrings, a garnet disc brooch, a fragment of a glass 'La Tène' bracelet, a knife, a string of beads and a comb.

The two other objects in this group are bronze shield tongues of which the associated loops are missing. It is not possible to establish the width of the belts and whether they belonged to a buckle or plate buckle. The shield tongue from Pandhof grave 10332 has some decorated bronze foil attached to it. It is not clear if this belonged to the buckle or the associated plate, or another object. It was found together with a strap end, two mounts without opening (*Riemenöse*), a small bronze simple strap end and a belt loop, which are an indication that it was originally a belt which consisted of multiple fittings. The documentation also mentions a bronze back plate, but this object is lost. Three bronze domed rivets remain, and these are probably remnants of this back plate. It can be assumed that a bronze plate buckle was probably part of this belt (see the section on belts with bronze fittings below). The here described tongue can very well be part of such a plate buckle. Only a part of this grave is left (the part of the legs), and the position of the objects in what are the remains of this grave is not known.

The bronze tongue from Vrijthof grave 214 is found together with a string of beads and a bronze buckle (lost). It is remarkable that two different find locations are indicated for the tongue and the buckle in this grave. The buckle is found on the pelvis, the tongue on the left knee. No information is available on the lost bronze buckle. It is uncertain whether they originally belonged together. The bronze tongues are difficult to date, they can both belong to a buckle and a plate buckle. A date in Rhineland phases 4 to 6 (530-585) is likely. If the tongue from Pandhof grave 10332 is part of an elaborate belt set with bronze fittings a date in Rhineland phase 6 (570-585) is justified.

Buckles with club tongue: bronze

Vrijthof: 187 (1643-1). Pandhof: 10796 (142-6); 10988 (255-1); 19999 (9999-1).

Appendix 1: Figure 19.

Two bronze buckles with a tongue with a relatively broad base can be described as buckles with a so-called '*Kolbendorn*' or club tongue. The two club tongues that are stray finds are identified as part of the same group.

The tongue of the buckle from Vrijthof grave 187 is narrowed towards the top, a feature with chronological significance, which can not be observed on the other tongues. This buckle is part of a relatively 'rich' grave goods assemblage of a woman (garnet disc brooches, earrings, finger ring and a string of beads). It was found on the pelvis what makes a function as closure of the waist belt likely.

The position of the bronze buckle from Pandhof grave 10988 is unknown. It is found together with a garnet disc brooch and a string of glass beads. It belonged to a waist belt with a width of approximately 1.5 cm, the loop has a semi-circular section

The tongue (without buckle) from Pandhof grave 10796 is decorated with two engraved lines on the basis. It is found together with an axe and with two bronze pins. Pins of this kind are generally part of an assemblage of grave goods of a woman. The position of this tongue in the grave is unknown. The

⁸⁰⁰ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 115).

⁸⁰¹ Siegmund 1998, 23-24.

second tongue (9999-1) is a stray find, and its association with other finds is unknown. These two tongues can also be part of a plate buckle.

Buckles with a club tongue are frequently found in Merovingian cemeteries.⁸⁰² Both the Vrijthof and Pandhof buckles were part of a belt with a width of less than 2.5 and can be classified as Siegmund type Gür 2.4. This type dates in Rhineland phase 4 (530-555).⁸⁰³ Buckles with club tongue with a belt width of more than 2.5 cm are mainly part of the grave inventories of men in Siegmund's research area. The belt width remains unknown for both the tongues without buckle. Buckles with a belt width of more than 2.5 cm also date in Rhineland phase 4.⁸⁰⁴ For this reason the Franken AG did not maintain the division based on the belt width. Buckles with club tongue date in their phases 3-4 (460/80-565).⁸⁰⁵ Legoux, Périn and Vallet classified these buckles as type 109 which predominantly date in their phases PM-MA1 (440/50-520/30) and sporadically in phase MA2 (520/30-560/70).⁸⁰⁶

Buckle with iron tongue: bronze

Vrijthof: 68 (1149-1).

Appendix 1: Figure 20.

One bronze buckle with a simple iron tongue is found in the Vrijthof cemetery. The bronze buckle has an oval loop with a rod and an oval loop section. It is found, together with a string of glass beads, near the neck of the buried person. This buckle was part of a belt with a width of approximately 3 cm.⁸⁰⁷ It can be assumed that the iron tongue is a replacement of a missing shield tongue or club tongue. The broad bases of these sorts of tongues require a rod for their fixation to the buckle. This buckle is most likely part of an assemblage of grave goods of a woman and consists next to the string of beads of a late Roman bow brooch.

Siegmund classifies bronze buckles with a simple iron tongue and a belt width of more than 2.5 cm as Gür 2.9 and dates them in Rhineland phases 5-7 (555-610). The Franken AG discarded this type because the specimens from their research area have too many differences to classify them as a single type.⁸⁰⁸ Legoux, Périn and Vallet classify bronze buckles with simple iron tongues as type 112, which dates sporadically in phase PM (440/50-470/80) and more frequently in phases MA1-MA3 (470/80-600/10).⁸⁰⁹

Various buckles: bronze

Vrijthof: 230 (1766-1). Pandhof: 10061 (48-1); 10885 (150-1).

Appendix 1: Figure 20.

Four different bronze buckles without tongue can not be classified more precisely. The loops of the buckles from Vrijthof grave 230 and Pandhof grave 10885 have a round /oval section and a rod. The buckle of the Vrijthof cemetery has a belt width of approximately 2 cm, the Pandhof belt was approximately 1.5 cm wide. All tongue shapes are possible for these buckles. The Vrijthof buckle was found near the left hand. The gender identification on the basis of the grave goods of the associated person remains uncertain. Next to a string of beads (missing), a decorative disc of antler and a comb with case, pieces of flint and a series of 'neutral' objects (shear, knife pottery) were also found. The Pandhof buckle was found together with a small silver buckle and an iron belt set with inlays consisting of a plate buckle, counter plate and back plate (although the assignment of this belt set to this grave

⁸⁰² Parallels for the specimen from Vrijthof grave 187 are for example known from Köln-Müngersdorf (Fremersdorf 1955) graves 19-6, 76-7, 84-5, 105-12, 102-2; Junkersdorf (La Baume 1967) graves 352-1, 494-1, and Schretzheim (Koch 1977) grave 35. Bronze buckles with club tongues are in short discussed by Martin. He dates them in the middle and second half of the sixth century, although they might occur earlier in the sixth century (Martin, 1976, 62-63).

⁸⁰³ Siegmund 1998, 23.

⁸⁰⁴ Siegmund 1998, 23.

⁸⁰⁵ Müssemeier *et al.* 2003, 16.

⁸⁰⁶ Legoux/Périn/Vallet 2004, 15, 30, 53 (type 109).

⁸⁰⁷ Siegmund mentions that large bronze and silver buckles (with a belt width between 2.5-3.6 cm) are characteristic for the period after the early sixth century in which the smaller buckles are dated (Siegmund 1998, 21).

⁸⁰⁸ Müssemeier *et al.* 2003, 17-18.

⁸⁰⁹ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 112).

remains uncertain). This assemblage consists furthermore of two glass vessels, a knife and a finger ring. The identification of the gender of the buried person remains uncertain. The bronze buckle from Pandhof grave 10061 also has a round section, but is much smaller. This buckle is found together with a string of beads and a back plate which, however, is different from the buckle. It remains uncertain whether they were part of the same belt.

The relatively small width of the belts of bronze buckles without plate is one of the characteristics which date these buckles in the beginning of the sixth century.⁸¹⁰ The belt of the buckle from this Pandhof grave is wider than the other buckles, so it can be argued that this buckle dates later than the beginning of the sixth century.

Buckles with simple tongues: iron

Vrijthof: 168 (1533-1). Pandhof: 10094 (22-1, 2); 10122 (73-1).

Appendix 1: Figure 20.

The iron buckle from Vrijthof grave 168 has a simple iron tongue. The two iron buckles of the Pandhof cemetery are that much corroded that the shape of the tongue can not unambiguously be identified as simple, these can also be a small club tongues or shield tongues with a narrow base. The buckle from Vrijthof grave 168 was part of a belt with a width of approximately 2.2 cm. It was found in a grave together with a seax, knife, two pins with a ring and two pottery vessels. The buckle was found between the upper legs what makes the identification as closure of the waist belt likely. The buckle from Pandhof grave 10094 is part of a belt with a width of approximately 2.3 cm, although this can be wider considering the corrosion. The buckle is found on the pelvis, so it is likely that it was part of a waist belt. The find location of the small bronze strap end from this grave is unknown. The assemblage of grave goods belongs to a woman and consists furthermore of a comb in a case, a bronze brooch and a glass bead. The buckle from Pandhof grave 10122 belongs to a belt with a width of approximately 1.5 cm, an exact measurement is difficult to establish because of the corrosion. It was found together with a glass bottle and a string of beads. The position of the buckle in the grave is unknown.

Iron buckles are known as grave goods throughout the Merovingian period and characteristics to date them more precisely are difficult to find, although the width of the associated belt can give some indications.⁸¹¹ In view of the width of the belt (less than 2.5 cm), all the iron buckles with simple tongues can be classified as Siegmund type 2.2.b. This type dates in Rhineland phases 2-3 (440-530).⁸¹² If this is correct, the buckle from Vrijthof grave 168 is an old piece in the assemblage it was found in. The Franken AG, however, have some reservations regarding the early date of this type. Moreover, they think that the diversity in this group is too large to classify them as a single type.⁸¹³ Legoux, Périn and Vallet do not classify simple iron buckles.

Buckle with bronze shield tongue: iron

Pandhof: 10042 (60-1).

Appendix 1: Figure 20.

An exceptional buckle with an iron loop and a bronze shield tongue is found in Pandhof grave 10042. The iron loop is that much corroded that the belt width is difficult to establish, but a width of approximately 2 cm can be expected. The two elements of this buckle did probably not form an original unity, but were assembled in a later stadium. The buckle is found together with a filigree disc brooch, a string of beads, a silver decorative pin, a knife and a bronze ring, which mainly date in the sixth century. The filigree disc brooch dates to the end of the sixth century and beginning of the seventh century. Iron buckles with bronze tongues are rare, and are not identified as a type by Siegmund, the Franken AG and Legoux,

⁸¹⁰ Siegmund 1998, 21.

⁸¹¹ Siegmund 1998, 21-22.

⁸¹² Siegmund 1998, 22-23.

⁸¹³ Mússemeier *et al.* 2003, 15-16.

Périn and Vallet. Bronze shield tongues appear over a long period (second half sixth century into the seventh century), and iron buckles with a belt width under 2.5 cm date in Rhineland phase 2-3 (440-530).⁸¹⁴ Regarding the associated grave goods, the iron loop can be considered to be an old piece, repaired with a more recent bronze shield tongue. It is classified according the bronze shield tongue as Siegmund type 2.6, which dates in Rhineland phases 4-5 (530-570).⁸¹⁵

Belts with plate buckles

A considerable number of plate buckles (or counter plates which indicate the former presence of a plate buckle) was found in the Vrijthof and Pandhof cemeteries (table 25). Silver plate buckles are rare, and only one was found in the Pandhof cemetery.⁸¹⁶ The difference between the number of belts with iron fittings in the Vrijthof and Pandhof cemeteries is remarkable. Belts with iron fittings with inlay are rare in the Pandhof cemetery, and were more frequently found in the Vrijthof cemetery.

	Silver	Bronze	Iron, undecorated	Iron, inlays	Total
Vrijthof	-	9	2	8	19
Pandhof	1	12	1	1	15
Total	1	21	13	9	34

Table 25. The distribution of plate buckles over the Vrijthof and Pandhof cemeteries.

Iron belt fittings with inlays generally date in the seventh century. Did the deposition of belts become rare in this period in the Pandhof cemetery, whereas it was still a popular practice for burials in the Vrijthof cemetery? In the end the dating of all the belts of the Vrijthof and Pandhof cemeteries will clarify this difference.

The loops of plate buckles show the same variety in shapes, material and tongue shapes as the simple buckles. Material, decoration technique and decoration patterns and the construction with which the plate is fixed to the loop show a significant development during the Merovingian period and are therefore considered to be strong chronological indicators. The plates are attached to the loop with a wrapped or a hinged construction (the hinged construction is earlier than the wrapped construction) or they form one piece with the loop, the so-called fixed plates.⁸¹⁷ Larger plate buckles with a fixed plate that are part of a waist belt are not as common as plate buckles with wrapped constructions and are usually considered to be of an 'exotic' provenance.⁸¹⁸ This, however, seems to be a problematic assumption which will be discussed further on. On the other hand, small buckles with fixed plates are common in Merovingian graves and are generally identified as purse- or shoe elements. The buckles and the plate buckles are considered to be the main fittings of the waist belt. The associated belt fittings will be discussed in relation to the plate buckle, the belt fittings without associated buckle or plate buckle will be discussed separately.

⁸¹⁴ Siegmund 1998, 22 (type Gür 2.2.b).

⁸¹⁵ Siegmund 1998, 23-24.

⁸¹⁶ Another silver plate buckle was found in Pandhof grave 10435. This specimen is identified as a fitting of straps that formed part with the weapon gear, and is described as such (see the section on seaxes).

⁸¹⁷ Siegmund 1998,

⁸¹⁸ Fingerling 1967.

Plate buckles: silver and bronze with fixed plate

Vrijthof: 194 (1503-1); 222 (1648-1). Pandhof: 10799 (128-1).⁸¹⁹

Appendix 1: Figure 20.

Two nearly identical buckles are known from Vrijthof grave 194 and Pandhof grave 10799.⁸²⁰ The Vrijthof buckle is of bronze and the Pandhof buckle of silver. As it is not useful to publish them separately I will deal with both of them here. Their near identity relates to their outline. The buckle of the Vrijthof has an open plate, whereas the Pandhof specimen is closed and has inlays of gilded silver foil. It is not known whether the Vrijthof buckle originally had decorated middle fields or not. Both buckles have a vertical middle rib and a shield tongue. The shield at the base of the tongue of the Vrijthof specimen is smaller than that of the Pandhof buckle. The Vrijthof specimen was attached to the belt with the help of three fasteners on the back of the plate. On top of the plate three fake rivets are placed. The Pandhof specimen is found in the grave of a woman, that of the Vrijthof in the grave of man.

Fingerling introduced the term 'Mediterranean buckles' for a specific group of plate buckles to which our Maastricht examples belong.⁸²¹ The distribution of this group, however, is not just limited to the Mediterranean world, but also extends into the Merovingian world (fig. 16).⁸²² The main characteristic on the basis of which this group of plate buckles is defined as Mediterranean is the fixed attachment of the plate to the loop. As Fingerling mentions, this characteristic is not common among the plate buckles from Merovingian graves.⁸²³ Other characteristic features of the Maastricht buckles are the profiled outline of the plate, the bulge at the extremity of the plate, the shield tongue, the vertical rib on the plate and the rectangular loop.

Fingerling refers to the wish of scholars of Merovingian material culture to place this group of plate buckles in the typological development of Merovingian belts, because these 'Mediterranean' plate buckles could be seen as an intermediate form between the simple bronze or silver buckles with shield tongue, accompanied by belt studs, and the chronologically later plate buckles of which the plate is attached to the buckle with a wrapped construction.⁸²⁴ Such a chronological development of Merovingian belts is, however, only known from the belts found in graves of men. Women continued to be buried with simple plate buckles throughout the sixth century. Fingerling's article is somewhat dated, but the observation that these plate buckles occur in graves of both men and women is still valid. Therefore this group of plate buckles can be considered an exceptional group in the Merovingian world and should not be placed in the general development of Merovingian belts. The main questions Fingerling addresses in his article are about the provenance (production place) and dating of these specific plate buckles using the find of Güttingen (Germany) as a starting point of the analysis. He offers an overview of all 'Mediterranean' plate buckles with fixed plates known at the time of publication. It seems to be useful to split up the group of buckles with open plate into a number of subgroups each comprising more or less identical specimens. Within the group of 'Mediterranean' buckles a subdivision is made whereby the finds from the Pandhof and Vrijthof are characteristic of a specific subtype (fig. 15).

For the Vrijthof specimen (with open plate) an exact parallel, in silver, is known from the cemetery of Bülach (Switzerland), grave 18 (grave of a man)⁸²⁵ as well as from Altenerding (Germany) grave 755 (grave of a man), although the last specimen is of bronze.⁸²⁶ A near exact parallel is known from Reichenhall (Germany) grave 136,⁸²⁷ a somewhat degenerate example is known from Caranda

⁸¹⁹ Ypey/Glazema 1955, 69.

⁸²⁰ The Pandhof buckle has been published before: Vinski 1967 [1974], Tab. XLII, nr 1.

⁸²¹ Fingerling 1967. He explicitly mentions the Pandhof specimen. Vinski (1967 [1974]) also dealt with this type of buckles. He too refers to the Pandhof specimen (Vinski 1967 [1974], tab. XLII). Several authors before them already suggested a Mediterranean origin for these buckles or suggested that they were 'imitations' of Mediterranean buckles, but did not carry out a systematic survey of these types.

⁸²² Fingerling 1967. See also Pescheck (1996, 42) who does not distinguish in the distribution pattern between the types Kranj and Maastricht.

⁸²³ Fixed plates are only known from shoe- and purse buckles and from belts with multiple fittings from the late Merovingian period (Fingerling 1967, 159).

⁸²⁴ Fingerling 1967, 161.

⁸²⁵ Fingerling 1967, 181, Fundliste D nr 1, Tafel 69, 1. Werner 1953, 22, 87.

⁸²⁶ Sage 1984, I, 202; II, Tafel 101, 33.

⁸²⁷ Fingerling 1967, 181, Fundliste D nr 3, Tafel 69, 2.

(France).⁸²⁸ Finally a fragment of a specimen from the cemetery of Weingarten (Germany), grave 757, probably belongs to this group, although the end of the plate with the characteristic vertical rib is lost.⁸²⁹ It is the grave of a man (anthropologically determined) in which also a sword, a pot, a knife, some flint and a flint iron and some bronze foil was found. Werner dates grave 18 of Bülach in the first half of the seventh century. The grave of Altenerding is difficult to date exactly, next to this buckle a sword, a seax, two simple rectangular buckles, strips of bronze foil and two pieces of flint were found in it. The seax is small, pointing to an early date. The grave probably dates from the second half of the sixth century, but it is not of great help in dating this type of buckles. The grave of Weingarten too is difficult to date exactly.

These buckles belong to Fingerling's group of the form 'Maastricht' to which he also adds a buckle of uncertain provenance, but possibly from Engers (Germany).⁸³⁰ His Maastricht group was designated after the specimen found in the Pandhof, that however has not an open plate (see below). At the time of his publication the Vrijthof specimen had not been found yet. The designation as Maastricht group can however be kept, but the name giving specimen should be that of the Vrijthof cemetery. Other buckles with open plates that are related to the Vrijthof specimen are known from Kranj (Slovenia) grave 6,⁸³¹ Palazuelos (Spain),⁸³² Langenenslingen (Germany) grave 4, in which a sword has been found that is dated by Menghin in his phase 6 (middle of the sixth century),⁸³³ Charnay (France),⁸³⁴ Cologne (Germany),⁸³⁵ Kruft (Germany),⁸³⁶ Carpio de Tajo (Spain) grave 45,⁸³⁷ Castiltierra (Spain),⁸³⁸ Alarilla (Spain) 3 specimen,⁸³⁹ Kleinlangheim (Germany) grave 140,⁸⁴⁰ and a specimen from Spain of which the provenance is unknown.⁸⁴¹ More examples than are listed here may be present in Spain. These buckles belong to Fingerling's subgroup 'Kranj' of the group of buckles with open plate next to a subgroup 'Mindelheim' of which the specimen differ too much from those of Maastricht to deal with them here. A buckle that is related to the Maastricht and Kranj groups is the one found in grave 33 of the cemetery at Basel-Bernerring.⁸⁴² This buckle with open plate, closed off at the back side by a silver plate, however differs in its form of the Kranj group (see below). Fingerling came to the conclusion that none of his types with fixed plates predated the Lombard period, which according to him implies that they must date after the Lombard conquest of Italy that is after 568. Most of the buckles dated according to him around 600.⁸⁴³

The silver buckle of Maastricht-Pandhof is in its outline identical to the one of the Vrijthof cemetery, however it has not an open plate. It is inlaid with foil of gilded silver on which filigree is attached. The filigree runs along the edges of the foils. Comma-like motifs ornament the inner fields. The bronze foils are attached to the plate with the help of five small rivets. The rivets of the foil near the end of the plate are encircled with filigree; the two of the oblong foil near the tongue are not. This buckle thus formally does not belong to the buckles with open plates, that is Fingerling's group 'Maastricht', named after this buckle, but obviously there are close connections with this group. The buckle was attached to the belt with the help of three fasteners. No fake rivets are present on the plate.

⁸²⁸ Fingerling 1967, 181, Fundliste D nr 4, Tafel 69, 3. This specimen is included because of the characteristic vertical rib.

⁸²⁹ Roth/Theune 1995, 222-223, Tafel 273.

⁸³⁰ Fingerling 1967, 181, Fundliste D. In the new presentation of the grave finds from Engers by Grunwald no such buckle is mentioned (Grunwald 1998, 108-109).

⁸³¹ Fingerling 1967, 182, Fundliste E nr 20, Tafel 69, 6. Stare 1980, 106, T. 2. Vinski 1980, 96.

⁸³² Fingerling 1967, 182, Fundliste E nr 16, Tafel 69, 7.

⁸³³ Menghin 1983, 248, catalogue nr 98, 8. On the date of the sword: Mengin 1983, 135.

⁸³⁴ Fingerling 1967, 182, Fundliste E nr 11. Vinski 1967 [1974], Tab. XLII, nr 3.

⁸³⁵ Fingerling 1967, 181, Fundliste E nr 7, Tafel 69, 5.

⁸³⁶ Fingerling 1967, 182, Fundliste E nr 8, Tafel 69, 4. Ament 1976, 204, Tafel 25, 8.

⁸³⁷ Fingerling 1967, 182, Fundliste E nr 14. Ripoll 1985, 72-73, 214, nr 1.

⁸³⁸ Palol/Ripoll 1999 (1988), 50, nr 191.

⁸³⁹ Zeiss 1934, 34-35, Tafel 14, 10, 11 and 13.

⁸⁴⁰ Pescheck 1996, I, 41-42, 238-239; II, Tafel 31,5. It is the grave of a woman dated in the Ältere Merowingerzeit III (560/570-600).

⁸⁴¹ Zeiss 1934, Tafel 14, 14.

⁸⁴² Martin 1976, 64-66, 281-288.

⁸⁴³ Fingerling 1967, 170. For the buckles discussed here this date seems to be too late.

This Maastricht buckle has already been discussed several times. It is related to the one in the cemetery of Basel-Bernerring grave 33 that is also decorated with filigree ornamented middle fields (fig. 15).⁸⁴⁴ In many respects however this buckle also differs from the one in Maastricht-Pandhof. The Basel specimen has in fact an open plate that is closed off on the back side with a silver foil. Moreover, the plate itself is decorated with heads of dolphins and horses, which relates it to Mediterranean products. The filigree ornament of the Maastricht buckle remotely reminds of the S-ornaments of the Basel buckle. Martin dates the Basel buckle in the second or beginning of the third quarter of the sixth century.⁸⁴⁵ Moreover he mentions two other buckles comparable to the one from Basel. They come from Nordendorf (Germany) and grave 22 of the cemetery of Castel Trosino (Italy).⁸⁴⁶

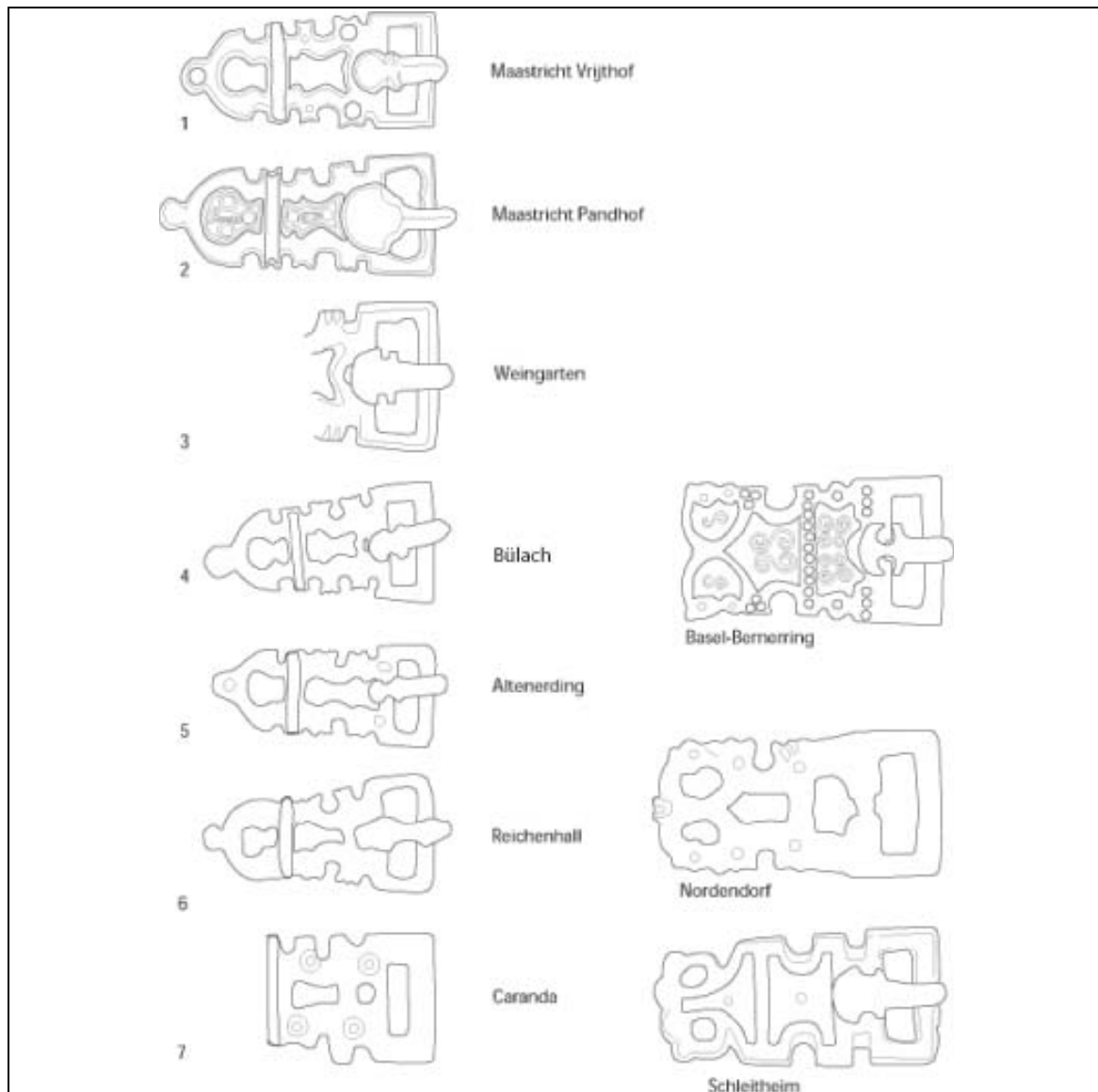


Figure 15. Parallels of the 'Mediterranean' plate buckles from Maastricht.

⁸⁴⁴ Martin 1976, 64-66, 281-288.

⁸⁴⁵ Martin 1976, 66.

⁸⁴⁶ Martin 1976, 64.

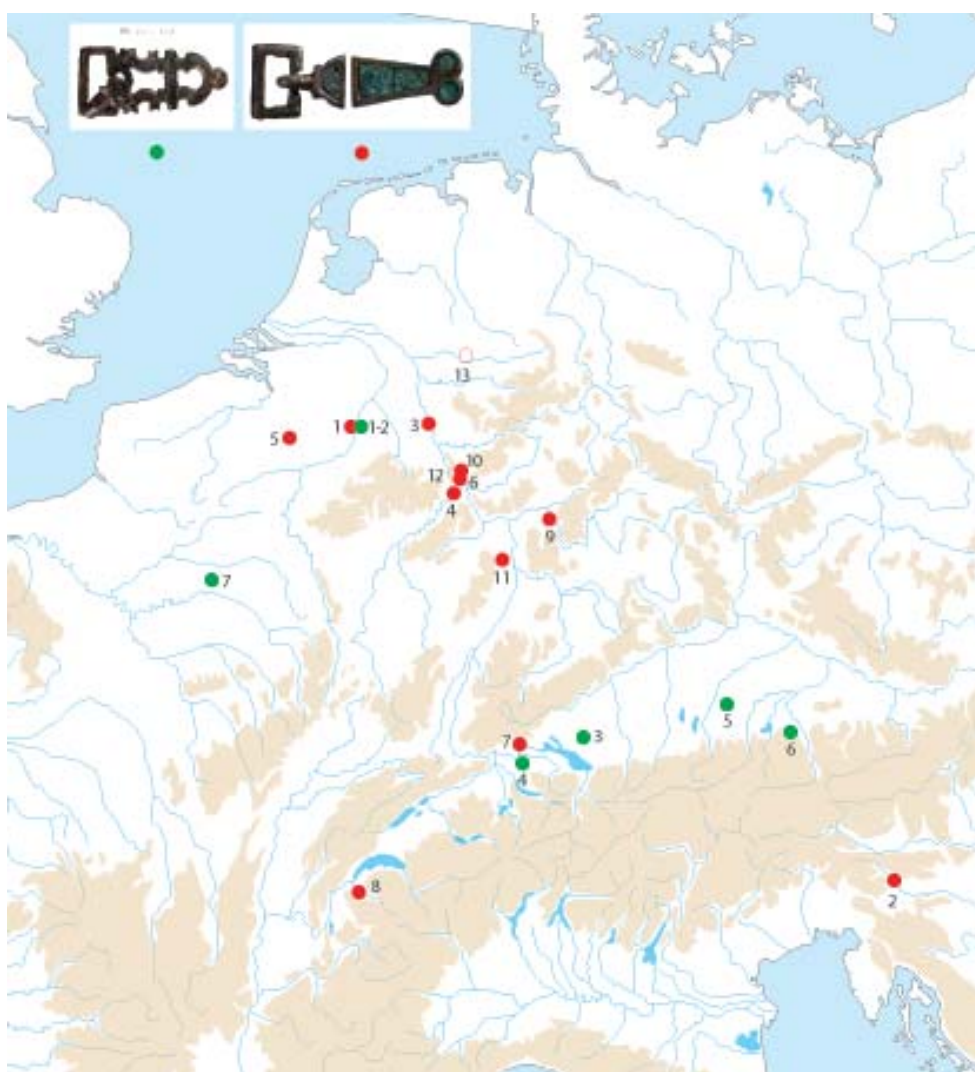


Figure 16. The distribution pattern of 'Mediterranean' plate buckles over Merovingian Gaul.

Because both are of a lesser quality he expects them to be somewhat younger than the Basel specimen.⁸⁴⁷ A last example that should be compared to the Maastricht-Pandhof specimen is the silver buckle found in grave 766 of the cemetery of Schleithem (Switzerland, Kanton Schaffhausen).⁸⁴⁸ It is the grave of a man of c. 40-49 years old, he 'war wohl ein fränkischer <Beamter>'.⁸⁴⁹ A sword, a shield, a lance and a seax were deposited in the grave along with pottery (food), a purse and some other small objects. The buckle was found at the height of the waist. It has a rectangular loop and the plate of the buckle has lower lying fields inlaid with gold foil, ornamented with filigree (Fig. 15). The outline of the plate differs a little from that of the Maastricht examples, although the two inlaid fields are separated by a vertical bar similar to the vertical strip of the Maastricht examples. It is dated on the basis of its parallel example in Basel-Bernerring grave 33 to the middle and the third quarter of the sixth century. The end of the plate also differs from the Maastricht examples. These buckles can be found in graves of

⁸⁴⁷ Martin 1976, 66. The specimen from Castel Trosino originates from a burial of the late sixth century.

⁸⁴⁸ Burzler *et al.* 2002, I, 142-143; II, 200-201, Tafel 96, nr 5.

⁸⁴⁹ According to the caption of Abb. 92 in Burzler *et al.* 2002, I, 142.

both men (Basel-Bernerring) and women (Maastricht-Pandhof, Castel Trosino). If the Maastricht specimen is somehow related in an art-historical sense to those of Basel-Bernerring, Schleithem and Castel Trosino then a date for the Maastricht examples in the second half of the sixth century seems most plausible.⁸⁵⁰

The plate buckle from grave Vrijthof 222 has a fixed plate, but is very different from the ones discussed above. The plate buckle is of bronze with a crude cast (degenerated?) animal style decoration and two cast fasteners at the back of the plate. This plate buckle is the only object uncovered in the grave and was found at the right side of the pelvis. It is therefore likely that this plate buckle was part of a belt worn around the waist. No exact parallels were found for this buckle. Its decoration is possibly related to that on shoe buckles with cast plates found in the region around Basel and Freiburg.⁸⁵¹ These buckles are however of a different type and construction. The grave in Sissach in which such a shoe buckle is found is dated to the Jüngere Merowingerzeit IIa (c 620/640-660).⁸⁵² In the typology of Legoux, Périn and Vallet types 133 (fixed plate) and 138 (attached plated) can be compared with the specimen from the Vrijthof. These types are dated in the seventh century.⁸⁵³ If the ornamentation of the Maastricht-Vrijthof buckle is indeed a degenerated animal II style then it might be expected that the buckle dates somewhat later in the middle or second half of the seventh century.

Plate buckles: silver and bronze; foil inlays

Vrijthof: 73 (1584-1). Pandhof: 10527 (489-1).

Appendix 1: Figure 20.

Two examples of another kind of so-called Mediterranean or 'exotic' buckles have been found in the Servatius complex. The bronze plate buckle from Vrijthof grave 73 has a rectangular loop and triangular plate with two circular bulges at the end of the plate. The tongue has a trapezium shaped base. The central field of the plate, one of the round circular ends and the base of the tongue are inlaid with bronze foil that shows a point-in-circle decoration. In one of the round ends it is missing, but corroded remains of the foil show that it was there once. The plate was fixed on the belt with the help of two fasteners at the back of the plate

Almost exact parallels ((Fig. 16.) with two circular bulges at the end of the plate, which I call group A) are known from the cemetery of Kranj (Slovenia) grave 337, Cologne, Saint Severin (Germany) grave IX, 93B, Gondorf (Germany) find 1580, Grez-Doiceau (Belgium) grave 305, Kärlich (Germany, Kreis Mayen-Koblenz) grave 'F', Schleithem (Switzerland Kanton Schaffhausen) grave 592, La-Roche-sur-Foron (France, Haute Savoie) E74, Niedernberg am Main (Germany), and possibly from the surroundings of Monsheim (Germany, west of Worms).⁸⁵⁴ Of the Gondorf specimen the loop is missing, moreover it has not an inlaid foil but a dot-in-circle decoration stamped into the plate. This may have been done after the (bronze?) foil had been lost. Schulze-Dörflamm mentions two other unpublished close parallels found in Neuwied-Heddesdorf (Germany) and Heikenberg (Germany, near Lünen).⁸⁵⁵ Paffgen dates the grave of Cologne, Saint-Severin in his phase 4 of the cemetery of Cologne, Müngersdorf (c. 550/560-

⁸⁵⁰ If the Castel Trosino grave is that of a Lombard woman it probably dates after the conquest of the nearby fortress by the Lombards in 571, Fingerling 1967, 164.

⁸⁵¹ See now Burnell 1998, 150-152.

⁸⁵² Burnell 1998, 158. Burnell states that they cannot be attributed to the Jüngere Merowingerzeit I.

⁸⁵³ See for instance types 133 and 138 in the typology of Legoux/Périn/Vallet 2004.

⁸⁵⁴ Kranj grave 337: Vinski 1980, 97 and Stare 1980, 119 and T. 102. Cologne, Saint-Severin grave IX, 93B: Paffgen 1992, 388-389, 703-705, Tafel 106,7. Gondorf: Schulze-Dörflamm 1990, I, 264-265, 332; II, 167, Tafel 52. Grez-Doiceau: *De l'or sous la route. Découverte de la nécropole mérovingienne de Grez-Doiceau*, Namur 2006, 9. Kärlich: Hanel 1994, 23-24, Tafel 4, 8 and 7. Schleithem: Burzler et al, 2002, I, 143; II 168-169, Tafel 69. La-Roche-sur-Foron: Colardelle 1983, 118, fig. 56,8. Hanel mentions in her book on the Merovingian finds of Kärlich that a similar buckle is found in Niedernberg am Main (Germany) grave 36 (Hanel 1994, 24 note 67 referring to Pescheck, 1984: Das fränkische Gräberfeld Niedernberg am Main, *Aschaffener Jahrbuch* 8, 91, 71 Abb 50,3). This publication is however not available in the Netherlands. 'Surroundings of Monsheim': Behrens 1947, 47, catalogue number O. 15225; Abb. 102. The buckle plate is part of the Flidner collection that was built up of finds collected by Flidner in the surroundings of Monsheim, but also by buying objects from private persons on the art market. An origin from the surroundings of Monsheim is however conceivable.

⁸⁵⁵ Schulze-Dörflamm 1990, I, 265. It is not clear whether they have two bulges (group A) or one (group B) at the end of the plate.

580/590).⁸⁵⁶ Vinski holds a post-Justinian date most likely, that is post c. 565.⁸⁵⁷ Schulze-Dörrlamm suggests a date early in Stufe III, which is generally dated from c. 520/530 to 600. She thus suggests rather a date before 565. The Kärlich grave includes a small circular fibula and a bow fibula of the type Koch IV.2 which dates to the second half of the sixth century.⁸⁵⁸ The grave will date to the second half of the sixth century.

There is a variant with only one circular bulge at the end of the plate and two bulges near the loop (group B). I did not try to create a complete inventory of this type of buckle to study its distribution and context. A few examples are given (Figure 21). This type is known from Kranj graves 77 (with oval loop) and 327 (*idem*).⁸⁵⁹ Another such specimen (inlaid with bronze foil) is found in the cemetery of Cutry (France) grave 910.⁸⁶⁰ It is the grave of a man which is placed by Legoux in his phase C/D/E. In the new chronology of Merovingian material culture for northern France this type of buckle (type 162) is placed in the second half of the phase MA2 and in the phase MA3 to which the approximate dates of 520/530-560/570 and 560/570-600/610 are given.⁸⁶¹ In the discussion of this buckle Legoux states that this type of buckle is common in northern Gaul (he means France) and Belgium and mentions similar examples in the cemeteries of Lavoye (France) grave 8, and Vieuxville (Belgium) grave 101.⁸⁶² Finally such a buckle has been found in Schwarzhof (Germany) grave 55.⁸⁶³

Comparable, but different, are specimens with the same outline of the plate as those of group B but with an open triangular plate which may have been filled up or had a bronze plate or foil at the back. Examples of these are, for instance, found in Hailfingen grave 371,⁸⁶⁴ Cipy grave 113,⁸⁶⁵ and in nearby Meerssen grave 16.⁸⁶⁶ They seem to be rather common in France and Belgium as well.⁸⁶⁷ Often it is not possible to distinguish between the type with inlay and the open plates on the basis of the publication drawings.⁸⁶⁸ Neither is it possible to see whether the plate has rivets or fasteners on the back. An oval buckle with a tongue of similar shape and decoration as the Maastricht example has been found at Haine-Saint-Paul (Belgium).⁸⁶⁹ The plate however is lost. The oval shape of the loop suggests that it belongs rather to my group B.

According to Vinski these types of plate buckles (our groups A and B) originate from the south-eastern Alpine region near the Adriatic Sea.⁸⁷⁰ In the north however, similar specimens are identified in quite a reasonable number.⁸⁷¹ Päffgen asks about the influence of these Mediterranean products in Northern Gaul.⁸⁷² We could as well ask whether the distribution pattern justifies the conclusion that they are Mediterranean products or even Mediterranean inspired products. Of the identical buckles of group A (Kranj, Cologne, Gondorf, Grez-Doiceau, Kärlich, Schleithem, 'surroundings Monsheim' and Maastricht) seven are from the north and possibly another two (Neuwied-Heddesdorf and Heikenberg bei Lünen for which I could not find illustrations). Most of the specimens of group C are found north of the Alps.⁸⁷³ Most likely buckles with a plate inlaid with bronze foil (my group A) date from c. 550/560-580/600 in spite of the early date given by Schulze-Dörrlamm.

The Maastricht buckle was found in the grave of a man, like the one in Cologne, Saint-Severin grave IX, 93B. For the Grave in Kranj the sex/gender of the deceased could not be established. Graves 77 and 327 of the cemetery at Kranj (our group B) are probably those of a woman (bow fibula) and a man

⁸⁵⁶ Päffgen 1992, 389.

⁸⁵⁷ Vinski 1980, 97.

⁸⁵⁸ Koch 1998, I, 265-271; II, Typentafel 2. See also Göldner 1987, I, 133-135.

⁸⁵⁹ Stare 1980, 108 and T. 31; 118 and T 95.

⁸⁶⁰ Legoux 2005, 145, 146 (fig. 120, 910), planche 41, 329, planches 120-121.

⁸⁶¹ Legoux/Périn/Vallet 2004.

⁸⁶² Legoux 2005, 145; Joffroy 1974, 105, planche 1; Alénus-Lecerf 1985, 128.

⁸⁶³ Behrens 1947, 20, Abb. 50, 1.

⁸⁶⁴ Stoll 1939, 63 and Tafel 23, 24.

⁸⁶⁵ Faider-Feytmans 1970, 174-175 and planche 91.

⁸⁶⁶ A small specimen that lacks the two bulges near the loop: Braat 1956, fig. 17,16-0 and 76-77.

⁸⁶⁷ In the cemetery of Cutry also specimen of Fingerling's type Güttingen and Mindelheim are present.

⁸⁶⁸ See also Päffgen 1992, 388-389.

⁸⁶⁹ Faider-Feytmans 1970, planche 91.

⁸⁷⁰ Vinski 1980, 96-97.

⁸⁷¹ Päffgen 1992, 388-389.

⁸⁷² See also the discussion on a number of these buckles in Giesler 1983, 518-520.

⁸⁷³ See the list in Päffgen 1992, 388-389, notes 26-32.

(crossbow fibula, fire-steel). The Cutry grave is that of a man. The Kärlich grave is of a woman and the Schleithem grave of a man of c 30-34 years. These buckles thus do not seem to be exclusively part of the dress of men.

Another buckle with foil inlay was found in the Pandhof cemetery (context 10527). This buckle is of silver, the loop is rectangular as is the plate, which has two fasteners on the back. The tongue has a trapezium-shaped base, its edges are profiled. The three rectangular inlays on the plate and the one on the tongue base are of bronze foil and are decorated with a dot-in-circle motive. An almost identical silver buckle was found in grave 1360 of the cemetery at Altenerding (Germany).⁸⁷⁴ This buckle however has an oval loop. The arrangement of the ornament on the plate and the irregular end of the plate is nearly identical to the Maastricht specimen. The plate of the specimen from Altenerding was inlaid with silver foils; the inlay on the tongue is missing. The grave from Altenerding is difficult to date; next to the buckle it contains a broken and heavily corroded lance, four knives, a strap end and a needle.

With the exception of the find in Cologne, Saint-Severin, the lower Rhine area does not provide similar plate buckles with bronze or silver foil inlay. Legoux, Périn and Vallet mention some examples of plate buckles and plates which are characterized by bronze foil inlays also with dot-in-circle decoration.⁸⁷⁵ These plate buckles however are much smaller and have a different shape than the two described from the Servatius complex. They date these plate buckles in 540/50-600/10. It can be assumed that the plate buckles as categorized by Périn belong to the same 'tradition' as those known from the Servatius complex and the known parallels.

Plate buckles: bronze, hinged construction

Vrijthof: 99 (1413-1, 2); 154 (1545-1).

Appendix 1: Figure 20.

One plate buckle with a flat plate and a hinged construction to connect the plate with the buckle was found in Vrijthof grave 99. This plate buckle is of bronze and accompanied by a bronze strap end. The plate buckle was attached to the belt with the three fasteners on the back of the plate. The cast and incised decoration on both the plate and strap end can be described as a degenerated animal style. The buckle has an oval loop with an oval section and a simple tongue. It was found at the right side of the pelvis and can therefore be interpreted as the closure of a waist belt. The belt width was approximately 1.8 cm. It is part of an assemblage of grave goods that consists furthermore of two glass vessels (one of around AD 600 and one of the late Roman period). Parallels for this plate buckle are difficult to find, but some resembling specimens are known from grave 206 of the cemetery of Stetten an der Donau.⁸⁷⁶ Here they are part of the leg wear. Closer parallels, although made of silver and with a shield tongue, were found in the grave 2 in the church of Saint-Evre in Toul. The two silver plate buckles from this grave have a similar bulge at the extremity of the plate, and the ornamentation can be described as a degenerated animal style. This grave dates to the first half of the seventh century.⁸⁷⁷

Siegmund suggests that a hinged construction is a chronological significant characteristic.⁸⁷⁸ In his typology hinged constructions occur with plate buckles with cast fasteners on the back of the plate, decorative (fake) rivets and a cast decoration. The plate buckles of Siegmund's typological groups are different from the specimen of the Vrijthof cemetery, in that they have larger and triangular shaped plates. Thus the plate buckle from the Vrijthof cemetery cannot be placed in one of the Rhineland groups, but it could be that the hinged construction of the plate buckle from the Vrijthof dates it in the same period (Rhineland phase 8: 610-640), which is in accordance with the find from Toul.

⁸⁷⁴ Sage 1984, I, 328; II, Tafel 160, 19.

⁸⁷⁵ Legoux/Périn/Vallet 2004, 16, 32 (type 161)

⁸⁷⁶ Weis 1999, grave 206.

⁸⁷⁷ Wiczorek et.al. 1996, 1033-1034 with reference to original publications.

⁸⁷⁸ Siegmund 1998, 27-28 (Rhineland Gür.3.3 and 3.4.).

The plate buckle with a hinged construction from Vrijthof grave 154 is discussed here, although it is unknown whether it can be compared with the plate buckle from Vrijthof grave 99 because the plate is lost. The (plate) buckle belonged to a belt with a width of approximately 1.3 cm. Therefore it can not be classified as Siegmund's Gür 3.3 or 3.4, which are generally much larger. It can be assumed, as mentioned above, that it dates in the same period as the larger plate buckles with a hinged construction (Rhine-land phase 8: 610-640).⁸⁷⁹ This is the only find from this grave.

Plate buckles with round plates: bronze, stamped in decoration

Vrijthof: 79 (1382-2, 3*). Pandhof: 10344 (568-1; 569-1); 19999 (300-2); 10336 (561-1).

Appendix 1: Figure 21.

The round plates of the bronze plate buckles from the Pandhof cemetery are attached to the buckle with a wrapped and slotted construction and have a stamped in geometric decoration and three prominent, bronze solid and domed rivets. The decoration pattern of the plates is repeated on the buckle loops and tongues. The decoration is concentrated along the edges of the plates; the decoration on plate buckle 300-2 (context unknown) is more elaborate and extended. It is unknown whether this plate buckle was part of a belt with multiple fittings.

The plate buckle from Pandhof grave 10336 was found together with a rectangular back plate and another bronze plate buckle, this one with a triangular plate with stamped in decoration. The documentation mentions the find of the two plate buckles at the position of the pelvis in this grave, what is rather unusual. The back plate has a stamped in geometric decoration which matches with the decoration patterns of both the plate buckles. The documentation furthermore mentions an axe and a knife as the other finds from this grave, but these objects are lost. On the basis of this information it can be suggested that the plate buckles and back plate were buried with a man.

The plate buckle from Pandhof grave 10344 has the least pronounced decoration. It consists of three rows of stamped in dots and triangles. This plate buckle is registered as find number 300, but the drawings in the documentation indicate otherwise.⁸⁸⁰ It is concluded that this plate buckle belongs to Pandhof grave 10344 with find number 568-1. The associated shield tongue (find number 568) has a stamped in decoration of four lines. The shield tongue and plate buckle were found together, according to the information available, with an additional hollow belt fitting which, however, does not show any resemblance with the plate buckle. This grave also contained four pottery vessels and one glass vessel.

The plate buckle from Vrijthof grave 79 is lost, as is the strap end found with it. The old photographs make it plausible to classify this plate buckle as I did. It is assumed that the plate buckle was attached to a belt with a width of approximately 3.5 cm.⁸⁸¹ The plate buckle and strap end were part of a grave goods assemblage of a man, which consists furthermore of a fire steel with a piece of flint and a pottery vessel.

That plate buckles with rounded plates and a stamped in decoration can be part of belt sets with multiple fittings is for instance illustrated by the extended belt set that was found in grave 293 of the cemetery of Kleinlangheim.⁸⁸² The plate buckle of this belt set resembles the specimens of the Pandhof and Vrijthof cemeteries. Belts of this kind are considered to be the belts of men.⁸⁸³ Böhner classified similar plate buckles as his group B2.⁸⁸⁴ The one specimen that can be dated (from Zemmer) is dated in his Stufe III. Another example was found in the village of Maasmechelen c. 12 km to the north of Maastricht.⁸⁸⁵ It is

⁸⁷⁹ Siegmund 1998, 27-28.

⁸⁸⁰ The tongue of this plate buckle was registered as find number 568. It is likely that the plate buckle and tongue belong together, what is supported by a drawing of plate buckle 568 in the Pandhof-archive which is identical to the plate buckle registered as find number 300. A plate buckle with find number 568 is not present.

⁸⁸¹ Based on a drawing in the Ypey-archive of which it is assumed that it represents the actual size.

⁸⁸² Pescheck 1996, 50 and Taf. 71, 1-9. It is dated in the Ältere Merowingerzeit III (560/70-600).

⁸⁸³ Pescheck 1996, 50, Abb. 13.

⁸⁸⁴ Böhner 1958, 184, Taf. 36, 8a-d, Taf. 37,1.

⁸⁸⁵ Heymans 1978, 94 en Pl. 16 (133).

decorated along the edges with two lines of stamped in triangles, which are bordered on both sides with a line of stamped in dots. This decoration scheme is identical to the one on the plate buckle with triangular plate and back plate from grave 10048 of the Pandhof cemetery and on the back plate and mounts of the belt in grave 10097 of the same cemetery.⁸⁸⁶ Four bronze plate buckles with rounded plates, although with a different stamped in decoration, are known from the cemetery of Lavoye.⁸⁸⁷ A close parallel for the plate buckle without context is found in Peigen grave 36 (Germany). It is part of an extended set of matching belt fittings which Von Freeden refers to as having a Frankish provenance.⁸⁸⁸ The Pandhof and Vrijthof belts can be classified as Siegmund's type Gür 3.2b. They date in Rhineland phase 6 (570-585).⁸⁸⁹ No exact parallels, however, are known from the lower Rhineland area. The Franken AG classified these buckles as type Gür3c and date them in their phases 5 and 6 (565-610/20).⁸⁹⁰ Legoux, Périn and Vallet distinguish in the group of bronze plate buckles with rounded plates between the singular plate buckles (type 157), the plate buckles with counter plates (type 158) and the large plate buckles (type 159).⁸⁹¹ Since find circumstances sometimes make it difficult to establish whether a buckle is singular or part of an elaborate set I prefer to consider their types 157-159 as a single group for the moment. These types belong to their phases MA3 and MR1 (560/70-630/40). Types 157 and 158 are predominant in the second half of phase MA3 (thus c. 585-610). Bronze plate buckles with rounded plates are certainly related to the iron ones with silver inlays such as the one in grave III, 81 of the cemetery Cologne-Sankt-Severin.⁸⁹² It seems that the bronze plate buckles with rounded plates are somewhat earlier than the iron ones so a date in the later sixth century is most probable for the Maastricht specimens.

Plate buckles with triangular plates: bronze, flat plate, stamped in decoration

Vrijthof: 48 (1592-1, 2); 310 (1783-1). Pandhof: 10048 (72-1, 2, 3, 4, 5, 6, 11, 12, 13, 14, 15, 16, 17); 10097 (45-1, 2, 3, 5); 10336 (561-2, 3); 10168 (520-1, 2, 3, 4, 5, 6, 13, 14, 15); 10723 (87-1).

Appendix 1: Figure 21-23.

The bronze plate buckles with triangular plates have a wrapped and slotted construction by which the plate is attached to the buckle. The plates of these plate buckles are flat and have three domed bronze quite prominent rivets, which served to fix the plate to the leather belt. Bulges at the place of the rivets shape the outlines of the plates. The decoration on the plate buckles is characterized by stamped-in pointed and triangular motifs.⁸⁹³ The number and form of the additional belt fittings associated with each plate buckle varies considerably. This heterogeneous group of belts has however been brought together on the basis of the form of the plate buckle. The additional fittings consist of back plates, various belt mounds and strap ends. Back plates generally have the same decoration as the plate buckle they belong to. Belt mounts are t-shaped, square or have the shape of bird or boar heads and are generally attached to the belt with three rivets. It is mentioned that the belt mounts with the shape of animal-heads generally occur in numbers of four.⁸⁹⁴ The function of the belt mounts is probably the fastening of additional straps, which were attached to the opening at the broad side of the mounts. Some mounts, however, do not have such an opening. The additional strap was probably fixed to the waist belt underneath the mount with the three rivets.

The plate buckles from Vrijthof grave 48 and Pandhof grave 10097 have stamped in little triangles along the outer edges of the plate. The sizes of the plate buckles are comparable, and the width of both the

⁸⁸⁶ See below.

⁸⁸⁷ Joffroy 1974, Fig. 37, grave 26: planche 3; grave 28: planche 3; grave 41: planche 4; Grave 47/48: planche 4, 56.

⁸⁸⁸ Von Freeden 1996, 313-315, Abb. 256.

⁸⁸⁹ Siegmund 1998, 27.

⁸⁹⁰ Müssemeier *et al.* 2003, 19.

⁸⁹¹ Legoux/Périn/Vallet 2004, 17, 31, 53 (type 157-159).

⁸⁹² Päffgen 1992, 2, 246 and Taf. 57,5. / 1992,1, 390-391.

⁸⁹³ Koch 1977, 124.

⁸⁹⁴ Stoll 1939, 24; Koch 1977, 124

leather belts was approximately 2.5 cm. The ends of the plates are shaped differently. The belt from Pandhof grave 10097 consists furthermore of a back plate and a set of two T-shaped mounts. It is not clear whether the original number of mounts of this belt was four. Moreover it is uncertain where the belt elements were found in the grave, as is the location of the biconical pot, which was also found in this grave. The back plate and mounts show the same decoration as the plate buckle, but have additional lines of stamped in points. As said previously, this decoration scheme is identical to a plate buckle found in Maasmechelen.⁸⁹⁵ The belt from Vrijthof grave 48 has an additional strap end. It belonged to the grave of a woman which contained furthermore a string of beads, some chain elements and a finger ring. The plate buckle with strap end was found at the right side of the pelvis, so it is likely that they were components of the waist belt.

De decoration on the plate buckle from Pandhof grave 10048 shows a double line of stamped in triangles and has a vague stamped in pattern of lines and points on the middle field of the plate. This plate buckle differs from the two discussed above, in that it is accompanied with a rectangular back plate, eight T-shaped mounts with an opening, a strap end and a belt loop. The presence of eight mounts is quite remarkable, as well as the differences in their decoration patterns. One wonders if not four mounts have been added to the original four. The grave goods assemblage of this grave also contained a nearly square flat plate, resembling a back plate, but its position on the belt is uncertain. The other finds from this grave are five glass vessels and one biconical pot, on the basis of which it is difficult to establish the gender of the deceased. The set of belt fittings from this grave almost matches the one from grave 335 (a grave of a man) of the cemetery of Weingarten.⁸⁹⁶ In that case a counter plate was also present. A lance head with a closed socket and strong middle rib was found in this grave. Similar lances are normally dated late in the seventh century, but the form of the blade points rather to a date in the later sixth century and early seventh century.⁸⁹⁷

The plate buckles from Vrijthof grave 310 and Pandhof graves 10336 and 10723 are different from the other buckles in this group since their decoration is more elaborated and was also applied to the loop. Moreover, the shape of the tongue of the buckle from Pandhof grave 10336 is different. The decoration of the plate buckle from Pandhof grave 10336 consists of only large and small points. The associated back plate has decoration elements which are identical to the decoration on the plate buckle. Another plate buckle with stamped in decoration (with rounded plate), however, was also found in this grave. The decoration on the back plate matches the best with the plate buckle with rounded plate, but also shows resemblances with the triangular plate buckle. The back plate, however, is not flat but hollow and thus shows that flat and hollow belt fittings may have been combined. No other finds are known from this grave.

The decoration on the plate buckles from Pandhof grave 10723 and Vrijthof grave 310 consists of both points and triangles. Of the Vrijthof plate buckle only half of the plate remains. It can be regarded as a repaired specimen, and the original shape of the plate buckle was probably triangular. The remains of the plate buckle were reused and a rivet was placed at the new end of the plate. This grave also contained a lance head and a *francisca* on the basis of which it is ascribed to a man. The plate buckle from Pandhof grave 10723 is the only belt element of this grave. It was found together with a piece of flint, which can be an indication for the burial of a man.

A plate buckle with a comparable decoration of stamped in triangles and points is known from Pandhof grave 10168.⁸⁹⁸ The shape of the plate is rhomboid and therefore somewhat different from that of the 'ordinary' triangular plates. A plate buckle with this shape was also found in grave 43 of the cemetery of Beckum I, which is associated with multiple belt fittings.⁸⁹⁹ Capelle dates this grave in Stufe IV of Böhner's chronology scheme, although in an early part of this Stufe because the youngest graves of the

⁸⁹⁵ See the section above: 'plate buckles with round plates: bronze, stamped in decoration'.

⁸⁹⁶ Roth/Theune 1995, 99-100, Taf 126, 4.

⁸⁹⁷ It is type 38 according to Legoux/Périn/Vallet 2004, 14, 26, 52, dated to their phases MA2-MA3 (520/30-600/10).

⁸⁹⁸ This plate buckle was originally registered as find-number 300. The Pandhof-archive, however, refers to this find (a drawing of the plate-buckle can be found in this archive) as find number 520.

⁸⁹⁹ Capelle 1979, 23-24, Taf 17h.

cemetery belong to the early seventh century.⁹⁰⁰ The plate buckle from Pandhof grave 10168 was found together with two rectangular back plates, two T-shaped mounts without opening, one larger T-shaped mount with an opening and a tongue, one square mount with an opening, and a small strap end, all of bronze. Both the back plates and the two T-shaped mounts without opening have quite prominent domed solid rivets of bronze; the back plates four and the mounts three. No parallels are known for the T-shaped mount with tongue. For now it is identified as a mount to attach an additional strap to the waist belt. The small square mount shows some remnant of bronze foil on the opening, and an identification as mount to attach an additional strap can therefore be questioned. This grave is described as a sarcophagus in the documentation, as is the presence of an axe, a knife and a sword. These objects are lost, but serve to identify this grave as the burial of a man.

Although the variability in this group of plate buckles is great there does not seem to be a large chronological variation. Siegmund placed similar plate buckles in typological group Gür 3.2a and describes them as bi-partite bronze belt sets of which the plate buckles have a shield tongue and stamped in decoration of points. In this case bi-partite refers to a belt consisting of a plate buckle and a back plate. Siegmund's definition of this group of belt fittings is quite wide and it may therefore prove necessary in the future to differentiate within this group of belt fittings. The Franken AG refers to this heterogeneity, but the chronological variability within this group was considered too insignificant to create a further subdivision.⁹⁰¹ However, a subdivision of this type might be necessary in relation to other themes of research such as gender and age categories. Siegmund dated this group (Gür 3.2a) in his phase 6 (570-585). The Franken AG designated this group as type 3A and date it in their phase 5 (c.565-580/90). The best match in the typology Legoux, Périn and Vallet is type 170 which they date in the second half of their phase MA2 and MA3 (540/50-600/10).⁹⁰²

Plate buckle with triangular plate: bronze, open work, animal style

Pandhof 10100 (59-1, 2, 5, 6, 15, 16, 17, 19).

Appendix 1: Figure 23.

The plate buckle from Pandhof grave 10100 is comparable to the previous group but should be discussed separately because of the cut-out (*durbrochene*) plate and back plate. The plate buckle of this belt has a cut-out middle field through which a thin decorated bronze plate, attached to the back of the plate, is visible. This construction is also present on one of the back plates. An animal style decoration can be recognized on the front of the plate of the plate buckle and the back plate. Next to the plate buckle and back plate, several other metal fittings such as four boar head shaped plates, a belt loop to secure the extremity of the leather belt, another rectangular plate with four rivets and two small plate buckles were also found in this grave. The four bronze boar head-shaped mounts are decorated with a simple punched in decoration of dots. They have an opening in the basis of the plate through which a strap could be fastened. These additional straps probably served to attach the seax to the waist belt. The belt loop has two rounded extremities and was attached to the waist belt with two fasteners at the backside. The surface of the loop is nearly completely decorated with a punched in decoration of dots and rectangles. The boar head plates and the belt loop are without doubt part of one elaborate belt together with the plate buckle and resembling back plate. It remains uncertain what the function of the other, simpler, back plate and the two small bronze plate buckles is in relation to this belt. It can be assumed that the back plate served as a supplementary strengthening of the belt or that it was part of an additional strap. The two small plate buckles were probably part of additional straps that carried the seax. Next to the metal belt fittings and a seax, the other finds of this grave consist of two knives, three pieces of flint and three beads. This grave can be ascribed to a man on the basis of these finds.

⁹⁰⁰ Capelle 1979, 61, 63, 65.

⁹⁰¹ Müssemeier *et al.* 2003, 19.

⁹⁰² Legoux/Périn/Vallet 2004, 16, 32 (type 170).

Boar head-shaped mounts, such as the ones of the Pandhof belt, are commonly attached to the belt in a symmetrical way, two to each side of the back plate.⁹⁰³ The four specimens of the Pandhof belt show us two mirrored pairs and it can be assumed that each pair was attached to each side of the back plate. Scholl already showed that such plates are known both from the Langobard and the Frankish world.⁹⁰⁴ Koch presents the most recent overview of the boar-head and cut-out (*durbrochene*) belt fittings.⁹⁰⁵ Another parallel of boar-head plates is mentioned by Pescheck; it is known from the cemetery of Müdesheim, grave 4.⁹⁰⁶ Comparable belt fittings have been found in various other cemeteries, although they all differ in detail. In grave 278 of the cemetery of Torgny (Belgium) a specimen was found with the image of a human being.⁹⁰⁷ It was the grave of a man in which also a sword, a seax, a lance and arrow were found. A sword belt of the '*Weihmörting*' type accompanied the sword.⁹⁰⁸ The Torgny grave may date in the end of the sixth century. A comparable specimen was also found in grave 56 of the cemetery at Rübenach.⁹⁰⁹ A specimen of the cemetery of Dugny-sur-Meuse (France) has a more complex decoration. It is dated in the end of the sixth century.⁹¹⁰ A last example of a comparable plate buckle, although certainly more can be found, is that in grave 35 of the cemetery of Ennery (France). It has a partially open plate. The grave is dated to the end of the sixth century (phase DEFG).⁹¹¹ This sort of survey indicates that the belt fittings in Pandhof grave 10100 can be dated to the end of the sixth century and beginning of the seventh century.

Plate buckles with triangular plate: bronze, flat plate, cast animal style decoration

Vrijthof: 205 (1654-1, 2).

Appendix 1: Figure 24.

One bronze plate buckle with a flat plate and cast decoration was found, together with a matching back plate, in Vrijthof grave 205. The plate buckle has a decoration of animal heads along the edges of the plate accompanied by stamped in triangles and dots. The middle field is defined by lines of triangles bordered on the side by a groove and is decorated with dots. The shield of the tongue has a decoration of triangles, which are similar to those along the edge of the associated rectangular back plate. The back plate is, in contrast with the plate of the plate buckle, hollow. The belt fittings were found together with a seax, a fire steel and a small bronze buckle which served as the fastener of a purse. These finds are probably the grave goods assemblage of a man; the small bronze purse buckle and the seax date in the sixth and seventh century. No exact parallels are known for this plate buckle. It shows some superficial similarities with type 179 of Legoux, Périn and Vallet, which predominantly dates in their phase MR2 (630/40-660/70).⁹¹² This plate buckle is to some extent related to the cast silver and bronze plate buckles and counter plates of the seventh century which are discussed by Werner in the context of the analysis of the rich grave finds from Wittislingen (Germany).⁹¹³ The Maastricht plate buckle shares some characteristics with these fittings such as the profiled edges of the plates that are decorated with animal heads. The central field of the Maastricht specimen is lined with triangles imitating the triangles inlaid with niello of the gilded silver cast examples such as the one of Wittislingen. It shares this characteristic with the belt set of Wurmlingen (Germany) depicted by Werner.⁹¹⁴ The Maastricht specimen, however, has no animal decoration in the central field nor garnet or glass inlays. Werner dates the Wittislingen and related belt sets in the second half of the seventh century. Mart discusses a similar group of cast bronze belt sets decorated in animal style.⁹¹⁵ These fittings are, however, hollow to some extent. He

⁹⁰³ Stoll 1939, 24.

⁹⁰⁴ Stoll 1939, 24 (note 8)

⁹⁰⁵ Koch 2001, 284-287, Abb. 115-117.

⁹⁰⁶ Pescheck 1996, 50

⁹⁰⁷ Lambert 1989, 173, 176.

⁹⁰⁸ These are dated by Menghin in the later part of his Zeitgruppe D (580-620).

⁹⁰⁹ Neuffer-Müller/Ament 1973, Tafel 4.23

⁹¹⁰ Cuvelier *et al.* 1988, 81.

⁹¹¹ Simmer 1993, 26, 46 and planche 11.

⁹¹² Legoux/Périn/Vallet 2004, 16, 32, 53 (type 179).

⁹¹³ Werner 1950, 26-32.

⁹¹⁴ Werner 1950, Tafel 7, 2a-b.

⁹¹⁵ Marti 2000, 99-100.

dates these belt sets in the *Jüngere Merowingerzeit* II (630/40-670/80). The Maastricht specimen dates most likely from this same period.

Plate buckles: iron, round plates, undecorated

Vrijthof: 0 (1771-1); 75 (1381-1, 2, 3).

Appendix 1: Figure 24.

The Vrijthof excavation produced two undecorated iron plate buckles with a round plate. The specimen of which the context is unknown (1771-1), belonged to a belt with an approximate width of 7 cm.⁹¹⁶ The loop is attached to the plate with a wrapped and slotted construction. Three bronze rivets with decorated rims of brass inlay served to attach the plate to the leather belt.⁹¹⁷

The plate buckle from Vrijthof grave 75 was part of a leather belt with a width of approximately 5.5 cm. The plate was attached to the buckle with a wrapped and slotted construction. The plate buckle is part of a tri-partite belt set with a rectangular back plate and round counter plate. The plate buckle and counter plate both have three undecorated bronze rivets, the rectangular back plate has four rivets. The belt elements are associated with a knife and were found as an ensemble next to the right lower leg. The belt and knife belong to an assemblage of grave goods that furthermore consists of a ceramic dish and beaker and a decorated pin. The pin can be dated in Rhineland phase 7 (585-610).

Iron undecorated plate buckles with round plates are quite common grave goods in the Rhineland, the Middle Meuse area and Northern France. The variety in this category of belt sets is quite small, and mainly concerns the size and the combination of the belt fittings present. Koch dates these belt sets in her Stufe 3 (565-590/600) and 4 (590/600-620/30) of the cemetery of Schretzheim.⁹¹⁸ These belt sets gradually replace the simple buckles so that they rather belong to the later part of Stufe 3. Moreover, Koch observed that belt sets which consisted of only a plate buckle are rather a phenomenon of Stufe 3 whereas those consisting of two or three components (plate buckle, counter plate, back plate) belong to Stufe 4, although they seem to be early within this phase. Similar observations were made in relation to the cemetery of la Grande Oye at Doubs (France) where these belt sets are an element of phase HA (c. 580-600/610). In this cemetery too, the bi- or tri-partite belts seem to be somewhat younger.⁹¹⁹ Belts with a width of 5-6 cm that consist of a plate buckle and counter plate were not found in Schretzheim, only tri-partite belts of this width are known. As Koch claims for Schretzheim, belts with a width of 7-8 cm can be expected to consist of two rectangular back plates and a round counter plate, next to the plate buckle. Belts of this kind are according to Koch younger than the belts with only a plate buckle or the thinner bi-partite belts. In Schretzheim the broad tri-partite belts are dated in the period from 590/600 to 650/60. This chronological characteristic could indicate that plate buckle 1771-1 was part of a belt with counter plate and two back plates.

Siegmund considers the category of belts with round iron plate buckles to be the earliest group of belts with iron belt fittings in the Rhineland. They are classified as Siegmund type Gür 4.1/4.2 and date in Rhineland phase 7 (585-610).⁹²⁰ The Franken AG discarded the typological difference between the two groups of Siegmund, which is based on the presence or absence of additional belt fittings, because the original presence or absence of the additional fittings is difficult to establish with certainty.⁹²¹ They define only one typological group for all the iron belt fittings with rounded plates (Gür 4.1/2) and date them in their phases 5-6 (565-610/20). Legoux, Périn and Vallet make a distinction between two groups of iron plate buckles with round plates on the basis of the presence (type 149)⁹²² or absence (type 148)⁹²³ of

⁹¹⁶ This is the maximum diameter of the plate, not the internal width of the loop.

⁹¹⁷ It is difficult to establish the material of the rivets. One could also have the impression that they are of iron and are plated with bronze. However, the pins with which they are attached to the plate and the belt are of bronze as can be seen on the back of the plate.

⁹¹⁸ Koch 1977, 21-29.

⁹¹⁹ Urlacher/Passard/Manfredi-Gizard 1998, 142-144.

⁹²⁰ Siegmund 1998, 29-31.

⁹²¹ Müssenseier *et al.* 2003, 20.

⁹²² Legoux/Périn/Vallet 2004, 16, 31, 53 (type 149).

⁹²³ Legoux/Périn/Vallet 2004, 16, 31, 53 (type 148).

additional belt fittings. They state that the plate buckles with additional elements often show larger dimensions than those without.⁹²⁴ This, however, is not in accordance with the Vrijthof finds. It was mentioned in an earlier publication of Périn, that plate buckles with round plates are not very common in northern France.⁹²⁵

The specimen of the Vrijthof cemetery that consists of a plate buckle, a counter plate and back plate (grave 75) is smaller (length of plate: 4.5 cm) than the plate buckle without the additional elements (length of plate: 6.5 cm). The context of this plate buckle is unknown, and it could originally have been part of a bi- or tripartite belt set. The decoration of the rivets (brass inlays) is not considered to be a relevant typological element according to Siegmund, the Franken AG and Legoux, Périn and Vallet.

Plate buckles: iron, not decorated

Vrijthof: 0 (1843-1). Pandhof: 10032 (110-1).

Appendix 1: Figure 24.

The shape of the plates of two undecorated iron plate buckles is difficult to identify. The loop of the plate buckle 1843-1 (context unknown) of the Vrijthof cemetery is reasonably preserved, but half of the plate is lost. This plate buckle was part of a belt with a width of approximately 4 cm. Whether this plate buckle originally had a decoration of silver and/or brass inlay cannot be established. Although no context information is available, this find can be associated with a lance, seax and perforated rivets of a seax scabbard. On the basis of these finds it can be assumed that the plate buckle was part of the grave inventory of a man and that it probably was decorated with silver and/or brass inlay, which is a common phenomenon on belt fittings that are associated with *Breitsaxen*.⁹²⁶

The plate buckle from Pandhof grave 10032 was found together with a bronze decorative pin, on the basis of which the burial of a woman can be suspected. Because of the corrosion it can not be identified whether it is decorated or not. Both plate buckles can for now be classified as undecorated plate buckles with a broad plate and placed in Siegmund's group Gür 4.5, which dates early in Rhineland phase 8 (610-640).

Plate buckles: iron, with profiled outline

Pandhof: 10863 (146-1).

Appendix 1: Figure 24.

One iron belt fitting from the Pandhof cemetery (context unknown) can be identified as the plate of a plate buckle. The loop is missing, but the irregular edge of the short edge of the plate indicates that a loop was once connected to it. The plate buckle is made of iron and is characterized by a profiled outline and five pronounced bronze rivets with rims that consist of brass inlay. The width of the belt was approximately 5.5 cm. The base shape of this plate buckle is a tongue shape with a profiled outline. This plate buckle can be considered to belong to the group of large iron belt sets with a 'profiled' outline. They date in the seventh century, as Koch described.⁹²⁷ Exact parallels for this shape are not known but for example in the graves 21, 22, 25 and 40 of Rosmeer (Belgium), some 8 km west of Maastricht, comparable large iron plate buckles with five domed bronze rivets were found.⁹²⁸

This plate buckle is comparable with type Gür 4.3 of the Rhineland typology. Although the shape of these iron plate buckles is described as trapezium like, the size and number of rivets is comparable with the plate buckle from the Pandhof cemetery.⁹²⁹ This Rhineland group dates in phase 8 (610-640). It is possible, however, that the original decoration on this plate buckle is impossible to establish due to severe corrosion.

⁹²⁴ Legoux/Périn/Vallet 2004, 16.

⁹²⁵ Périn 1980, 231. However, in the recently published cemetery of Cutry quite a few have been found (Legoux 2005, planche 46).

⁹²⁶ Siegmund 1998, 87-94.

⁹²⁷ Koch 1982, 25.

⁹²⁸ Roosens/De Boe/Meulemeester 1976, grave 21: 13, pl. 7, grave 22: 14, pl. 8, grave 25: 15, pl. 9, grave 40: 18, pl. 11.

⁹²⁹ Siegmund 1998, 31.

Plate buckles with triangular plates: bronze, hollow plate, not decorated

Vrijthof: 110 (1596-1, 2; 1553-1, 2). Pandhof: 10370 (555-1, 2, 3, 4, 10, 11, 16); 10321 (558-6); 2510307 (571-2; 572-1, 2).

Appendix 1: Figure 25.

Of the group of belts fittings, which is characterized by hollow bronze plates which are not decorated, two complete plate buckles (one with an additional counter plate and belt fitting), one isolated counter plate, and two isolated additional belt fittings are known from the Vrijthof and Pandhof cemeteries.

The two plate buckles from the Pandhof cemetery have resembling triangular plates, which are attached to the buckles with a hinged construction. The rivets are lost of both these plate buckles, but the holes in the plates show where they were placed, and the outline of the triangular plates is profiled on the exact position where the rivets were once present. These rivets were merely decorative because the plate buckles were fixed to the leather belt with the cast fasteners on the backside of the plates.

The plate buckle from Pandhof grave 10370 is the largest with a plate length of 8.3 cm. The associated counter plate has the same length. The additional belt fitting, which is still attached to the seax from this grave, has the same triangular shape but is much smaller. Whether this plate was part of the waist belt or of a leather strap that served to connect the seax scabbard to the waist belt, is not clear.⁹³⁰ Four additional, very thin, plates or mounts of bronze can be associated with this belt. These rectangular plates all have three openings and a punched in dot-in-circle decoration. Two of these plates are still connected to the seax of this grave, and it is likely that they served to attach the straps, that carried the seax, to the waist belt.

The plate buckle from Pandhof grave 10321 was found without any other belt fittings.⁹³¹ It has a length of 6.6 cm and the buckle has a punched in dot-in-circle decoration. A seax, which is corroded to such an extent that further identification is impossible, and three decorated rivets of bronze that were part of the seax scabbard are the only other finds that are known from this grave.

A triangular shaped hollow belt fitting was found in Pandhof grave 10344. This hollow plate does not match with the associated plate buckle from this grave, which has a flat plate (see the section on bronze plate buckles with rounded plates). They could have been joined together, however, to form one belt set at a later moment. This means that the plate buckle is a reused object, as are the Roman pottery vessels from this grave. The hollow plate is similar to the plate from Pandhof grave 10370 and for example one in Schretzheim grave 283. Koch identified this plate as a back plate.⁹³²

The counter plate from Vrijthof grave 110 is hollow and not decorated. It belongs to the grave goods assemblage of a woman. Because of its position relatively far from the skeletal remains the allocation of this find to Vrijthof grave 110 is questionable. It can be assumed that this counter plate was originally part of a belt with at least a comparable plate buckle. Other fittings that are associated with this counter plate are a rectangular (back) plate and two appliqués (Riemenöse) with square slots and small round holes.

Bronze plate buckles with hollow plates and their associated belt fittings belong to Siegmund's group Gür 3.3, which dates in Rhineland phase 8 (610-640). Belt sets of this kind are dated by Koch in her Stufe 5 (620/30-650/60).⁹³³ A similar example is known from the cemetery of Bülach (grave 127); it consists of a plate buckle, counter plate and triangular back plate.⁹³⁴ Werner dates this belt set in the second half of the seventh century and claims that it is a type that is part of the material culture of the entire Merovingian area and especially the Lombard area. The ones distributed in the more northern regions, however, are considered by Werner as local products and differ from the Lombard types by their broader and ungainly appearance.⁹³⁵ Legoux, Périn and Vallet classified plate buckles and associated belt fittings

⁹³⁰ See the description of the seax scabbard related metal fittings in this thesis.

⁹³¹ This find was registered as number 489. Another plate buckle (with bronze foil inlays, see section above), however, was registered as this find number in the Pandhof archive. This same archive registered the bronze plate buckle under as find number 558. It is decided to follow the administration of the Pandhof archive.

⁹³² Koch 1977,

⁹³³ Koch 1977, 125.

⁹³⁴ Werner 1953, Taf 4, 12.

⁹³⁵ Werner 1953, 25.

with the described characteristics as type 172 and date them in their phases MR1-MR2 (600/10-660/670).⁹³⁶

Plate buckles with triangular plates: bronze, hollow plate, decorated plate

Vrijthof: 0 (8888-4).

Appendix 1: Figure 25.

The hollow plate buckle from the Vrijthof cemetery (8888-4) with cast decoration along the outer edge of the plate is without context. This kind of decoration is remarkable on bronze belt fittings with hollow plates, and a close parallel for this specimen is not known until now. A belt set that can be compared with this plate buckle was found in Theswil-Benkenstrasse (Switzerland) grave 53.⁹³⁷ It was part of a group of belts with cast animal style decoration.⁹³⁸ One characteristic is the presence of a decorated middle field surrounded by a frieze with cast animal style. The Maastricht plate buckle has such a decoration scheme but the middle field is not decorated but plane. Moreover, the composition of the frieze of this plate, in terms of the ordering of animal heads, resembles that of the plate from grave 205 (1654-1), what might be an indication for a local workshop. It is as if the mould for making this plate was not finished which might be another indication for a local workshop. Belt sets with cast animal style decoration of the type as found in Theswil date in the *Jüngere Merowingerzeit* II (520/30-560/70).

Iron plate buckles with silver and brass inlay

Eight belts with various iron belt fittings (plate buckle, counter plate, back plate) with inlay can be reconstructed; one for the Pandhof cemetery and seven for the Vrijthof cemetery. The decoration patterns formed by the inlay of silver and brass have been a research subject for a long time but a consistent detailed typology is not available yet.⁹³⁹ This is mainly due to the complexity and the local variation of the decoration patterns. It appears that the iron belt fittings of the Vrijthof and Pandhof can be placed in nearly all the typologies available, such as those of Siegmund, the Franken AG and Legoux, Périn and Vallet, because they offer classifications that simplify the complex decoration patterns. The specific characteristics of the decoration patterns on the belt fittings of the Vrijthof and Pandhof cemeteries need to be discussed separately. Further research into the classification of the complex decoration patterns is required. For the plate buckles of the Vrijthof and Pandhof cemeteries the main distinctive criteria are the shape of the plates, the material of the inlay (monochrome or bichrome) and the presence of a coated middle field. The decoration of the plates will be described separately for the middle field and its surrounding frame.

Plate buckles with inlay: narrow cells

Pandhof: 10885 (139-1, 2, 3).

Appendix 1: Figure 26.

The exceptional belt set from Pandhof grave 10885 consists of a triangular plate buckle, triangular counter plate and rectangular back plate. This tri-partite belt is assigned to Pandhof grave 10885, although the assignation to this grave is uncertain. Doubt was raised because this exceptional find is not mentioned in the first publication of the finds of the Pandhof cemetery.⁹⁴⁰ Neither is it mentioned in the 'Pandhof archive', in which all the finds of the Pandhof cemetery were registered and the majority of the remarkable finds drawn. An argument for this absence in the archive could be that the finds were not restored yet, and were only known as pieces of corroded iron. Other iron finds (also belt fittings with inlay are, however, described in this archive). Pandhof grave 10885 consists furthermore of a small

⁹³⁶ Legoux/Périn/Vallet 2004, 16, 32, 53 (Type 172).

⁹³⁷ Marti 2000, I, 100, Abb. 55.

⁹³⁸ See also Werner 1950, 26-32.

⁹³⁹ Salin 1904; Werner 1953; Trenteseau 1966; Haseloff 1981a,b; Roosens 1986; Mart/Meier/Windler 1992, 34-48, 56-57.

⁹⁴⁰ Glazema/Ypey, 1955.

silver buckle, two glass vessels, a collection of beads (lost) and a bronze finger ring, on the basis of which it is identified as the burial of a woman.

The decoration on these belt fittings is characterized by the so called '*engzellige*' inlay (narrow cells). This inlay pattern is generally considered to be an imitation of the garnet decoration on disc brooches.⁹⁴¹ It is impossible to describe in detail the complicated decoration pattern and the recurring motives that connect the plate of the plate buckle, the counter plate and the back plate.

The basic pattern on the plate of the buckle and counter plate is a middle, more or less triangular, field surrounded on three sides by a frieze. Because of the presence of the (shield) base of the tongue the frieze is bending around an undecorated field below the base of the tongue. The decoration of the middle field is dominated by two groups of mushroom motives arranged in a cross-form. In between these is another circular-like motive, in the centre of which a small cross is present. The rest of the middle field is filled with various shapes imitating garnets.

The mushroom motive returns on the back plate, connecting the plate of the buckle with the back plate. On the back plate, however, four extra motives were added protruding from the corners where the mushrooms meet. On the counter plate the central motive in the middle field is built up exactly on the basis of the added motives of the back plate. This motive thus connects the back plate with the counter plate. Obviously the artist did not strive for total symmetry although the opposition of the plate of the buckle and counter plate and the arrangement of middle field and frieze invites to do so. On closer inspection many differences are observable such as the different arrangement of the central motives in the middle field of both plates. On the plate of the buckle three central motives occur which makes it necessary to reach the limits of the middle field for the left group of mushrooms. Because only two central motives were placed on the middle field of the counter plate this middle field was kept intact. This provides a more harmonious image than the plate of the buckle.

All in all this set is one of the most beautiful in this group of belt sets with inlay imitating garnets. As far as we know there is no study available on this specific group of belt sets.

This type of decoration is found on plate buckles of various forms, round ones as well as triangular ones and forms with more irregular edges such as the one in Niederstotzingen grave 1 and 9.⁹⁴² Mushrooms arranged in a cross may take various forms. One close parallel for the mushrooms motive is found on belt fittings in grave 377 of Weingarten.⁹⁴³ This plate buckle has a rounded plate and can thus be assigned to chronological phases around c. 600.

Without going to much in detail it can be said that belt sets decorated in this way are usually dated in the end of the sixth and beginning of the seventh century. Compare type 184 of Legoux, Périn and Vallet, which they assign to their phases MA3 and early MA4 (560/70-600/10).⁹⁴⁴

Plate buckle with inlay: type 'Bülach'

Vrijthof: 92 (1403-1, 3, 4).

Appendix 1: Figure 26.

The iron plate buckle from Vrijthof grave 92 has a characteristic swallow's tail extremity which is a characteristic of the plate buckles of the so called 'Bülach' type.⁹⁴⁵ The Bülach type is defined both by form (swallow's tail ends) as well as decoration (band-motives) in the middle field and snakes along the edges of the plate. This central pattern can consist of single or multiple lines and can be rounded or angular.⁹⁴⁶ In Bülach most of the belts (eight out of twelve) show a monochrome (silver) incrustation.⁹⁴⁷

The plate buckle from the Vrijthof cemetery has three domed bronze rivets with a decoration of brass twisted wires at the base. The Maastricht specimen has one of the most intriguing and complicated

⁹⁴¹ Paulsen (Niederstotzingen) 1967, 34.

⁹⁴² Paulsen 1967, Taf. 32 and 34.

⁹⁴³ Roth/Theune 1995, 109-110, Tafel 138.

⁹⁴⁴ Legoux/Périn/Vallet 2004, 16, 33, 53. Type 184.

⁹⁴⁵ Werner 1953, 31-34; Schrickel 1979, 15-28; Van Es/Hulst 1991, 123-124.

⁹⁴⁶ Werner 1953, 31.

⁹⁴⁷ Werner 1953, 31.

decoration patterns of the buckles of the Bülach type. The middle field of the plate consists of a pattern of five interlacing bands that are filled with points and have angular sides. Four of these bands end in animal heads. This pattern intersects the silver coated background. On this plate the animal heads that are placed in the swallow's tails ends are not those of the 'snakes' presumed to decorate the upper and lower edges of the plate.⁹⁴⁸ They are part of the intertwining bands in the middle field. These bands are thus not a closed off ornament but has open ends. This characteristic can be seen on a plate buckle and counter plate of Haine-Saint-Paul (Belgium).⁹⁴⁹ Schrickel discusses the addition of animal heads to the bands of the central motive.⁹⁵⁰ However her examples cannot be compared to the composition of the Maastricht specimen. Usually the swallow's tails ends are taken in by heads of 'snakes' whose bodies stretch along the edge of the plate in the direction of the rivets near the loop. In our case extra animal heads are present of which it may be assumed that they are related to the bands with vertical stripes and steps along the edges of the plate. The snakes bodies thus are of type 3 in the classification by Schrickel.⁹⁵¹ These bands are considered to form the 'snake's' bodies. However, it is not possible to identify the body belonging to the animal heads near the two rivets near the loop.

This plate buckle is apparently part of the grave goods assemblage of a man and consists furthermore of a seax (lost), four decorative rivets of the seax scabbard, a touch stone, two belt mounts and a small bronze buckle. The two bronze belt mounts have a square base with a slot, a tongue shaped extension and three solid domed rivets. The mounts probably served to attach some additional straps to the waist belt to which the seax scabbard or a purse could be attached. The small bronze buckle 1403-2 could be related to such a purse. The plate buckle and mounts were found together with the seax next to the right lower leg. Close parallels for these mounts are found in the grave (grave of 1932) of a man in the cemetery of Mannheim-Strassenheim (Germany).⁹⁵² The four mounts of this grave were also found with belt fittings of the 'Bülach' type. A spatha, seax, lance and umbo accompanied these finds. This grave is dated in the second quarter of the seventh century.

The name 'Bülach', ascribed to this kind of plate buckles, refers to the find concentration of such plate buckles in the region around the cemetery of Bülach. Werner states that the plate buckles of this type have that much similarities that it can be assumed that they were made in the same workshop.⁹⁵³ However, Werner states that the definition of these plate buckles as type 'Bülach' does not mean that *Bülach* should be considered to be the place of production of these plate buckles but merely that it refers to the high concentration of finds in this cemetery.⁹⁵⁴ The specimen from the Vrijthof cemetery again shows that this type appears in graves outside its region of 'origin'. A plate buckle of the 'Bülach' type with bichrome inlay is for example known from grave 1975/79 of the cemetery of Lent⁹⁵⁵ Van Es and Hulst offer a list of ten cemeteries in the Frankish area where belt fittings of this type with monochrome inlays were found.⁹⁵⁶

Siegmund did not identify plate buckles of type 'Bülach', nor did the Franken AG.⁹⁵⁷ The plate buckle from Vrijthof grave 92, however, can be classified as Siegmund's type Gür 4.6 on the basis of the monochrome geometric inlays of bands filled with points.⁹⁵⁸ This type dates in Rhineland phase 8 (610-640). The Franken AG maintained this type and date it in their phase 7 (610/20-640/50).⁹⁵⁹ Strangely enough plate buckles of type Bülach are not defined as such by Legoux, Périn and Vallet, but the plate buckle of Vrijthof grave 92 can be classified as their type 185, based on the points in the interlacing

⁹⁴⁸ Schrickel 1979, 21-33.

⁹⁴⁹ Faider-Feytmans 1970, I, 132; II, planche 72 (H.P. 164).

⁹⁵⁰ Schrickel 1979, 24-25.

⁹⁵¹ Schrickel 1979, 17 and tafel 1).

⁹⁵² Wieczorek et.al. 1996, 1022-1023.

⁹⁵³ Werner 1953, 31.

⁹⁵⁴ Werner 1953, 30.

⁹⁵⁵ Van Es/Hulst 1991, 123-124, 281, Abb. 83. This 'Bülach' type has a decoration of bichrome inlay and the authors suspect a place of production in the Meuse Valley.

⁹⁵⁶ Van Es/Hulst 1991, 147, note 218.

⁹⁵⁷ This is an argument in support of the observation by Van Es and Hulst that the Bülach type belt sets of the north rather belong to the eastern Belgian/North-eastern France region, that is the Middle Meuse valley.

⁹⁵⁸ Siegmund 1998, 32.

⁹⁵⁹ Müssemeier et al. 2003, 20-21.

bands.⁹⁶⁰ This type dates in their phases MR1-MR2 (600/10-660/70). Knaut dates the plate buckles of the Bülach type with bands and dots in the second quarter or second third of the seventh century.⁹⁶¹

Plate buckle with silver geometric inlay and animal style elements

Vrijthof: 86 (1387-1).

Appendix 1: Figure 26.

An iron plate buckle with monochrome inlay is the only belt fitting found in Vrijthof grave 86. The belt width is approximately 5 cm. Broad waist belts are often identified as weapon belts, which means that they could carry the weight of a scabbard with seax or sword that was connected to the belt.⁹⁶² This is in accordance with the find of a seax and perforated scabbard rivets in grave 86. The buckle loop is decorated with lines of silver inlay, the tongue base has silver geometric inlay and the silver inlays on the top of the tongue represent an animal head. The plate is trapezium shaped, is slightly profiled and has rounded extensions there where the rivets are placed. The extension or bulge at the short end of the plate suggests the former presence of a rivet. The presence of three fasteners on the back of the plate suggests that these rivets did not serve to fix the plate to the leather belt but that they had a merely decorative function. The two remaining rivets are large dome headed bronze rivets, and it can be assumed that the third had the same appearance.

The decoration of the plate refers to a group of plates with intricate band motives that are considered by Schrickel to be related in some ways to the plate buckles of the Bülach type. She discusses a group of buckles where the band motive is combined with animal heads.⁹⁶³ However, she does not believe that this ornamental scheme develops out of that on the plate buckles of the Bülach type.⁹⁶⁴ The central field of the Maastricht buckle is taken in by two animal heads and associated bodies consisting of bands with cross-stripes (*Leiterband*). The animal bodies are intertwined with two bands (one of them has cross-stripes (*Leiterband*) and is closed, the other one consists of a band with points and is open on one end). Thus on this buckle two types of bands (with stripes and points) are combined. This central field is bordered by a narrow band of varying width of vertical stripes on the long sides and a frieze of steps along all four sides. Around the shield of the tongue a honeycomb frieze is present. Along the outer edges there is either a band with cross-stripes or animal heads.

The two animal heads looking away from the side rivets might be considered 'snake's' heads looking backwards although they do not have exactly a form that reminds of a snakes head. The curved upper jaw rather refers to a bird of prey or another animal. The 'snakes' bodies along the edges consist of two bands (comparable to Schrickel's type 3), one with vertical stripes and one with a double line of steps. The two bands are separated by a single line and not two lines as in Schrickel's type 3. Moreover the presence of friezes with steps along the short sides of the central field is an argument not to consider the step friezes along the sides as parts of snakes bodies but as elements of a frame of the central field. In this sense the ornamental repertoire of this buckle seems to represent a further development of that of the 'Bülach' buckle in grave 92. The high quality of this buckle as well of those found in Pandhof grave 10885 and Vrijthof grave 92 and the connection between those in grave 92 and 86 may be an indication that a workshop producing iron buckles with silver inlay was present in Maastricht.

Iron plate buckles with monochrome animal style decoration are not identified in Siegmund's research area. Siegmund, however, mentions that the pattern of the decoration is chronologically more indicative than the presence of monochrome or bichrome decoration.⁹⁶⁵ Despite this remark, it is difficult to assign

⁹⁶⁰ Legoux/Périn/Vallet 2004, 16, 33, 53. Type 185.

⁹⁶¹ Knaut 1993, 132.

⁹⁶² Siegmund 1998, 29.

⁹⁶³ Schrickel 1979, 25-28.

⁹⁶⁴ Schrickel 1979, 25. On the relation between Bülach type plate buckles, plate buckles with band shaped animal bodies such as this on and plate buckles with '*Faltenbandstil*' see also Van Es/Hulst 1991, 123-128.

⁹⁶⁵ Siegmund 1998, 32.

the plate buckle from Vrijthof grave 86 to one of the types as identified by Siegmund.⁹⁶⁶ The alterations of Siegmund's typology by the Franken AG do not offer a typological group in which the belt from the Vrijthof unambiguously fits. The same remark can be made for the typology of Legoux, Périn and Vallet. The Vrijthof plate buckle has elements of their types 185, 186 and 187.⁹⁶⁷ The date ranges for these types are from MR1 to MR2 (600/610-660/70). Buckles with this decorative scheme are also discussed by Knaut on the basis of a belt set found in Neresheim grave 101.⁹⁶⁸ The execution of the ornaments on this example is however more crude showing how delicate the decorations on the Maastricht buckle was made.⁹⁶⁹ As to the dating of this type of decoration he refers to Koch who dates these in phase 5 of the cemetery of Schretzheim (620/30-650/70).⁹⁷⁰ However, the example of Schretzheim from grave 274 does not really match the Maastricht plate buckle. Most likely, the Maastricht plate buckle dates in the second quarter and the middle of the seventh century. The perforated rivets of the associated seax scabbard date in the seventh century, as does the seax.

Plate buckles with silver inlay: cross motif

Vrijthof: 125 (1600-2; 1598-2; 1599-1, 2, 3).

Appendix 1: Figure 26.

The belt fittings from Vrijthof grave 125 with silver inlay in the form of crosses consist of an iron plate buckle, counter plate and three additional fittings. Only the plate buckle remains, the other belt fittings are lost and can only be described on the basis of photographs and drawings in the Ypey-archive. The plate buckle has a triangular plate with a rounded extension at the extremity. Two crosses of silver inlay are applied to the middle field. The three bronze rivets are relatively small and have a rim with silver inlay. A wrapped and slotted construction connects the plate to the loop. The buckle shows three decoration patterns of silver inlay; mushrooms are applied to the loop, a cross is placed on the base of the tongue, and the tongue extremity is moulded and decorated as an animal head. The counter plate resembles the plate of the plate buckle, as do the three additional fittings. Some leather remains were present at the back of at least two of these. The other objects found in this grave are a seax, lance and umbo. Another iron object is mentioned in the documentation but not further described. Close parallels for this belt are not known until now.

A plate buckle with counter plate and three additional plates, all with inlay in the shape of crosses, are depicted in the typological scheme of Legoux, Périn and Vallet. The plates of this belt are long elongated plates and do not resemble those of the Vrijthof belt. This belt is classified as type 191 and dated in phase MR3 (660/70-700/10) and sporadically in phase MR2 (630/40-660/70).⁹⁷¹ The shape of the belt elements can be placed in Siegmund's belt type group Gür. 4.6, which dates in his phase 8 (610-640). The decoration seems to come close to Gür. 4.4, which dates in phase 7 (585-610).⁹⁷² The mushroom motive on the loop is an element of the decorative schemes of plate buckles with silver inlay imitating garnets.⁹⁷³ This motive regularly recurs in the first half of the seventh century.⁹⁷⁴

Plate buckles with bichrome inlay, indefinite ornamentation

Vrijthof: 278 (1817-1, 2, 3, 4).

Appendix 1: Figure 27.

An iron plate buckle and three additional mounts remain from a belt in Vrijthof grave 278. They have bichrome inlays of silver and brass. These inlays are weathered to such a degree that the original

⁹⁶⁶ Siegmund type Gür 4.6 is characterised by monochrome inlays in a geometric pattern, type Gür 4.7 is characterised by bichrome inlay with a regular animal style pattern. This pattern does not match the pattern of the plate buckle from Vrijthof grave 1387, although this group probably comes close.

⁹⁶⁷ Legoux/Périn/Vallet 2004, 16, 33, 53.

⁹⁶⁸ Knaut 1993, 132-134.

⁹⁶⁹ On the Neresheim fittings we see the same decorative elements: *Leiterband*, steps, honeycomb.

⁹⁷⁰ Knaut 1993, 133; Koch 1977, 30, 127-128.

⁹⁷¹ Legoux/Périn/Vallet 2004, 16, 33, 53. Type 191.

⁹⁷² Siegmund 1998, 31-32.

⁹⁷³ See for example the belt from Pandhof grave 10885.

⁹⁷⁴ See the analysis of this motive by Paulsen (1967, 34-40) and the dating of the graves in Niederstotzingen.

pattern is difficult to identify. The decoration on one of the additional plates, however, is reasonably preserved, and is presumed to be indicative for the patterns on the other plates. Brass and silver lines and four small silver plated fields form the pattern of this middle field. The edges of the plates seem to be undecorated. Maybe fake rivets were once present. The triangular plate of the plate buckle is relatively narrow and long, the three additional fittings are triangular. The fittings were attached to the belt with the help of fasteners on the back of the plates. These belt fittings were found together with a seax and scabbard elements such as bronze rivets and nails and an edge reinforcement. Since no other plate buckle was found in this grave, it is assumed that this plate buckle was part of the waist belt, although this cannot be deduced from the position in the grave. For the three additional mounts it remains unknown whether they were attached to the waist belt or to leather straps that served to attach the seax scabbard to the waist belt. These belt fittings can be classified as Siegmund's type Gür 4.8, although they do not show a completely plated middle field. This type dates in Rhineland phase 9 (640-670).⁹⁷⁵ The Franken AG changed this type into two different types depending on the presence of a plated middle field. Because of their plated fields, the belt fittings of the Vrijthof fit into their type Gür 4.8A which dates in phase 8 (640/50-670/80).⁹⁷⁶ The closest parallel in the classification of Legoux, Périn and Vallet is type 190 which they date in their phases MR2-MR3 (630/40-700/10). It can be concluded that these belt fittings were used as grave goods for a considerable longer time in northern France than elsewhere.⁹⁷⁷ Nearly identical mounts with bichrome decoration were found in the cemeteries of Borsbeek and Beerlegem (Belgium).⁹⁷⁸ These graves date in the middle and second half of the seventh century.⁹⁷⁹ The seax from Vrijthof grave 278 dates in the end of the seventh century and early eighth century, the associated rivets in the middle of the seventh century. A date for these belt fittings in the second half of the seventh century is plausible.

Plate buckles with inlays: bichrome, silver plated, animal style decoration without central field.

Vrijthof: 58 (1634-1, 2) 284 (1815-1). Pandhof: 10129 (21-1, 2, 8, 9).

Appendix 1: Figure 27.

Three belts with iron fittings with silver plated plates are known from the Vrijthof and Pandhof cemeteries. A plate buckle and three additional mounts were found in Pandhof grave 10129. The plate buckle is found on the pelvis and is therefore identified as the fastener of a waist belt. Two of the three additional mounts were found connected to the seax. The seax was deposited near the left side of the upper leg of which it follows that these mounts were not deposited as parts of the waist belt and that the waist belt and seax were deposited separately. The small mounts can be identified as fittings of the leather straps that served to attach the seax scabbard to the waist belt.⁹⁸⁰ They have the same appearance, however, as the plate of the plate buckle. The mounts and plate buckle are silver plated with an inlay of brass that forms an animal style decoration. The edges of the plates are not decorated. Besides a seax and associated scabbard elements such as bronze decorative rivets, the grave goods assemblage consists furthermore of a glass vessel and a small comb fragment.

A triangular counter plate with profiled edges and back plate were found in Vrijthof grave 58. It can be assumed that a plate buckle was originally part of the belt, but it remains unknown whether the belt was deposited without plate buckle or that the plate buckle was lost after excavation. The belt fittings were found together with a seax and knife near the right lower leg. The width of the belt was approximately 5 cm, and the fittings can be identified as the components of a broad waist belt that served to carry the seax with scabbard. This means that the seax, scabbard and waist belt were separated from the body

⁹⁷⁵ Siegmund 1998, 32-33.

⁹⁷⁶ Müsseseimer *et al.* 2003, 21.

⁹⁷⁷ Legoux/Périn/Vallet 2004, 16, 33, 53. Type 190.

⁹⁷⁸ Borsbeek grave 27: de Boe 1970, 41, Fig. 23, 17-28. Beerlegem: Roosens/Gijssels 1975, II Pl. 35, grave 154, 2-4.

⁹⁷⁹ In grave 27 of Borsbeek two *trientes* of Madelinus (Dorestat) have been found. The date of these *trientes* has not yet been established definitely but at least they give a terminus post quem of about 630/40. Grave 154 of the Borsbeek cemetery is located on its northern periphery and may thus be considered one of the youngest graves of the cemetery.

⁹⁸⁰ See also the section on seax related belt fittings.

and deposited as a single entity. A large part of the counter plate and back plate are completely silver plated. The animal pattern, which intersects the silver coating of the plates, consists of a brass inlay. The decoration covers the entire plate of the plate buckle, there is no middle field. On the back plate a typical ornament of rotating animals (German: *Tierwirbel*) on a plated background and in a frame of silver and brass dots can be observed. The lines of the animal bodies consist both of stripes (ladder motive) and dots. This type of belt fittings and type of decoration is found in a large area covering the Netherlands, Belgium, France, Germany and Switzerland. This type has recently been discussed both by Burnell and Marti in relation to belt fittings in grave 27 of Sissach-Saint Jacob.⁹⁸¹ Both discuss the motive of rotating animal heads although the ornament on the back plate of Sissach differs from the one in Maastricht. The Sissach belt set is dated by Burnell in the *Jüngere Merowingerzeit* IIa (620/40-660).⁹⁸² Marti moreover discusses a significant detail of the decoration: the circle of points around the rivet at the end of the plate. He considers this, along with other characteristics, as an element, which has its origin in eastern Belgium.⁹⁸³ He refers to an example of the cemetery of Braives (grave 52) although the specimen from grave 29 of this cemetery seems to be a better parallel.⁹⁸⁴ However, both belong to this group of belt fittings with a silver plated background and an intersecting inlay of brass animal style decoration which covers the entire field. Another example of a belt fitting with a circle of dots around the outer rivet is found in Lent grave 1975/14.⁹⁸⁵ Van Es and Hulst also voice the impression that this example has its best parallels in eastern Belgium (see also their distribution map p. 189). Their plea for a renewed study of this type of belt fittings can only be repeated here. It might again show that Maastricht is a good candidate for the location of a workshop producing iron belt fittings with silver and brass inlay.

The counter plate from Vrijthof grave 284 was the only belt fitting found in this grave. It was found together with decorative bronze rivets, some bronze nails and a mouth-reinforcement of a seax scabbard near the right lower leg. The width of the associated belt (approximately 3.5 cm) makes it likely that the counter plate was an component of the waist belt. The decoration consists of a silver plated field which is intersected by a brass inlay of animal heads and bodies. The animal bodies are less delicate than those of the belt in grave 58. They consist of simple double brass lines. The decoration covers the entire plate without zoning and without separate decoration of the edges. This counter plate belongs to the same group of plates as the one in Vrijthof grave 58 although, as said, the execution of the decoration seems to be less delicate.

These belt fittings from the Pandhof and Vrijthof cemeteries can be classified as Siegmund's type Gür 4.7. The plated middle field is not a defining characteristic of this type, although it is mentioned by Siegmund as an important chronological feature of comparable specimens in the work of Ament.⁹⁸⁶ This type dates in Rhineland phase 9 (640-670). Type Gür 4.7 is maintained by the Franken AG and dates in their phase 8 (640/50-670/80).⁹⁸⁷ The belt fittings of the Vrijthof and Pandhof cemeteries can best be compared with type 188 and 189 of Legoux, Périn and Vallet.⁹⁸⁸ These types date predominantly in their phase MR2 (630/40-660/70) and sporadically in phase MR3 (660/70-700/10).⁹⁸⁹

⁹⁸¹ Burnell 1998, 101-105; Marti 2000, 94-97.

⁹⁸² Burnell 1998, 104; Marti 2000, 29.

⁹⁸³ Marti 2000, 97.

⁹⁸⁴ Brulet/Moureau 1979, pl. 5,3 and pl. 8,2.

⁹⁸⁵ Van Es/Hulst 1991, 130-131.

⁹⁸⁶ Siegmund 1998, 32.

⁹⁸⁷ Müssemeier *et al.* 2003, 21.

⁹⁸⁸ Legoux/Périn/Vallet 2004, 16, 33, 153 (types 188 and 189).

⁹⁸⁹ They differentiate their types on the basis of how animal bodies are executed: with lines (type 188) or ladder motive (type 189). One may question if this is a good criterion for other regions. The animal body on the plate in Vrijthof grave 58 is executed using different motives (longitudinal lines, stripes and dots). The animal bodies on the plates of the belt in Sissach grave 27 are also executed using both the ladder motive and single lines (Burnell 1998, taf. 21, 13-15; Marti 2000, 95). Is it a coincidence that all the specimens they present in the graphic representation of type 188 are with a middle field and most (except one) of type 189 are without zoning? They date types 188 and 189 exactly the same, so a new study of these belt fittings may suggest other subdivisions that are not so much significant in a chronological sense as in a cultural sense.

Plate buckle with inlays: bichrome, silver plated middle field, animal style decoration

Vrijthof: 15 (1670-1, 1671-1).

Appendix 1: Figure 28.

A plate buckle and associated counter plate were found near the feet in Vrijthof grave 15, together with a seax, bronze scabbard elements and an axe. The belt width was approximately 4 cm, which indicates that the plate buckle and counter plate were components of a waist belt to which the seax scabbard was attached. The waist belt was separated from the body and deposited as an ensemble with the seax and scabbard. The decoration pattern on the plates is characterized by zoning. A virtually completely plated middle field is separated from the outer zones by a brass line. The outer zones are not plated. The silver plated central field is intersected by an animal style decoration of brass inlay. The animal's bodies consist this time of only a single line. The plating was made by hammering silver wires in the iron base of the plates. The edges are undecorated with stylised animal heads. Near the ends of the plates a honey-comb pattern is present. Marti discusses the use of this honey-comb motive in that he considers this as an archaic element, surviving the Bülach style belt fittings. The plate of the plate buckle is much more corroded than the counter plate, so it can be assumed that the plate of the plate buckle was also trapezium shaped with a rounded short end.

A difference should be made between plates with no zoning such as these from Vrijthof graves 58 and 284 and plates with a central field in the plate (such as this one).

It is not easy to find close parallels for the decoration pattern of the belt fittings in grave 15. Often both middle field and edges are silver plated but our specimen has no silver plating along the edges, just the stylised indication of animal heads executed in lines. Moreover, the shape of the plates is difficult to define but certainly is not triangular as most other belt fittings are with a decoration scheme with a plated middle field. It can however be assumed that these belt fittings must be dated in relation to the triangular belt fittings with plated middle field. Most likely this belt set dates in the Jüngere Merowingerzeit II (630/40-660/70) or Rhineland phase 9 (640-670).⁹⁹⁰

Plate buckles with inlays: bichrome, silver coated middle field, degenerated animal style

Vrijthof: 105 (1473-1, 2).

Appendix 1: Figure 28.

The profiled triangular plate buckle and counter plate from Vrijthof grave 105 were found together with a seax, knife, fire steel and pieces of flint. They were probably components of the waist belt to which the seax scabbard was attached. The decoration pattern may be described as a very degenerated animal style. The ornaments do now constitute irregular 8-shaped ornaments. It can be seen that the silver plating was attached by means of cross-hatching in the base of the plates. This is a different technique than the one used on the plates of grave 15. They have open ends and loose elements are present that seem to be the stylised remnant of the jaw of an animal head. Close parallels are difficult to find. Plates with a comparable decoration were found in the Eisenach (Germany) grave 31 and Ehrang grave 11. Böhner classified them as types A3a and A3b without being specific about their date.⁹⁹¹ This plate buckle with counter plate is difficult to place in the typologies of Siegmund, the Franken AG or Legoux, Périn and Vallet. It can be expected that this type of decoration has to be dated at the end of the development of the iron buckles with silver and brass inlay. It is best dated in the second half of the seventh century.

Remaining belt elements

The classification and description of the belts of the Vrijthof and Pandhof cemeteries has focussed on the buckles and plate buckles of waist belts. For some of these belts the additional belt fittings (counter plates, back plates, mounts (*Riemenöse*), additional plates, strap ends, belt studs and belt loops) have

⁹⁹⁰ Siegmund 1998, 32. Gür 4.7.

⁹⁹¹ Böhner 1958, Tafel 51, 2a-b.

already been described, classified and dated in relation to the buckles or plate buckles. Additional fittings that were found as singular finds and which were not sufficient indicative for the reconstruction of a complete belt will be described below.

Back plates: iron

Pandhof: 11341 (407-1).

Appendix 1: Figure 28.

The back plate from Pandhof grave 11341 is an isolated find. It is a relatively large back plate which belonged to a belt with a width of approximately 5 cm (l: 5.5 cm, w: 4.6 cm). The documentation mentions a decoration of silver inlay, which cannot be identified anymore because of the severe corrosion. The mentioned textile remains are also difficult to observe. The plate has four bronze domed rivets with rims that consist of silver inlay (disappeared on two of the rivets). This decorated iron back plate can be part of a belt with monochrome or bichrome fittings and can therefore only be dated in an extended period of time. According the typo-chronologies of Siegmund and the Franken AG this back plate belongs to the seventh century. No other finds are known from this context.

(Back) plates: bronze

Vrijthof : 96 (1528-2); 0 (1175-3). Pandhof: 10061 (48-2), 19999 (286-1).

Appendix 1: Figure 28.

The majority of the 15 bronze back plates of the Pandhof and Vrijthof cemeteries were associated with other belt elements and are as such discussed above. Two of the back plates were isolated finds or were found with belt fittings that do not match and cannot be identified as components of the waist belt. The back plate from Vrijthof grave 96 was found together with a small bronze rectangular buckle, which is identified as the fastener of a purse. This back plate could have belonged to the strap that attached the purse to the waist belt or was a component of the waist belt itself. Other waist belt fittings are not known from this grave. The square back plate has four dome headed bronze rivets and an open middle field through which the remnant of a thin plate of bronze foil (with an animal style decoration?), attached to the back of the plate, can be observed. It was apparently part of the grave goods assemblage of a man. A similar back plate was found in Rübenach grave 151 which was accompanied by a small rectangular bronze buckle and a biconical pot with wide mouth.⁹⁹² Rübenach grave 151 is assigned to phase B1-2 (c. 560/70-600).⁹⁹³

The thin bronze plate 1175 (without context) from the Vrijthof cemetery was probably part of a back plate (absent).⁹⁹⁴ The small plate buckle it was found with is, considering its size and the identification of similar specimens, a shoe buckle, part of the leg wear or the fastener of a purse.

The surface of the rectangular plate buckle from Pandhof grave 10061 is covered with stamped in dots and triangles. A thin bronze plate is still present underneath the back plate. This plate was found together with a buckle that is too small to identify as a component of the belt to which the back plate was fixed. This belt was approximately 3.5 cm wide. The finds were part of the grave goods assemblage of a woman.

A thin bronze rectangular plate (286-1) was found in the Pandhof cemetery (context unknown). It was probably part of a back plate construction.

T-shaped mounts with a slot (*Riemenöse*)

Vrijthof: 39 (1603-4); 230 (1767-2).

⁹⁹² Neuffer-Müller/Ament 1973, Taf. 8, 36.

⁹⁹³ Neuffer-Müller/Ament 1973, 146; Wieczorek 1987, 486, Abb. 23.

⁹⁹⁴ Thin plates are known from different belt fittings such as plate buckles, counter plates and back plates. They were fixed underneath the fittings and have the same shape as these fittings. The function of these plates is unknown. See for example the plate buckle from Pandhof grave 10061, where a thin plate is still fixed underneath the plate with the four rivets by which the back plate is attached to the belt. Probably the back plate is fixed on the belt, and the thin associated plate underneath the belt.

Appendix 1: Figure 29.

The mounts from Vrijthof graves 39 and 230 have the same shape, but are different in size. They are T-shaped and have a slot in the broad side of the plate. The mount of Vrijthof grave 230 is the smallest of the T-shaped mounts from the Vrijthof cemetery. It was found together with a buckle that served as the fastener of the purse. This mount is identified as part of the leather strap by which the purse was attached to the waist belt. The narrow part of the mount from Vrijthof grave 39 is missing. It was found together with a seax (lost), two bronze decorative rivets of a seax and fragments of an edge-reinforcement of the seax scabbard, at the right side of the body. It can therefore be assumed that this mount was part of a strap that connected the seax scabbard to the waist belt.

Strap-ends

Strap-ends are commonly reconstructed as belt elements that are fixed to the end of leather waist belt or leather straps and are thought to make the belt-end hang down from the buckle or plate buckle. The measurements can vary from very small till very large and they can be highly decorative or plain and inconspicuous. The little strap ends are mostly associated with purse, shoe- and leg wear. The size of the strap ends of waist belts is larger, and sometimes extremely large. For these large strap ends it is difficult to imagine a practical function because of their dimension and weight. Do they have a symbolic function, specifically articulated during the funerary rite or in more mundane circumstances?

Strap ends are mainly tongue shaped and decoration and material are usually similar to the other components of the belt set. The location in the grave and/or the size of the strap ends were criteria for their identification as component of a waist belt.

Strap ends: iron

Pandhof: 10226 (301-1).

Appendix 1: Figure 29.

The strap end from Pandhof grave 10226 is the only belt element known from this grave. It was found together with a terra sigillata bowl. The strap end is relatively large with a length of 9.4 cm. It has a silver coated middle field, intersected by an animal style decoration of silver and brass inlay. The frame consists of a band of silver dots surrounded by horizontal lines of silver inlay. The strap end was attached to the leather belt by three (one invisible) rivets with rims of silver inlay. The decoration of this strap end fits in Siegmund's typological group Gür 4.7, which dates in Rhineland phase 9 (640-670).⁹⁹⁵

Strap ends: large, bronze

Vrijthof: 208 (1646-1).

Appendix 1: Figure 29.

The bronze strap end from Vrijthof grave 208 has a length of 14.2 cm. The split base and little bronze rivets with carved-rim decoration imitating filigree were used to attach the strap end to the belt.

Between the two rivets an extra hole is present, possibly to attach the third rivet. The strap end is decorated with three cast lines and a pair of incised quarter circles in the corners between the lines and the edges of the plate. The lower two third of the strap end has bevelled edges and its sides show an inward curved line. The strap end was found next to the middle of the left leg. The grave assemblage probably consisted furthermore of a string of beads (as can be seen on the drawings of this grave), but these are lost.

Because of the length and weight of the strap end it is difficult to assume that it was part of the clothing worn in every day life and it is therefore more plausible that it served a specific decorative function. Large strap ends are an element of the later seventh century.⁹⁹⁶

⁹⁹⁵ Siegmund 1998, 32.

⁹⁹⁶ Stein 1967, 35, 414-415 and Taf. III; Siegmund 1998, 39 (Gür 6.3, phase 10 (670-705); 217-218.

Strap ends: bronze

Vrijthof: 56 (979-1); 166 (1542-1*); 0 (1576-1); 247 (1754-1). Pandhof: 10307 (572-2); 19999 (343-1).

Appendix 1: Figure 29-30.

The strap ends mentioned here are the strap ends that are likely to have been components of waist belts. All these strap ends are tongue shaped and have a rounded extremity.⁹⁹⁷ Three of these strap ends have a profiled outline and a stamped in decoration. Strap ends of this form, although slight differences occur in their outlines, were components of both waist belts and horse gear. As an elements of horse gear such strap ends were found in Beckum I (Germany) grave 17, Altlussheim (Germany) grave 22, Gammeringen (Germany) of grave 15-12-1902, Regensburg (Germany) horse grave of 1976, Beckum II (Germany) grave 110, Bremen (Germany) graves 14 and 21.⁹⁹⁸ The grave from Regensburg is dated c. 600⁹⁹⁹, the grave of Gammeringen is dated by Oexle in the end of the sixth century although her description is a bit cryptic,¹⁰⁰⁰ the grave Beckum II, 110 in the last third or last quarter of the sixth century,¹⁰⁰¹ and finally the graves from Bremen are dated in the last third of the sixth century.¹⁰⁰² It can thus be stated that strap ends of this type are generally dated in the last third of the sixth century (the find repertoire of the *Altere Merowingerzeit III*) and possibly in the beginning of the seventh. This is in accordance with the observation that this type of strap end belongs to belts of the same period such as the one found in Maastricht-Pandhof grave 10048.

Belt studs/ belt rivets

Vrijthof: 101 (1493-1,2); 0 (1487-1, 2, 3). Pandhof: 19999 (530-2, 3).

Appendix 1: Figure 30.

Grave 101 of the Vrijthof cemetery revealed two belt studs of bronze. They are shield/violin shaped with a central groove over the length of the plate and were attached to the belt with cast loops on the back of the plates. They were found together with a small bronze buckle, which is identified as a shoe buckle. Another resembling bronze belt stud with find number 530-2 (context unknown) is known from the Pandhof cemetery. Belt studs of this kind are often found in numbers from one till three in the graves of men. These little plates, mostly bronze and violin shaped were attached to the belt at the right side of the buckle and served to fix the belt ending which was wrapped around the buckle. Belts studs are often found in combination with simple buckles without plate of bronze and silver.¹⁰⁰³ The well excavated cemetery of Grez-Doiceau shows us how three belt studs might have been fixed to a belt; one pair is fixed close to the buckle and a third one is fixed further down the belt pointing in an opposite position.¹⁰⁰⁴

Legoux, Périn, and Vallet make a typological distinction between belt studs of less or more than 2.5 cm, of which the smallest date earlier than the larger ones. The belt studs of the Vrijthof and Pandhof cemetery are all less than 2.5 cm and can be classified as their type 193 which dates in the second half of their phase MA1 (470/80-520/30) and in phase MA2 (520/30-560/70) and sporadically in phase MA3 (560/70-600/10).¹⁰⁰⁵ Siegmund classifies similar belt studs as type Gür 2.10 which dates in Rhineland phase 4 (530-555).¹⁰⁰⁶

⁹⁹⁷ Strap ends with a pointed extremity generally date in the later Merovingian period (eight century).

⁹⁹⁸ All examples can be found in: Oexle 1992. The sites are presented in alphabetical order in the second volume with plates, so the specific examples can be found easily.

⁹⁹⁹ Oexle 1992, 20

¹⁰⁰⁰ Oexle 1992, 42

¹⁰⁰¹ Oexle 1992, 54-55

¹⁰⁰² Oexle 1992, 54

¹⁰⁰³ Siegmund 1998, 25.

¹⁰⁰⁴ Vrielynck 2007, 46, fig.2. See also Fleury/France-Lanord (1998, 131) for such an arrangement of these belt studs in grave 42 of the cemetery of Saint-Denis (France).

¹⁰⁰⁵ Legoux/Périn/Vallet 2004, 16, 34, 53 (type 193)

¹⁰⁰⁶ Siegmund 1998, 25.

The propeller-shaped bronze fitting 530-2 of the Pandhof cemetery (context unknown) is identified as belt stud. A parallel is known from grave 2991 of the cemetery of Krefeld-Gellep, and is Roman in date.¹⁰⁰⁷

The two rivets with find number 1487 (Vrijthof: without context) are also identified as belt studs. Resembling rivets are known from Krefeld-Gellep grave 2489.¹⁰⁰⁸ Siegmund does not identify these rivets as a separate group. He includes them in his general group of belt studs of all forms (Gür 2.10).¹⁰⁰⁹ The Franken AG classified them as Gür2.10A and date them in their phase 4 (510/20-c. 565).¹⁰¹⁰ Legoux, Périn and Vallet classify similar rivets as type 195 and identify them as belt studs.¹⁰¹¹ These date in their phase MA1 (470/80-520/30).

Belt loops

Vrijthof : 59 (1595-1).

Appendix 1: Figure 30.

The three bronze belt loops from the Pandhof cemetery were all components of belts with multiple bronze fittings and are discussed above. The bronze belt loop from Vrijthof grave 59, however, is the only find from this grave. It is simpler in appearance than the belt loops of the Pandhof cemetery. The loop consists of a folded plate of bronze with an extension in the middle on which a simple line decoration is applied. Not much is published on these specific components of Merovingian belts, probably because they are uncommon finds. On the basis of the Pandhof finds, and also specimens in other cemeteries, it can be assumed that belt loops were generally components of elaborate belts with bronze fittings.

Brooches

In the group of brooches a main distinction is generally made between disc brooches, bow brooches and the so-called small brooches (which are of various forms). The disc brooches and bow brooches have been the focus of several studies, which resulted in a series of publications that are predominantly concerned with their typology, chronology and distribution patterns. Moreover, repeated attention has been paid to the way brooches were worn for which the co-presence of certain brooches in relation to the body is discussed.¹⁰¹² From the cemeteries Vrijthof and Pandhof 18 disc brooches (including a filigree brooch) and seven Merovingian bow brooches are known, as are some small brooches of various forms. These brooches are all well known forms from the Merovingian period; except two Vrijthof brooches which are peculiar specimens in Merovingian contexts. Besides the early medieval brooches three Roman brooches were found (table 26).

Group	Vrijthof	Pandhof	Total
Garnet disc brooch	10	6	16
Garnet disc brooch, filigree	1	-	1
Filigree brooch	-	1	1
Bow brooch, rectangular head plate	-	6	6
Bow brooch, round head plate	1	-	1
Bow brooch, equal armed	1	-	1

¹⁰⁰⁷ Pirling

¹⁰⁰⁸ Pirling

¹⁰⁰⁹ Siegmund 1998, 25.

¹⁰¹⁰ Müssemeier *et al.* 2003, 18.

¹⁰¹¹ Legoux/Périn/Vallet 2004, 17, 33, 53 (type 195).

¹⁰¹² See for example Zeller 1996, Walter 2004.

Small brooch, bird	1	2	3
Small brooch, rhomboid	-	1	1
Oval, domed brooch, large inlays	1	-	1
Bow brooch, exotic provenance	1	-	1
Bow brooch (Roman)	1	1	2
Small brooch, swastika shaped (Roman)	-	1	1
Total	17	18	35

Table 26. The occurrence of brooches in the Vrijthof and Pandhof cemeteries.

It appears that the garnet disc brooches are the most frequent brooch form in both the cemeteries. The paired occurrence of these brooches, their association with other brooches and grave goods and their position in the grave (relation to the body), will be discussed below.

Disc brooches

In the category of disc brooches the garnet disc brooches form the most characteristic and frequent group of finds from Merovingian cemeteries. Other groups of disc brooches are the bronze cast specimens, the disc brooches with filigree and the pressed foil brooches.¹⁰¹³ Of the two latter groups, only a filigree brooch was found in the Pandhof cemetery. Sixteen garnet disc brooches with various characteristics and a disc brooch with garnet and filigree were found in the Vrijthof and Pandhof cemeteries (table 27).

Garnet disc brooches	Vrijthof	Pandhof	Total
Round brooches	6	2	8
Rosette brooches	4	4	8
Bronze casing	1	-	1
Silver casing	9	6	15
1-zone of cells with garnet	1	-	1
2-zones of cells with garnet	7	6	13
Pressed foil middle field	6	2	8
Filigree middle field	-	2	2
Garnet middle field	2	2	4
Mixed middle field	1	-	1

Table 27. The features of the garnet disc brooches of the Vrijthof and Pandhof cemeteries.

The work of Vielitz is the most recent study of garnet disc brooches.¹⁰¹⁴ She specifically focussed on the typology and chronology of these brooches, their associated grave goods and the way they were worn.. The typological groups of Vielitz are mainly based on the number of zones and the construction of the inner zone, what resulted in eight general groups (A-H) with additional sub-types. This typology covers nearly all the elements and characteristics of the brooches from Maastricht; the Vrijthof and Pandhof brooches can be placed in three of these groups. Siegmund's typology appears to be insufficient for the description and classification of the Vrijthof and Pandhof brooches, as are the typologies of the Franken

¹⁰¹³ Siegmund 1998, 46-50.

¹⁰¹⁴ Vielitz 2003.

AG and Legoux, Périn and Vallet; they are all too general.¹⁰¹⁵ The chronological significance of the more refined typology of Vielitz, however, needs to be compared to these cruder classifications.

Garnet disc brooches consist of a middle field and/or 1 or multiple zones of cells with garnets. The disc brooches are first classified by their number of zones. This requires a clear definition for both the zones and the middle fields. Next to the number of zones Vielitz chose the material of the casing, the number of cells, and the material and construction of the middle field as main characteristics for the classification of garnet disc brooches.

The definition of the middle fields is formulated inconsequently in the typologies of Siegmund, the Franken AG and Legoux, Périn and Vallet. The middle fields, which can be of various forms, are in these typologies sometimes identified as a zone and sometimes they are not.¹⁰¹⁶ As a consequence, the definition of the middle fields and number of zones remains vague and summarily. Vielitz created a typology in which she especially focussed on the various appearances of these middle fields (material, construction and decoration pattern). The middle fields consist, according to Vielitz, either of garnets, of a (sunken) field decorated with filigree, of a field of pressed foil or filigree, or of inlays of various other materials than garnet.

In the groups of small disc brooches (group A and B: both rosette and round) with one zone, such as defined by Vielitz, the cells in the middle often have another inlay than garnet. If the inlay is not present and this middle field exceeds a diameter of 0.9 cm, the brooches are not considered to be part of the group of small brooches with one zone. The possibility that the middle field consisted of multiple cells of garnets, of pressed foil or of filigree, and as a consequence consists of more than one zone (group C, D or E), should be considered for these brooches.¹⁰¹⁷

Although Vielitz described and classified the middle fields of disc brooches more extensively, her identification (or lack of definition) of this part of the brooch as middle field or as zone also remains confusing. Though it is not mentioned explicitly it can be concluded that the centre (middle field) of the brooch is considered, both by Vielitz and Siegmund, to be a zone when it consists of more than one cell with garnet, or when it consists of pressed foil or a field with filigree.¹⁰¹⁸ A middle field which consists of one cell with garnet, of a bead as central setting, etc., in the centre of the brooch is not considered to be zone. I think this is rather inconsequent and that the middle field should only be considered a zone when completely covered with garnet, either fitted in one or in multiple cells. Other middle fields, may they consist of a bead, pressed foil, filigree or something else apart from garnet, should for the purpose of clear definition, never be considered a zone. This will be the point of departure for the following classification of the garnet disc brooches from Maastricht. The identification of the number of zones for the Vrijthof and the Pandhof brooches is as a consequence different from the comparable types as defined in other classifications.

Garnet disc brooch: round, one zone

Vrijthof: 306 (1796-1).

Appendix 1: Figure 31.

The only small round disc brooch with one zone of cells with garnets from the two Maastricht cemeteries consists of a silver casing with five cells with garnets and a central setting of a grey-white substance, probably a glass bead.¹⁰¹⁹ The brooch has a diameter of 2.2 cm, the fastener on the back of the brooch is lost. A remarkable feature is the outward extension of thin silver foil on the rim of the brooch. This

¹⁰¹⁵ Siegmund identifies five types of garnet disc brooches which number is according to him sufficient for chronological purposes. The detailed typology of Rupp, as Siegmund claims, has no chronological significance (1998, 45-46). Legoux, Périn and Vallet identified six types of disc brooches.

¹⁰¹⁶ Compare for example the brooches from Xanten I Grab P147.4 (Siegmund 1998, Taf.229) and the brooches from Junkersdorf grave 41, 49 and 211 (La Baume 1967, Taf 4, Taf 14); all classified as Siegmund's Fib 1.3.

¹⁰¹⁷ Vielitz 2003, 33, note 199.

¹⁰¹⁸ Vielitz 2003, 33 note 199.

¹⁰¹⁹ Vielitz 2003, 33. It is mentioned that white glass beads are often used as inlay for the middle field of small garnet disc brooches with one zone.

brooch was found in a partly disturbed grave which contained also a string of beads. It was found on the breast in a grave that was partly disturbed.

The other round brooches with one zone of multiple cells with garnets from the Vrijthof and Pandhof have middle fields which consist of silver pressed foil. According to the typology of Vielitz and Siegmund these are brooches with 'two zones'.¹⁰²⁰ Moreover, the pressed foil and filigree middle fields are not mentioned explicitly by Siegmund as a criterion for their classification. I consider these brooches as brooches with one zone. These brooches, however, have a different appearance than the small round Vrijthof brooch and will therefore be classified and discussed in a separate section below.

The brooch from Vrijthof grave 306 consists of a zone with five cells, which is remarkable. Small brooches with one zone of four cells are, according to Siegmund, known from the middle and lower Rhineland area and modern northern France. Those with six cells are the most frequent in the lower Rhineland area.¹⁰²¹ Brooches with a zone of four, six or eight cells are according to Vielitz the most regular finds. Brooches with zones with a higher number of cells and an uneven number of cells, such as the Vrijthof brooch has, are rarer.¹⁰²²

The Vrijthof brooch can be classified as Vielitz type A3 (*Einzonige Rundfibeln mit fünf-, sechs- oder siebenfach-radialen Zellmuster*), and more specifically subtype A3.10.¹⁰²³ Vielitz does not date type A3 separately. Types A2-A5 (with a radial pattern of cells with garnet) are dated in the three chronological phases (*Stufe* 1-3) such as defined by her.¹⁰²⁴ Small round brooches with a zone of radial garnet cells appear at the end of the fifth century, especially those with a zone of four or eight cells.¹⁰²⁵ Vielitz mentions two examples of brooches with one zone of five cells. The brooch from Schretzheim grave 146 dates in her *Stufe* 1 (480/500-530/40) and the one from Weimar grave 51 in *Stufe* 2 (530/40-560/70).¹⁰²⁶

Vielitz claims that the diameter of the round brooches with one zone which date in *Stufe* 1 measure between 1.3 and 2.0 cm, and the ones from *Stufe* 2 between 1.7 and 2.3 cm, of which the ones that measure more than 2.0 cm form a majority.¹⁰²⁷ Thus the Vrijthof brooch (diameter 2.2 cm) should be placed in *Stufe* 2 (530/40-560/70) of Vielitz. Moreover, Vielitz considers brooches with one zone to be rare in her *Stufe* 3.

Siegmund dates small brooches with one zone (Fib 1.1) in Rhineland phases 3-4 (485-555). The period that these phases cover is almost identical with *Stufe* 1 and 2 of Vielitz. The Franken AG maintained Siegmund's type and date these brooches predominantly in their phase 3 (460/80-510/25) and sporadically early in phase 4 (510/25-565).¹⁰²⁸

Garnet disc brooches: round and rosette, one zone, middle field of pressed foil

Vrijthof: 187 (1641-1; 1642-1); 274 (1792-1; 1782-1); 314 (1172-1).

Appendix 1: Figure 31.

Six garnet disc brooches (two single, two pairs) with a middle field of pressed foil and one zone of multiple cells with garnet were found in the Vrijthof cemetery.¹⁰²⁹

The two brooches from Vrijthof grave 274 are identical, but were initially not recognized as a pair. Brooch number 1782-1 was on the basis of the available documentation ascribed to Vrijthof grave 290. On closer inspection it became apparent that the find number of this brooch was probably incorrect and that brooch 1782 was in fact number 1792 and should consequently be ascribed to Vrijthof grave 274. Next to the similarity of the two brooches this assignation is also supported by the fact that Vrijthof

¹⁰²⁰ Siegmund 1998, 45-47; Vielitz 2003, 42-44.

¹⁰²¹ Siegmund 1998, 45. Siegmund refers to the overview of Martin (1976, 81-82) for small brooches with four cells.

¹⁰²² Vielitz 2003, 32.

¹⁰²³ Vielitz 2003, 247, Abb. 110, A3.10.

¹⁰²⁴ Vielitz 2003, 66-70. (*Stufe* 1: 480/500-530/40; *Stufe* 2: 530/40-560/70; *Stufe* 3: 560/70-600/10).

¹⁰²⁵ Vielitz 2003, 69.

¹⁰²⁶ Vielitz 2003, 70.

¹⁰²⁷ Vielitz 2003, 70.

¹⁰²⁸ Müssemeier *et al.* 2003, 26.

¹⁰²⁹ As mentioned before, such brooches are often identified as brooches with two zones (the middle field of pressed foil is included as zone).

grave 290 does not know any other finds, which is a peculiar circumstance for such brooches. Moreover, the excavation documentation suggests that more than one brooch was found in Vrijthof grave 274. The other finds from this grave, among which are earrings and beads, are usually associated with a pair of garnet disc brooches.

Both brooches consist of a round silver casing with silver ground plate and silver sheets dividing the cells. Both brooches have one zone of eight cells with garnets applied on gold foil. The brooches have a diameter of 1.9 cm. One garnet is absent from brooch 1782-1. Of the fasteners on the back of both brooches the silver pins are lost. The middle field of the brooches consists of a pressed silver foil with a pattern of radiant lines.

The two round Vrijthof brooches can be classified as Vielitz' general type E3 (*Zweizonige Fibeln mit pressblech-Strahlenkranzmuster*) and, on the basis of the middle fields, more specifically as type E3.21.¹⁰³⁰ The brooches of this type date in Vielitz *Stufe* 3 (560/70-600/10).¹⁰³¹

The other brooches of this group are all rosette shaped. The two brooches from Vrijthof grave 187 are identical and belong to a grave goods assemblage that consists of a variety of beads, golden pendants (probably attached to the necklace of beads), earrings and a finger ring. According to the drawings made during the excavation, one of the brooches was found near the neck and one on the breast. This is in accordance with the general way these brooches were worn and/or deposited as grave goods.¹⁰³² The brooches consist of a silver casing and ground plate and one zone of ten cells with garnets. They have a diameter of 3.1 cm. The middle fields consist of a central setting of pressed silver foil with a decoration pattern of radiant stripes. Although they are not round such as the brooches from Vrijthof grave 274, these brooches also belong to general type E3 of Vielitz. On the basis of the middle fields they can be classified as sub-type E3.22.¹⁰³³ The brooches of this type date in Vielitz *Stufe* 3 (560/70-600/10).¹⁰³⁴

The brooch from Vrijthof grave 314 is much alike those from grave 187, but does not form a pair and is, with a diameter of 2.3 cm, smaller. A part of the silver ground plate and rim, and four of the eleven garnets are gone. The middle field consists of pressed foil with a pattern of short radiant stripes. It cannot be said whether this brooch once was part of a pair. It was found together with some beads.

This brooch can best be compared with general type E2 (*zweizonige Fibeln mit Pressblechmustern aus Kugelchen und Linien in konzentrischer Anordnung*) and on the basis of the decoration pattern of the middle field as sub type E2.12.¹⁰³⁵ These brooches date in Vielitz *Stufe* 2 (530/40-560/70) but can also occur in *Stufen* 1 and 3.¹⁰³⁶

It appears that the rosette shaped brooches from the Vrijthof cemetery are larger, except for the brooch from Vrijthof grave 95, than the round garnet disc brooches. Siegmund described the rosette shaped brooches from the Rhineland area as brooches with either two or three zones of multiple cells with garnets, the variation of the middle fields is not considered. No brooches with middle fields comparable to the Vrijthof brooches can be found in the lower Rhineland area. Vielitz also observed that brooches with a middle field of pressed foil are rare; from her research area only 7% of the brooches have such a middle field.¹⁰³⁷

On a general level the Vrijthof brooches can be classified as Siegmund type Fib 1.3, which dates in Rhineland phase 4 (530-555) and sporadically in phase 5 (555-570). The Vrijthof brooches date earlier according to Siegmund's typo-chronology than according to the typo-chronology of Vielitz.

Unlike Siegmund, Legoux, Périn and Vallet do refer to middle fields of another material than garnet and show some examples of rosette shaped brooches with one zone of garnets. Their typological group 215 matches the rosette shaped Vrijthof brooches, which dates in their phases MA2-MA3 (520/30-

¹⁰³⁰ Vielitz 2003, 42-44, 253, Abb. 113-E3.21.

¹⁰³¹ Vielitz 2003, 76-77.

¹⁰³² See for example Zeller 1996, Martin 1991, RGZM 38/2 629 e.v., Martin 1995 in Hoops Reallexikon.

¹⁰³³ Vielitz 2003, 42-44, 253, Abb. 113-E3.22.

¹⁰³⁴ Vielitz 2003, 76-77.

¹⁰³⁵ Vielitz 2003, 42-44, 253, Abb. 113-E2.12.

¹⁰³⁶ Vielitz 2003, 76-77.

¹⁰³⁷ Vielitz 2003, 42.

600/10).¹⁰³⁸ Round brooches with a middle field of pressed foil are not identified as a separate type, while in the research area of Vielitz the rosette shaped brooches form a minority of the brooches with a pressed foil middle field.¹⁰³⁹ The rosette shaped brooches with a pressed foil middle field form the majority in Maastricht. They are probably more characteristic for the Meuse area and northern France. The dating of Legoux, Périn and Vallet is in line with that of Vielitz. It can be assumed that the rosette brooches from Maastricht date earlier than the round brooches with a pressed foil middle field, but a date for all these brooches in the second half of the sixth century is for now proposed.

Garnet disc brooches: rosette and round, one zone, middle field of filigree.

Vrijthof: 95 (1484-1). Pandhof: 11220 (375-1, 2)¹⁰⁴⁰; 11321 (418-3, 5)¹⁰⁴¹.

Appendix 1: Figure 31.

It is assumed that the silver element (418-3), which is known from Pandhof grave 11321, is the central setting of a disc brooch with garnets because it is similar to the central setting of the complete garnet disc brooch that was also found in this grave. This brooch is rosette shaped with one zone of 10 cells with garnets. The middle fields of the brooches consist of a round silver setting with filigree decoration. The filigree pattern consists of four volutes, placed around a central point. It remains uncertain whether the brooches were worn and/or deposited as a pair, or that the single central field was already separated from the brooch at the time before and/or at deposition.¹⁰⁴² This 'pair' of brooches originates from one of the 'richest' furnished graves of the Pandhof cemetery with other finds like a rock crystal ball in a silver casing, two silver gilded bow brooches, various beads and two golden pendants.

The disc brooches can be classified as general group D7 (*zweizonige Fibeln mit Filigranmuster aus volutenförmigen Elementen*) of Vielitz and in view of the decoration of the middle field as sub-type D7.74.¹⁰⁴³ The two brooches from Pandhof grave 11321 are already published as examples for this type.¹⁰⁴⁴ They are published as finds from Pandhof grave 290, as this grave was known by at that time. This type is, according to Vielitz, rare although known from cemeteries that cover an extended area.¹⁰⁴⁵ These brooches date in Vielitz *Stufe 2* (530/40-560/70).¹⁰⁴⁶

The two brooches from Pandhof grave 11220 are round and small with a diameter of 1.9 cm. The inner zones consist of a round silver setting with silver filigree that forms a pattern of a circle surrounded by four small dots. The casing of these brooches is of silver and the zone around the middle field consists of nine cells with garnets. A part of the ground plate and rim and four of the cells with garnets of one of the brooches are lost. These brooches were found in a grave which contained two gilded bow brooches and glass beads.

Vielitz describes the filigree pattern as a significant feature for sub-type D3.14 (*Zweizonige Fibeln mit Filigran-bogen muster aus vier Halb- oder Vollkreisen*) of the group of two-zoned brooches with filigree.¹⁰⁴⁷ These two Pandhof brooches also are mentioned by Vielitz (as finds from a grave by her known as Pandhof grave 333) as examples for this type. They date in her *Stufe 2* (530/40-560/70).¹⁰⁴⁸ This pair of brooches is worn and/or deposited in combination with two bow-brooches. This costume is, according to Siegmund, the 'normal' dress-costume of woman in Rhineland phases 3-4 (485-555).¹⁰⁴⁹ The two garnet disc brooches from Pandhof grave 11321 were also associated with two bow brooches and can be compared with the costume as identified for grave 11220. Garnet disc brooches of which the

¹⁰³⁸ Legoux/Périn/Vallet 2004, 17, 35, 53 (type 215).

¹⁰³⁹ Vielitz 2003, 42.

¹⁰⁴⁰ Ypey/Glazema 1955, 53.

¹⁰⁴¹ Ypey/Glazema 1955, 47.

¹⁰⁴² The notes in the old archive and the subscription of the picture in Ypey/Glazema 1955 mention that the second rosette brooch was found in 'pieces'. These remains, however, (except for the middle field) are not present in the current Pandhof collection.

¹⁰⁴³ Vielitz 2003, 39-42, 251, Abb. 112-D7.74.

¹⁰⁴⁴ Vielitz 2003, 76, 177, 563, 564, Maastricht Grab 290.

¹⁰⁴⁵ Vielitz 2003, 90, Abb. 38, 92.

¹⁰⁴⁶ Vielitz 2003, 76.

¹⁰⁴⁷ Vielitz 2003, 39-42, 251, Abb. 112-D3.14.

¹⁰⁴⁸ Vielitz 2003, 75, 177, 565 and 566, Maastricht Grab 333.

¹⁰⁴⁹ Siegmund 1998, 55-56.

central fields consist of filigree can be assumed to be elements of the most elaborate (funerary) outfits of women.

The brooch from Vrijthof grave 95 is rosette shaped. It has a silver casing and is with a diameter of 1.8 cm the smallest rosette brooch from the Vrijthof cemetery. It is the only brooch found in this grave. The other finds from this grave are various beads, bronze earrings, a knife, a bronze bracelet and a bronze belt buckle with belt stud. The singular zone of garnets of this brooch counts eight cells and the pattern of filigree in the middle field is a spiral, a pattern that can be identified as sub-type D10.34 of general group D (*Zwei- und dreizonige Fibeln mit filigranverzierter Innenzone*) of Vielitz.¹⁰⁵⁰ A middle field such as in Vielitz classification scheme, however, is only found on brooches with three zones. Vielitz generally dates brooches with filigree in her *Stufen* 2 and 3 (530/40-600/10).¹⁰⁵¹ The Vrijthof brooch is with a diameter of 1.8 cm a relatively small brooch, of which it is mentioned by Vielitz that these can date as early as in her *Stufe* 1 (480/500-530/40).¹⁰⁵²

The brooches with a middle field of filigree make up the second large group of garnet disc brooches in the research area of Vielitz.¹⁰⁵³ Both the pairs with a filigree middle field from Maastricht date to Vielitz *Stufe* 2 (530/40-560/70), the exact dating of the small brooch Vrijthof brooch is uncertain. According to Siegmund's typology, the brooches can best be classified as type 1.3 which dates to Rhineland phase 4 (530-555), and sporadically to phase 5 (555-570).¹⁰⁵⁴ The brooches can be classified as type 215 according to the typology of Legoux, Périn and Vallet, which dates to their phases MA2-MA3 (520/30-600/10).¹⁰⁵⁵ The classification of the middle fields, according to Vielitz typo-chronology differs only slightly with the dating of the other typo-chronologies by which it can be concluded that the dating of the brooches on the basis of the morphological development of the middle field does not offer a more detailed chronology.

Garnet disc brooches: round and rosette, two zones

Vrijthof: 166 (1539-1). Pandhof: 10365 (562-3; 562-4).¹⁰⁵⁶

Appendix 1: Figure 31.

The pair of brooches from Pandhof grave 10365 and the single brooch from Vrijthof grave 166 are the only Maastricht finds that are classified as garnet disc brooches with two zones. Their inner zone consists of multiple cells of garnets and therefore a so-called middle field, such as it is described for the other brooches, is considered a feature which is not present on these brooches.

The round brooch from Vrijthof grave 166 has a silver casing and a diameter of 2.8 cm. The inner zone has a diameter of 1.1 cm. It is formed by three triangular cells, from one of which the garnet is lost. The outer zone consists of twelve cells with garnets. The other finds from Vrijthof grave 166 are the bronze fittings of a purse, a small key and various beads of a necklace. The brooch was found on the middle of the chest. It is not certain whether it originally belonged to a pair.

The rosette shaped brooches from Pandhof grave 10365 have a silver gilded casing and ground plate with a diameter of 2.4 cm. The outer zone consists of ten cells with garnets. The inner zones of these brooches are similar to the inner zone of the brooch from Vrijthof grave 166. They have a diameter of 1 cm. These brooches belong to a grave goods assemblage consisting furthermore of two bow brooches and a series of beads. These brooches are published by Vielitz as finds from Pandhof grave 591, as they were known at the time of the publication.¹⁰⁵⁷

¹⁰⁵⁰ Vielitz 2003, 39-42, 251, Abb. 112, D10.34.

¹⁰⁵¹ Vielitz 2003, 76.

¹⁰⁵² Vielitz 2003, 76.

¹⁰⁵³ Vielitz 2003, 39, 42.

¹⁰⁵⁴ Siegmund 1998, 45.

¹⁰⁵⁵ Legoux/Périn/Vallet 2004, 17, 35, 53 (type 215).

¹⁰⁵⁶ Ypey/Glazema 1955, 51-52.

¹⁰⁵⁷ Vielitz 2003, 73 (note 516).

Vielitz classified brooches with this kind of inner zone as type C1 (*Zweizonige Fibeln mit zwei- oder dreifach-radialen Zellmustern*).¹⁰⁵⁸ The inner zones such as of the three brooches from Maastricht are classified as sub-type C1.4.¹⁰⁵⁹ Vielitz claims that the middle fields of these brooches (such as for types C2 and C3) are much alike the little brooches with one zone, so that these brooches (of types C1 to C3) can be seen as their successors.¹⁰⁶⁰

Round brooches of group C1 with a diameter of 2.5-3.0 cm (the Vrijthof brooch measures 2.8 cm) date to *Stufe* 2 of Vielitz (530/40-560/70).¹⁰⁶¹ Vielitz dates the rosette brooches from the Pandhof (diameter 2.4 cm) to the same period.¹⁰⁶²

Siegmund classified brooches with this appearance as typological group Fib 1.3 which is placed in Rhineland phases 4-5 (530-570).¹⁰⁶³ The sub-types such as Vielitz defined for these brooches, do not have much chronological significance compared to the less specific classification of Siegmund. It can be concluded that the classification of Vielitz can be highly appreciated for its detailed typological results, but that chronological results are not obtained to the same refined degree.

Brooches of this kind are not specifically defined in the classification of Legoux, Périn and Vallet, and on the basis of the depicted examples it seems that they are not part of the find repertoire of northern France.

It is remarkable that the garnet disc brooches from the Pandhof are part of the 'four-brooch fashion' and that those from the Vrijthof do not necessarily form an ensemble with bow brooches. This may be an indication that the garnet disc brooches from the Vrijthof belong to a 'fashion' whereby single brooches worn on the breast replace one with two brooches. The 'single garnet brooch fashion' (eventually combined with bow brooches) is supposed to be a further development of the fashion with two disc-or small brooches. It dates later in the sixth century and culminates in the use of large disc brooches in the seventh century.¹⁰⁶⁴

Garnet disc brooch: round, two zones with mixed inlay

Vrijthof: 17 (1681-1).

Appendix 1: Figure 32.

The garnet disc brooch from Vrijthof grave 17 can be distinguished from the other round disc brooches because of its bronze casing and the two zones of relative narrow cells with garnet and greenish glass inlay. The glass inlay forms a cross motif. The outer zone consists of 20 cells, the inner zone of 5. The central setting is a small round cell from which the inlay is missing. Because it is too small for a setting of multiple cells of garnets, and these little cells are often with another inlay than garnet it is for now identified as a middle field, not a zone. The brooch has a diameter of 2.8 cm. The fastener at the back of the brooch is lost. This grave contained furthermore some glass beads. No skeletal remains were found in this grave but in view of the outline of the grave it can be assumed that the brooch was found in the area around the pelvis, what is a relatively low position. This grave may have been disturbed, and it can be assumed that this brooch moved from its original position.

Although the cells of this brooch are quite narrow, especially compared to the other Maastricht brooches, it seems appropriate to place this brooch in Siegmund's typological group Fib 1.3 instead of group 1.5 for which narrow cells are the main characteristic.¹⁰⁶⁵ The brooches that are examples of this type do not resemble the Vrijthof brooch. Group Fib 1.3 dates in Rhineland phase 4-5 (530-570).

The Vrijthof brooch fits best in group C (*Zwei- und mehrzonige Fibeln mit granatbelegter Innenzone*) of the Vielitz typology, and more specifically in sub-group C3 (*Zweizonige Fibeln mit sechs- oder mehrfach-*

¹⁰⁵⁸ Vielitz 2003, 35-39.

¹⁰⁵⁹ Vielitz 2003, 37, 249, Abb. 111- C1.4.

¹⁰⁶⁰ Vielitz 2003, 35.

¹⁰⁶¹ Vielitz 2003, 73.

¹⁰⁶² Vielitz 2003, 73, note 516.

¹⁰⁶³ Siegmund 1998, 45.

¹⁰⁶⁴ Zeller 1996, 675-680.

¹⁰⁶⁵ Siegmund 1998, 45.

radialen Zellmuster).¹⁰⁶⁶ The first zone with 5 cells and the central setting of the Vrijthof brooch are both, according to this typology, considered to be the inner zone of the brooch. This inner zone, however, in the typology of Vielitz counts six or more radial cells and not five. Despite this deviation the Vrijthof brooch can best be compared with subtype C3.14 of group C3.¹⁰⁶⁷ Brooches of this type are dated in Vielitz *Stufe 2* (530/40-560/70).

Legoux, Périn and Vallet created a specific typological group for round garnet disc brooches for which a cross motif is the main characteristic. They refer to these brooches as 'relatively large with large garnets', although without giving exact measurements.¹⁰⁶⁸ The brooch from Vrijthof grave 17 has a diameter of 2.9 cm, which is only somewhat larger than a number of the other brooches of the two Maastricht cemeteries. Type 218 of Legoux, Périn and Vallet dates in phase MA3 (560/70-600/10), which is later than the proposed date of Vielitz and Siegmund. It can be questioned whether the Vrijthof brooch can be classified and dated according to the typology of northern France.

Garnet disc brooches: rosette, 1 zone, garnets and filigree in a sunken field

Vrijthof: 189 (1489-1).

Appendix 1: Figure 32.

The garnet disc brooch from Vrijthof grave 189 is rosette shaped and consists of a silver ground plate and a silver casing with a diameter of 2.7 cm. The outer zone consists of ten cells of which six are filled with garnets and four are empty. It can be assumed that these cells also contained garnets. The middle field is formed by two isolated, semi-circular cells with garnets placed opposite to each other on a sunken field. This sunken field is of a silver plate with a decoration of four volute shaped filigree threads. Apart from some remnants, the fastener on the back of the brooch has gone astray. This brooch was found together with another, although very different, brooch on the middle of the chest (see below).

The features of this Vrijthof brooch are well documented by Vielitz. She classified such brooches as general group F (*Zwei- und mehrzonige Fibeln mit gemischter Innen- oder Zwischenzonenverzierung*) of which the Vrijthof brooch can be compared to type F3.¹⁰⁶⁹ The exact appearance of the filigree pattern is not listed in the overview of sub-types for type F3, although the position of the cells with garnet of sub-type F3.11 (two segments of garnets) resembles the Vrijthof specimen.¹⁰⁷⁰ Vielitz dates brooches of type F3 in her *Stufe 3* (560/70-600/10).¹⁰⁷¹

Siegmund classifies similar brooches as Fib 1.4 and dates them in Rhineland phase 5 (555-570).¹⁰⁷² The Franken AG maintained this type which dates towards the end of their phase 4 (510/25-565) and in phase 5 (565-580/90). Brooches with a sunken field and filigree are not explicitly described as such by Legoux, Périn and Vallet, but the Vrijthof brooch resembles the depicted examples of type 215, which dates in their phases MA2-MA3 (520/30-600/10).¹⁰⁷³

Filigree disc brooch: elevated middle field, filigree and isolated cells with garnet.

Pandhof: 10042 (60-5)¹⁰⁷⁴.

Appendix 1: Figure 32.

The disc brooch from Pandhof grave 10042 is different from the other garnet disc brooches of both the Vrijthof and Pandhof cemeteries because of its elevated middle field and surface of isolated cells with garnets in combination with an elaborate decoration of filigree. The brooch is found at the position of the

¹⁰⁶⁶ Vielitz 2003, 35-39.

¹⁰⁶⁷ Vielitz 2003, 249 (Abb.11-C3.14).

¹⁰⁶⁸ Legoux/Périn/Vallet 2004, type 218, 17, 35, 53.

¹⁰⁶⁹ Vielitz 2003, 44-48.

¹⁰⁷⁰ Vielitz 2003, 255, Abb. 114-F3.11.

¹⁰⁷¹ Vielitz 2003, 77.

¹⁰⁷² Siegmund 1998, 45.

¹⁰⁷³ Legoux/Périn/Vallet 2004, 17, 35, 53 (type 2150).

¹⁰⁷⁴ Ypey/Glazema, 1955, 44-45.

neck, together with amethyst beads. The other finds from this grave are an iron buckle, a decorative pin, a knife, a coin-pendant and a simple iron ring.

Filigree brooches fall outside the variation of brooches such as studied by Vielitz, but are as a separate group, including this specific Pandhof specimen, extensively discussed by Graenert.¹⁰⁷⁵ The focus of this study lies on typology, chronology and distribution patterns of all the filigree brooches known from find locations west of the Rhine (three regions are compared: Francia (to which Maastricht belongs), Burgundia and the Rhineland), combined with some interesting analysis of the organisation of their production and their part in the dress-costumes of women. The typology of Graenert is based on the construction of the brooches (connected specimens (*Serie A*) or box form (*Serie B*)), on their form and size and on the various decoration patterns of filigree and isolated cells with various inlays.¹⁰⁷⁶

The Pandhof brooch is round and consists of a ground plate and decoration plate. The decoration plate lies directly on the ground plate and together they form one connected specimen (*Serie A*).¹⁰⁷⁷ The ground plate is of nonferrous metal, the decoration plate is of gold. The two plates are fixed with six silver nails with domed heads which are visible on the surface of the decoration plate and are integrated in the overall decoration pattern. At the back of the ground plate the remnants of the fastener are present, the needle is lost. The centre of the ground plate is concave. It forms the elevation of the middle field on the front side of the brooch, the so-called middle knob.

Graenert created, apart from '*Serien A and B*', three typological groups, and the Pandhof brooch is placed in group 1.¹⁰⁷⁸ This classification is based on certain aspects, namely the size, the shape of the filigree ornaments and the pattern formed by the cells with inlays (of various materials).¹⁰⁷⁹ The Pandhof brooch has a diameter of 2.9 cm and thus belongs to the smallest of the filigree brooches of Graenert's research area.¹⁰⁸⁰

With regard to the filigree decoration it is mentioned by Graenert that filigree refers to a decoration technique which is not unambiguously described. It can consist of threads of different construction and appearance.¹⁰⁸¹ The filigree applied on the Pandhof brooch is identified as pearl thread.¹⁰⁸² Graenert established a classification scheme of single filigree ornaments and 4 groups of ornament patterns. The Pandhof brooch shows two filigree ornaments: circles and s-shapes, both of a single pearl thread. These ornaments intermingle over the complete surface in a pattern that is classified by Graenert as group F1.¹⁰⁸³ The last typological element of the Pandhof brooch is formed by the patterns of isolated cells with inlay. The Pandhof brooch has six isolated cells, all with garnets, which are applied in two zones. The three cells of the inner zone have the shape of a drop, with the tip pointing to the middle. The three cells in the outer zone are square with concave sides. Graenert identified the pattern of cells with garnets as category S1a and S2b.¹⁰⁸⁴

The brooches of Graenert's research area are dated by the results of a seriation of their characteristics and the seriation is verified with the finds they are associated with. The Pandhof brooch (*Gruppe 1*) dates to Aments JMI (600-630/40).¹⁰⁸⁵ Siegmund classified similar brooches as type Fib 2.3 and dates them in Rhineland phase 7 (585-610).¹⁰⁸⁶ This type is maintained by the Franken AG and dates in their phase 6 (580/90-610/20).¹⁰⁸⁷ According to Legoux, Périn and Vallet this brooch should be classified as type 221,

¹⁰⁷⁵ Graenert 2007.

¹⁰⁷⁶ The characteristics of the Pandhof brooch are described in the catalogue (Graenert 2007, Katalog I: Benelux-Länder, 170-171, 024 Maastricht).

¹⁰⁷⁷ Graenert 2007, 14-17, Abb. 3.

¹⁰⁷⁸ Graenert 2007, 43, 51-55.

¹⁰⁷⁹ Graenert 2007, 35-43, Abb 21, 23 (typological scheme). The various characteristics such as defined by Graenert form a typological scheme of which all elements are depicted in Abb. 21 and 23.

¹⁰⁸⁰ Graenert 2007, 35, Abb. 18.

¹⁰⁸¹ Graenert 2007, 23-28. Filigree should not be confused with 'granulation', which is a different decoration technique although it can have the same appearance as filigree, especially when pearl thread is used.

¹⁰⁸² Graenert 2007, 24, Abb. 12.13, 26, Abb. 13.6, 27, Abb. 14.E.

¹⁰⁸³ Graenert 2007, 36-38.

¹⁰⁸⁴ Graenert 2007, 42-43.

¹⁰⁸⁵ Graenert 2007, 51-60, Abb. 29.

¹⁰⁸⁶ Siegmund 1998, 48.

¹⁰⁸⁷ Müssemeier *et al.* 2003, 26-27.

which predominantly dates to their phase MR1 (600/10-630/40).¹⁰⁸⁸ Brooches of this type can sporadically be found in the period just before and after this phase.

Bow brooches

Three pairs of bow brooches were found in the Pandhof cemetery, from the Vrijthof cemetery a single bow brooch is known as a stray find. The three Pandhof pairs, each consisting of two similar specimens of silver gilded bow brooches with rectangular head plates and oval feet with animal heads, are known from grave contexts. These pairs are already discussed by Koch in his detailed work on Merovingian bow brooches from find locations in the western part of the Frankish territory.¹⁰⁸⁹ Koch classified the three pairs as different types on the basis of the shape and construction of the knobs on the head plates, the decoration pattern and techniques applied, and the shape of the animal heads that form the extensions of the feet. The characteristics of these types and the individual Pandhof brooches are extensively described in Koch's study. These detailed descriptions form the basis for the following discussion of the Pandhof brooches and their find contexts and dating. The distribution patterns of the comparable examples for each type are also extracted from Koch's work.

An interesting aspect of bow brooches, such as the Pandhof specimens, is that the number of examples of each type is relatively small, but that they share multiple characteristics (the resemblances between them are striking), and that they often have extended distribution areas. The process of production and distribution of such objects and their relation to burial practices is an interesting field of research, which is nonetheless scarcely touched upon in early medieval archaeology. In this respect it is interesting to recall a remark of Graenert with regard to filigree brooches. She observed that these brooches are, in contrast to several bow brooches, hardly ever similar to one another. The high degree of individual features made it in her opinion difficult to define encompassing typological characteristics.¹⁰⁹⁰ Can it be assumed that the organisation of production for bow brooches and for filigree brooches was different?

Bow brooches are often discussed as part of the 'brooch-costume' of women. They often appear paired and are frequently associated with garnet disc brooches (four-brooch fashion).¹⁰⁹¹ The bow brooches are sometimes interpreted as fasteners of the lower part of the cloak where they were attached below each other; it is also thought that they were attached to a leather strap that was hanging down from the belt.¹⁰⁹²

For the stray find from the Vrijthof the original location in the grave cannot be established, the pairs from the Pandhof, however, are all known from grave contexts. Their associated finds and, if this information is available, their position in relation to the body will be discussed below.

Bow brooches: silver gilded, rectangular head plates, oval feet with animal head.

Pandhof: 10365 (562-1; 2).¹⁰⁹³

Appendix 1: Figure 32.

The two brooches of the silver gilded pair from Pandhof grave 10365 are decorated with a geometric pattern executed in *Kerbschnitt* and niello.¹⁰⁹⁴ A frieze of single triangles with niello was applied along the edges of the head plates and along the edges of the oval feet. The head plates consist of multiple decoration zones. A frieze of opposite triangles with niello was applied around the middle fields of the head plates which are decorated with a so called chess board motif. These friezes are surrounded by a field with ladder stripes. The bows consist of two, slightly deepened, rectangular fields with stripes. Dot-

¹⁰⁸⁸ Legoux/ Périn/Vallet 2004, (type 221), 17, 35, 53.

¹⁰⁸⁹ Koch 1998. Bow brooches are extensively discussed by Kühn for the Rhineland (1965), Southern Germany (1974) and central Germany (1981), and are further discussed by Koch for the western part of the Frankish world (1998) and Göldner (1987) for the Rhine and the Mosel area, and in various publications of early medieval cemeteries.

¹⁰⁹⁰ Graenert 2007, 33.

¹⁰⁹¹ Zeller, 1996.

¹⁰⁹² Walter 2004, 41.

¹⁰⁹³ Ypey/Glazema 1955, 51-52.

¹⁰⁹⁴ The following description of the two bow brooches is after Koch (Koch 1998, 274).

in-circles with niello are applied on the rest of the bows. The surface of the oval feet shows a complicated pattern of lines, which are bordered by a frieze of niello triangles. The feet end in elongated animal heads. The vertical band in the middle of the heads shows a niello dot-in-circle decoration. The shapes of the eyes, which can be different on various bow brooches, are oval on the Pandhof specimens. The pair from Pandhof grave 10365 is part of a grave goods assemblage that furthermore consists of two garnet disc brooches and a necklace of beads. The disc brooches are found on the chest, the two bow brooches on the pelvis. The animal heads of the brooches (thus the extensions of the feet) are pointing towards the head of the buried person.

Koch classified this pair in the general group of brooches with a rectangular head plate and oval foot plate as type V.1 (head plate without knobs). Four resembling brooches or pairs are known as examples of this type, which is, as Koch mentions, a low number compared to the various bow brooch types with knobs. Although exact parallels for the Pandhof brooches are not known to Koch, they can best be compared to the finds from Trivières (Belgium, Prov. Hainaut) and Anderlecht (Belgium, prov. Brabant). Koch dates these brooches to the end of the AM II (520/30-560/70) and to the AM III (560/70-600). On the basis of the two garnet rosette brooches, Koch assumes that the Pandhof bow brooches were rather deposited towards the end of the AM II than in the AM III.

Siegmund identified 3 types of bow brooches with a rectangular head plate for which the main defining criteria are the absence (S-Fib 12.9) or presence of knobs.¹⁰⁹⁵ The brooches without knobs date to Rhineland phases 4 and 5 (530-570). The examples of this type are, however, substantially different from the Pandhof brooches. The Franken AG maintained type S-Fib 12.9 of which they state (as does Koch) that the types Caulaincourt and Andernach-Nordendorf, defined by Göldner as type 3b:5, can also be classified as such.¹⁰⁹⁶ The Franken AG date these brooches in the end of phase 4 (510/25-565) and in phase 5 (565-580/90). Legoux, Périn and Vallet do not consider the absence or presence of knobs on brooches with rectangular head plates as a typological relevant criterion (see the examples of type 277). The brooches from Maastricht, however, resemble an example of type 277, which dates predominantly to their phase MA3 (560/70-600/10), yet can also sporadically date to the phase before, MA2 (520/30-560/70).¹⁰⁹⁷ Summarizing it can be stated that, despite the typological differences, the bow brooches from the Pandhof are dated to more or less the same period in the typo-chronologies mentioned and the work of Koch.

Bow brooches: gilded silver, rectangular heads with amalgamated knobs, animal style foot

Pandhof: 11220 (375-4; 3).¹⁰⁹⁸

Appendix 1: Figure 32.

Both the bow brooches of the pair from Pandhof grave 11220 have eight knobs which are cast in one piece with the brooches.¹⁰⁹⁹ The four knobs at the top of the heads and the two knobs at each side of the heads are connected (amalgamated). The decoration of the brooches consists of niello triangles and lines applied by the technique of *Kerbschnitt*. The niello triangles form a frieze along the edges of the head plates and form a single line along the edges of the oval foot plates that end on the snouts of the animal heads. The friezes of triangles on the head plates consist of one line of niello triangles which surround the rectangular middle fields which. The bows of the brooches have a vertical area in the middle which is filled with a decoration of little niello dot-in-circles. On the side of these middle fields *Kerbschnitt* zigzag lines are applied. The middle field of the oval foot plates consists of a *Kerbschnitt* decoration of lines which form a complicated pattern. The foot plates end in short animal heads. These are shorter and more squat and stylised than they are on the other bow brooches from the Pandhof cemetery. The eyes of the animal heads are oval. The grave goods assemblage of Pandhof grave 11220 also consists of two

¹⁰⁹⁵ Siegmund 1998, 54-55.

¹⁰⁹⁶ Müssemeier *et al.* 2003, 31.

¹⁰⁹⁷ Legoux/Périn/Vallet 2004, type 277, 18, 37, 54.

¹⁰⁹⁸ Ypey/Glazema 1955, 53.

¹⁰⁹⁹ Koch 1998, Teil 1, 279-278. The type to which the Pandhof brooches belong are in detail discussed by Koch, not the actual Pandhof brooches. This type-description forms the basis for the following description of the Pandhof brooches.

additional garnet disc brooches, together with a necklace of beads. The two bow brooches were found on the pelvis.

This pair of bow brooches is published by Koch as part of the general group of bow brooches with rectangular head plates with knobs (group V.2), and is classified as sub-type Nordendorf/Maastricht (V.2.1.2).¹¹⁰⁰ At the time of publication Koch knew eight examples of this type from quite an extended area. It is remarkable, as also Koch mentions, that examples of this type show a high degree of resemblance and are distributed over an extended area. It can be assumed that these brooches were produced in the same workshop. The motives behind their distribution and circulation remain open for speculation. Koch dates the brooches of this type in the AM II (520/30-560/70) on the basis of retrieved ones from undisturbed graves. Koch observed that they could also occur as antiques in younger graves. Next to the rectangular head plate with or without knobs, the construction of the knobs is another defining criterion in Siegmund's typology. They can either be connected (amalgamated) or cast together with the brooch (S-Fib 12.10), or be applied separate knobs (S-Fib 12.11).¹¹⁰¹ The Pandhof brooches can be classified as Siegmund's type Fib 12.10 which he dates to Rhineland phase 4 (530-555). The Franken AG maintained this type and date it to their phases 4B to 5 (510/25-580/90).¹¹⁰² Both Siegmund and the Franken AG mention that multiple types, such as created by Kühn, are assembled in this type. Although this type is defined broader by Siegmund and the Franken AG than is the type for the Pandhof brooches by Koch, for the final dating this is not of much consequence. The Pandhof brooches can be compared to type 277 (as the brooches from Pandhof grave 10365) of the typology of Legoux, Périn and Vallet, which dates predominantly to their phase MA3 (560/70-600/10), yet can also sporadically be dated to the phase before, MA2 (520/30-560/70).¹¹⁰³

Bow brooches: gilded silver, rectangular head with applied knobs, animal style foot

Pandhof: 11321 (418-16; 17).¹¹⁰⁴

Appendix 1: Figure 33.

The gilded silver brooches of the pair from Pandhof grave 11321 both have seven separated knobs that were fixed to the brooches after production.¹¹⁰⁵ Three knobs are fixed to the top of the heads and two to each side of the heads. The knobs are profiled at their base and have domed heads. The brooches are decorated with a *Kerbschnitt* decoration of stripes that form various patterns. A decoration of niello ladder stripes can be found along the edges of the head plates, along the edges of the oval foot plates, and forms the curved horizontal border between both the head plates and the bows, and the foot plates and the bows. The *Kerbschnitt* decoration of the middle field of the head plates consists of two connected swastikas. The decoration of the bows consists of two longitudinal fields filled with interlacing lines. The oval footplates have a niello decoration of open strap-work. The foot plates end in elongated animal heads in relief. These foot plates are as a consequence more profiled than those of the other Pandhof bow brooches. The heads have round eyes unlike the eyes on the other Pandhof brooches, which are oval.

The brooches from Pandhof grave 11321 were found, although partly disturbed, in an 'extremely rich' grave of a woman. The grave goods assemblage consists furthermore of several beads (2 strings are reconstructed), a jewelled pendant of gold with garnet, a golden earring (lost), a rock crystal ball in a silver casing and two rosette shaped garnet disc brooches (of one which only the central setting remains) and a silver buckle. The find locations of these brooches are not known for this grave.

Koch classified this pair of brooches in the general group of brooches with rectangular head plates and oval foot plates as sub group V.2.2, which is characterised by singular knobs, and more specifically,

¹¹⁰⁰ Koch 1998, Teil 1, 279-281; Teil 2, 707, Fundliste 20B, type V.2.1.2, Karte 20.

¹¹⁰¹ Siegmund 1998, 54-55.

¹¹⁰² Müssemeier *et al.* 2003, 31.

¹¹⁰³ Legoux/Périn/Vallet 2004, 18, 37, 54 (type 277).

¹¹⁰⁴ Ypey/Glazema 1955, 47.

¹¹⁰⁵ See for a detailed description of this type of bow brooches also Koch 1998, Teil 1, 313.

based on the decoration, sub-type V.2.2.6 (*Fibeln met winkligen Kerbschnittdekor*).¹¹⁰⁶ Five other singular brooches or pairs are classified as the same type although, apart from their shared characteristics such as the *Kerbschnitt* decoration and the shapes of the knobs, they differ to a certain degree. The brooch which shows a high degree of resemblance with the Maastricht specimens is from an unknown provenance in the Netherlands (prov. of North-Brabant). This find location, that does not have to be far from Maastricht, could point towards a localised production of these bow brooches, as Koch mentions. The meandering swastika's, however, are in his view (following U. Koch) a motif which was developed in the eastern part of the Merovingian world. Questions on the origin and distribution of both objects and influences require further investigation before defining certain regions as the origin of a specific element of antique material culture. These brooches are dated to the end of the AM II (550-575) and the beginning of the AM III (560/70-600).¹¹⁰⁷

Bow brooches with separate applied knobs are classified by Siegmund as type 12.11. This type is difficult to date more precisely than to Rhineland phases 6-8 (570-640). This type was not maintained by the Franken AG because it comprises too many sub-types.¹¹⁰⁸

Legoux, Périn and Vallet identified brooches with separately applied knobs as type 276.¹¹⁰⁹ Such brooches are not dated precisely but are mentioned to occur sporadically in their phase MA2 (520/30-560/70) and are even more rare in phase MA3 (560/70-600/10).

Pairs of bow brooches are often discussed in relation to women's dress because they are generally part of a set of brooches which consisted furthermore of two smaller disc brooches or small differently shaped brooches, such as for example bird brooches. The Franken AG identified twelve 'brooch-fashions' on the basis of reoccurring associated types of brooches on specific locations on the body.¹¹¹⁰ This list is more extended and precise than the one presented by Siegmund. The 'fashions' represented by the Pandhof brooches concern Franken AG fashion numbers 3 (phase 3), 4 (phase 4-5), 5 (phase 4B-5) and 8 (phase 3). This overview is based on the presence of two bow brooches and two small garnet disc brooches in relation to their position on the body. Both the Pandhof pairs can first of all be defined as part of the so-called 'four-brooch fashion' because they are associated with a pair of garnet disc brooches. The position in relation to the body is uncertain, but the mentioned 'fashions' of the Franken AG date from phase 3 to phase 5 (460/80-580/90).

Bow brooch: silver gilded, rounded head plate with bird and animal style knobs, bird head foot

Vrijthof: 0 (2965-1).

Appendix 1: Figure 33.

The context of this exclusive silver bow brooch, found as a stray find during the excavation of the Vrijthof, is unknown, but it can be assumed that it was deposited in one of the Vrijthof graves. The brooch consists of a semi-circular head plate with five knobs, which are cast at one with the brooch. Four of the five knobs are bird heads; the knob in the middle is an animal head. The bird heads consist of a head and a neck. The necks are thick on which vertical lines of *Kerbschnitt* are applied. The eyes of the bird heads are formed by round cells. Some remnants of a garnet can still be observed in one of the cells that represent the bird eyes; the garnets of the other three bird heads are gone astray but it can be assumed that originally they were filled with garnets. The eyes of the animal head are also formed by round cells, but these are filled with green glass paste. The rounded head plate has a middle filled with four round cells in which the garnets are still present. The middle field is framed by *Kerbschnitt* lines that

¹¹⁰⁶ Koch 1998, 310-315.

¹¹⁰⁷ Koch 1998, 313.

¹¹⁰⁸ Mússemeier *et al.* 2003, 31-32.

¹¹⁰⁹ Legoux/Périn/Vallet 2004, 18, 37, 54 (type 276).

¹¹¹⁰ Mússemeier *et al.* 2003, 32-34.

follow the rounded curve. On the ribs in between the lines a vague decoration of niello dots can be observed. The bow also shows a decoration of *Kerbschnitt* lines along the middle field on which engraved or *Kerbschnitt* dots in circles are applied. The foot is formed by the neck and head of a bird. It is decorated with a *Kerbschnitt* pattern of curls on which also some niello decoration in the form of dots and triangles can be observed. The bird head that forms the extension of the foot has one large round cell with a garnet that represents the eye. The beak has a *Kerbschnitt* decoration of lines that follow the outline of the beak.

It is noteworthy that parallels for the head plate with the 'knobs' made of four bird-heads and one animal-head are well known, and also a foot in the shape of a bird head, but that a parallel for the combination of these two elements that also resemble the Vrijthof brooch, are difficult to find.

A bow brooch with four knobs of bird-heads and a foot in the shape of a bird head was found in Böttingen. The bird head knobs differ from the ones of the Maastricht brooch in that their neck is less pronounced. Their beaks are also longer and make a connection with other knobs (to the back of another bird head). The middle knob of this brooch is not formed by an animal head but by a square cell with a garnet. The bird head that forms the foot is much smaller than the one of the Vrijthof brooch.

Koch classified brooches with bird head knobs as type I.3.3.2.8 (with four sub-types) of the general group I of brooches with a half-round head plate, straight foot and five knobs.¹¹¹¹ None of the examples resemble the Vrijthof specimen. The middle knob in the form of an animal-head is neither identified by Koch. All these brooches with bird head knobs have simple feet (without an extension in the form of a bird- or animal head). Specimens with a foot in the shape of bird head can be found in Koch's groups III.3.4.2.¹¹¹² These bird heads, however, are all very different from the bird-head on the Vrijthof brooch, as are the bird-head knobs of these brooches. Regarding the combination of knobs and feet, it is difficult to find exact parallels for the Vrijthof brooch.

Legoux, Périn and Vallet classified brooches with a nearly identical head shape as type 268 and date them in their phases MA1-MA2 (470/80-560/70).¹¹¹³ The foot of this type however is simple. Brooches with this head shape and foot shape are not known from the lower Rhineland area.

Small brooches

The group of small brooches consists of brooches of various forms.¹¹¹⁴ From the Vrijthof and Pandhof cemeteries three bird brooches, two equal armed brooches, a rhomboid brooch and a swastika brooch are known. The three bird brooches and equal armed brooch are Merovingian in date, the others are either Roman or of an exotic provenance. For these brooches it can be questioned whether they were deposited as grave goods in the Merovingian period. An extended overview of various Merovingian bird brooches can be found in the work of Thiry.¹¹¹⁵ Finds made after this old study (although not outdated) have to be found in the various publications of early medieval cemeteries.

Bird brooch with filigree and garnets

Vrijthof: 0 (8888-6*).

Appendix 1: Figure 33.

The only context information available for this bird brooch, which became lost after the excavation, informs us that it was found at the location of the Vrijthof cemetery and that it was fixed to the lower back part of a skull.¹¹¹⁶ Information on whether this find was done in a grave and whether it was associated with other finds is not available, yet it can be assumed that it was deposited as a grave good in the Merovingian period. The old photograph and several notes disclose that it was a brooch with a

¹¹¹¹ Koch 1998, 92-96.

¹¹¹² Koch 1998, 114-117.

¹¹¹³ Legoux/Périn/Vallet 2004, 18, 37, 54 (type 268).

¹¹¹⁴ Siegmund 1998, 50-52.

¹¹¹⁵ Thiry 1939.

¹¹¹⁶ This information was found in the Ypey-archive.

length of 3.3 cm. The filigree and cells with garnets are placed on a golden plate that was attached on a silver ground plate with seven silver nails. The beak is pointing to the right and is bending downwards. The four cells with garnets, applied on the middle of the brooch, represent the right wing. In the written rapport on this find it is mentioned that this brooch was reused as a pendant. This conclusion was based on the observation that the fastener on the back side of the brooch was removed and that the brooch was found underneath the skull.¹¹¹⁷

This bird brooch can be placed in Thiry's group of bird brooches with *Filigran- und Cabochonverzierung*.¹¹¹⁸ In this group both *Kerbschnitt* brooches in combination with garnets or cells with another sort of stone and filigree brooches with garnets or other stones are included. The positions of the garnets or stones on the examples of *Kerbschnitt* brooches do not resemble those of the Vrijthof specimen.¹¹¹⁹ The examples of filigree brooches are only slightly comparable to the Vrijthof specimen.¹¹²⁰ The patterns of their filigree decoration are different, the outlines of the brooches do not compare, and the garnets that represent wings are not applied in the same way as on the Vrijthof brooch. Other examples that are a more exact parallel for the Vrijthof brooch are for now not known to me from publications hereafter. Thiry dates bird brooches with filigree and garnets or other sorts of inlays to the second half of the sixth century.¹¹²¹

Siegmund defines four types of bird brooches on the basis of the presence or absence of garnets and their location on the brooch.¹¹²² This classification is also applied by the Franken AG.¹¹²³ The location of cells with garnets on the middle of the brooch and filigree decoration are not mentioned as features on bird brooches of the lower Rhine Area, nor are they by the Franken AG. This may indicate that the Vrijthof specimen has features that are specific for Maastricht or the Meuse area. Siegmund dates all four types of bird brooches in Rhineland phase 3 (460/80-510/25).¹¹²⁴

Legoux, Périn and Vallet identified 17 types of bird brooches on the basis of the decoration technique and the shape of the brooch. Nearly all the types refer to the specific locations they are known from, but they do not describe their significant and defining characteristics.¹¹²⁵ None of the published examples resemble the Vrijthof brooch.

Bird brooches with garnets

Pandhof: 10510 (448-1; 448-2).

Appendix 1: Figure 33.

The surface of these brooches is entirely covered with cells filled with garnet, except for the small round cells that represent the eyes. These are accentuated by a bead. The brooches have a ground plate and casing of silver and a height of 2.9 cm. That they were actually used as brooches can be concluded from the remains of the fastener on the back of one of the brooches. It has disappeared from the other brooch, as are a part of the body and one garnet of what remains of the brooch. The other brooch is complete in outline, but is missing four garnets and the fill of the eye. It can be concluded that each brooch consisted of 15 cells with garnet and a cell for the eye with a different fill. The beak and two wings (or one wing (left) and one claw (right)?) of each brooch are formed by separate cells. The beaks are applied on the right side of the brooches and point downwards. The heads are formed by a circle of five cells with a small round eye in the middle. The least complete brooch shows that the eyes consist of a small white bead. One of five radiant cells forms a small bulge at the back of the head. The body consist of four more or less square cells and the tails of three elongated cells. The pair belongs to a grave goods assemblage which consists furthermore of a glass palm cup and one amber bead.

¹¹¹⁷ These notes are probably from the hand of Ypey.

¹¹¹⁸ Thiry 1939, 58-59.

¹¹¹⁹ Thiry 1939, Taf. 21, 482-493.

¹¹²⁰ Thiry 1939, Taf. 21, 494-503.

¹¹²¹ Thiry 1939, 59, 139.

¹¹²² Siegmund 1998, 50-51.

¹¹²³ Müssemeier *et al.* 2003, 28.

¹¹²⁴ Siegmund 1998, 50-51.

¹¹²⁵ Legoux/Périn/Vallet 2004, 17, 36, 53 (types 235-251),

Various examples of bird brooches which are completely covered with garnet are published in Thiry's overview of bird brooches.¹¹²⁶ The garnet bird brooches with wings, or a wing and claws, at both the left and right side of the brooches can be identified as a separate group.¹¹²⁷ Some examples (numbers 68 to 72) of this group are very similar to the Pandhof specimens, especially with regard to the shape of the beak, the position of the eyes, the shape of the wings and the way their tail is formed.¹¹²⁸ These brooches are also recognised as a sub-group by Thiry, although she also included numbers 73 and 74 (which are, in Thiry's words, more 'extravagant' than the others).¹¹²⁹ The brooches of this group are characterised by a bent beak, a small round eye in the middle of the head which is formed by a circle of multiple cells with garnet. The tails of the birds are formed by three elongated cells with garnet. The left wings of these birds are formed by a triangular cell. This last aspect does not resemble the left wings of the Pandhof specimens, which are rounded.

The find locations of the specimens that resemble the Pandhof brooches are *Freilaubersheim (Rheinhausen)*, *Schwarzrheindorf (Bonn)*, *Andernach (Mayen-Koblenz)* and *Rittersdorf (Bitburg)*.¹¹³⁰ This sub-group was dated to the second half of the sixth century on the basis of the find contexts of the brooches from *Freilaubersheim* and *Schwarzrheindorf*.¹¹³¹

Bird brooches which are completely covered with garnet are also discussed in more recent publications. Regarding the characteristics of Thiry's group such as described above, the ones known to me now are more or less comparable to the Pandhof brooches. A resembling bird brooch is for example known from grave 174 of the cemetery *Goudelancourt-les-Pierrepont (Aisne, Fr.)*.¹¹³² The eye of this brooch is round and small and is positioned in the middle of a radiant pattern of five cells with garnet, such as on the Pandhof specimens. The beak also resembles the beaks of the Pandhof specimens. The pattern of garnets on the body, the shape of the wings and the shape of the tail, however, are different.

Another comparable pair was found in grave 879 of the cemetery of *Cutry*.¹¹³³ The eyes are small, round and of another material (white), and the tail is formed by three elongated cells. Both the beak and the right wing are not formed by a separate cell with garnet; they form one part with respectively the head and the body. This pair dates to Cutry phase A/B/C II (500-525).

Other brooches with a surface completely covered with garnet are known, but these are less similar to the Pandhof brooches. The pair from Zürich is much smaller and their eyes are relatively large and not placed in the middle of the head but at the back of the head.¹¹³⁴ The shapes of the garnet cells that form the body are different, as are the cells that form the tails and wings.

Other garnet bird brooches with an eye at the back of the head and also differently shaped body's are known from *Namur*¹¹³⁵ and two from *Picardie*¹¹³⁶ (these have their beak pointing towards the left). These date to the end of the fifth and beginning of the sixth century.

The position of the eyes at the back of the bird head is a characteristic for numbers 53-64 of Thiry's overview. According to Thiry, these brooches date a phase earlier than the brooches with an eye in the middle of the head, such as those from the Pandhof. The dates are in accordance with the dates of the brooches from Picardie, although not with the dating of the two bird brooches from Cutry which are dated earlier than the resembling bird brooches such as published by Thiry.

Garnet bird brooches are classified by Siegmund as type Fib 7.4.¹¹³⁷ The construction of this type is based on the brooch from the grave of Wardt-Lüttingen which, however, also has filigree decoration. This type can be considered to be a later variant of the brooches that are completely covered with

¹¹²⁶ Thiry 1939, 25-32, Taf. 6-8.

¹¹²⁷ Thiry 1939, Taf. 7.62-74, Taf. 8.75-82.

¹¹²⁸ Thiry 1939, Taf. 7.68-72.

¹¹²⁹ Thiry 1939, 30.

¹¹³⁰ Thiry 1939, 74-75.

¹¹³¹ Thiry 1939, 30, 136.

¹¹³² Bayard 1986, 160, fig. 127.

¹¹³³ Legoux 2005, 96, 98, fig. 73, planche 100, 879.1,3.

¹¹³⁴ Babucke 1997, 154, Abb. 264.

¹¹³⁵ Bequet 1897, 311-336.

¹¹³⁶ Bayard 1986, 141, Fig. 106, 107 (grave 2587, 2319).

¹¹³⁷ Siegmund 1998, 51.

garnet and date in Rhineland phase 5 (555-570). The Franken AG maintained this type but did not include it in their dating system.¹¹³⁸ Legoux, Périn and Vallet define brooches of this kind as type 240 and date them predominantly in their phase MA1 (470/80-520/30) and sporadically in their phase MA2 (520/30-560/70).¹¹³⁹ Roth and Theune dated this brooch type in their phase SW♀II between c. 530-550.¹¹⁴⁰ It can be concluded that garnet bird brooches show various nuances which have a chronological significance. The specific features of the Pandhof brooches are only discussed by Thiry, who dates this group in the second half of the sixth century. This does not coincide with the findings of most of the more recent typo-chronological studies, which, however, do not classify the brooches on the basis of these specific characteristics. Further chronological research on the various characteristics and their typological development has not been carried out after Thiry, and doing so can possibly offer more typo-chronological insights for the various appearances of garnet bird brooches.

Bow brooch: equal armed

Vrijthof: 0 (1850-1*).

Appendix 1: Figure 33.

Brooch 1850 from the Vrijthof location was lost after the excavation. It is a stray find. The remaining documentation provided enough information to describe the find as a bronze brooch with a length of 5.4 cm. It has rounded plates at each side of the bow which are decorated with a cast or/and engraved cross motif in the middle of the plates and a geometric pattern along the edges. The bow is decorated with a similarly applied pattern of lines.

This brooch resembles the brooches that are defined by Siegmund as Fib 10 which dates in Rhineland phase 10 (670-705).¹¹⁴¹ The Franken AG maintained this type.¹¹⁴² They mention that equal armed bow brooches show a variety of shapes that are difficult to date to specific chronological phases. In the research area of the Franken AG the first equal armed bow brooches are known from graves of women of the late seventh century. They are more specifically dated in their phases 9-10 (670/80-750).¹¹⁴³ Koch mentions that these brooches are already known from the region north of the Alps in the early seventh century and in Italy in the late sixth century. Legoux, Périn and Vallet defined two types of equal armed bow brooches with round plates (type 286 (small) and 291 (large)). No specifications on the exact measurements are given. For now it is assumed that the Vrijthof brooch can be classified as their large equal armed bow brooch. This type (291) dates to their phase MR3 (660/70-700/10) but can also sporadically appear just before this phase.¹¹⁴⁴

Small equal armed bow brooches of the early medieval period are recently discussed by Thörle.¹¹⁴⁵ His research area expands from north of the Alps to south and east of the Alps. The group of bow brooches with round endplates such as the Vrijthof specimen is large. The bow brooches with round end plates are classified as general group II of Thörle, which is divided in sub-types by the form of the bow.¹¹⁴⁶ The bow of the Vrijthof brooch has a convex profile on the basis of which it can be classified as Thörle's type II A1. The brooches of type II A1 are cast bronze brooches which can be subdivided on the basis of their decoration. The decoration such as on the Vrijthof brooch cannot be recognised on the examples of the other sub-types and this brooch is therefore classified as the rest group of type A.¹¹⁴⁷ In regard of the brooches of type A (and also the other equal armed brooches) the decoration of an engraved cross on the sides of the bow of the Vrijthof brooch is remarkable. A decoration on the sides of the bow can

¹¹³⁸ The Franken AG mention a parallel in Cologne-St. Severin (grab V/217) which dates in their phase 3 (460/80-510/25).

¹¹³⁹ Legoux/Périn/Vallet 2004, 17, 36, 53 (type 240),

¹¹⁴⁰ Roth/Theune 1988, 34.

¹¹⁴¹ Siegmund 1998, 51.

¹¹⁴² Siegmund 1998, 51; Müssemeier *et al.* 2003, 29-30.

¹¹⁴³ Müssemeier *et al.* 2003, 29-30.

¹¹⁴⁴ Legoux/Périn/Vallet 2004, type 291, 18, 38, 54.

¹¹⁴⁵ Thörle 2001.

¹¹⁴⁶ Thörle 2001, 50-53.

¹¹⁴⁷ Thörle 2001, 57.

only be observed on a very limited number of equal armed bow brooches. Group IIA1 dates to JMII-JMIII (630/40-670/80).¹¹⁴⁸

Equal armed bow brooch: Scandinavian / Thuringian

Vrijthof: 85 (1419-1).

Appendix 1: Figure 34.

The brooch from Vrijthof grave 85 shows a relatively large bow compared to the arms. The elevated concave bow is oval in shape. On the flattened top of the bow a round cut-away space can be observed in which some remnants of a white paste (cement?) is present. An engraved ladder-band pattern is applied along the edge of the round cut-away, and around it a pattern of engraved opposite triangles can be observed. Such triangles can also be observed along the edge of the oval bow. The arms of the brooch are formed by three singular cells. The white paste which is still present in the round cut-away on the top of the bow can also be observed in the round cells at both far ends of the arms. The two other cells of both the arms are filled with gold foil. The inlay of yellowish transparent glass applied on top of this gold foil is still present in three of these cells. It can be assumed that it was also applied in the fourth cell. It remains to be questioned if the gold foil with glass on top of it was also applied in the other two cells in which only white paste can be observed.

The grave goods assemblage to which this brooch belongs consists of a pottery trefoil jug, a glass squat jar and a necklace of beads. The brooch was found near where the original position of the left shoulder is assumed. Although only the skull remains, it seems that both the necklace and the glass and pottery vessels were found at, what is assumed on the basis of similar finds in other graves, their original position in the grave. It can thus be assumed that the brooch is also found at its original position and that it is actually part of a Merovingian grave goods assemblage although resembling specimen are from the Merovingian period are not known to me. It is difficult to identify it as part of the material culture of the Merovingian period.¹¹⁴⁹

Rhomboid brooch: elevated centre with round inlay of glass and extensions with glass inlay.

Pandhof: 10094 (22-5).¹¹⁵⁰

Appendix 1: Figure 34.

A small bronze brooch with an elevated middle field and four triangular extensions at the corners of the rhomboid shaped body is part of a grave goods assemblage consisting furthermore of a comb with case, a buckle with strap end and some beads. The brooch was found near the right lower leg/foot. The extensions are decorated with three singular cells with coloured glass inlay. Similar brooches, although of gilded silver, are known from grave 88 of the cemetery Saint-Victor in Huy-Petite, with garnet in the cells of the extensions or glass inlay resembling the colour of garnet. The same is mentioned for the inlay in the middle of the brooches.¹¹⁵¹ The two brooches were found near the shoulders.¹¹⁵² In view of the finds from Huy it can be assumed that the Pandhof specimen was once part of a pair. The grave from the cemetery Saint-Victor dates in 525-540.

Legoux, Périn and Vallet classified brooches with a flat rhomboid body with two bulges that are formed by cells with inlays at each corner of the rhomboid body as type 211 (*Fibule carrée á angles bilobés*). They date this type in phase MA1 (470/80-520/30) but it can still sporadically appear in phases MA2-MA3 (520/30-600/10).¹¹⁵³ These brooches, however, are flat and it is questionable whether they can be compared to the Pandhof specimen. Siegmund and the Franken AG do not include this type in their

¹¹⁴⁸ Thörle 2001, 92, tabelle 7.

¹¹⁴⁹ In the documentation of the Vrijthof finds a remark was made that this brooch resembles a 'Scandinavian brooch from *Farsleben*', which dates to the sixth century. This Scandinavian brooch is, according to these notes, published in: *Gesellschaft und Kunst der Germanen. Die Thüringern und Ihre Welt* (Behm-Blancke 1973, Taf. 100). This book is not available in the Netherlands. For now it is assumed that this brooch is part of the material culture of Scandinavia.

¹¹⁵⁰ Ypey/Glazema 1955, 63.

¹¹⁵¹ Docquier/Bit 1990, 197-198, 208, planche 1.88.6.

¹¹⁵² Docquier/Bit 1990, 197-198.

¹¹⁵³ Legoux/Périn/Vallet 2004, 17, 35, 53 (type 211).

typologies. It can therefore be assumed that this type is not part of the material culture of the Rhine valley and that it is an element of the Meuse valley and Northern France. A date for these brooches in the first half of the sixth century, however, is plausible for the Pandhof specimen.

Brooch: bronze, oval, with multiple large settings.

Vrijthof: 189 (1489-2).

Appendix 1: Figure 34.

A peculiar bronze brooch, for which no resembling examples are known to me, was found in Vrijthof grave 189. The brooch is oval and domed. It has a length of 3.3 cm and a height of 1.3 cm. It can be assumed that a 'stone' (material unknown) was originally mounted in the oval opening on top of the brooch. This oval opening measures 1.9 cm and is deep, it was therefore a relatively large setting. Oval and round openings alternate with each other along the side of the brooch. In total four round and four oval deepened cells are present. Remnants of white settings (pearls?) are still present in all four round cells. The oval cells are empty. It can be assumed that originally settings of some kind of material were also mounted in these cells. In between each oval and round cell two more shallow and triangular cells with garnets can be observed. The two triangular cells are mirrored and thus form the shape of a sandglass. On the back of the brooch some remnants of the fastener are still present.

This brooch was found with another brooch (a filigree disc brooch with isolated cells with garnets), on the middle of the breast. No other finds are known from this grave. It can therefore be assumed that this brooch formed part of the material culture of the Merovingian period, or perhaps the period before what would make it an antique in this grave. For now no parallels are known to me.

Roman brooches

Bow brooches: various

Vrijthof: 68 (1105-10). Pandhof: 19999 (236-1).

Appendix 1: Figure 34.

The brooch from Vrijthof grave 68 is part of a grave goods assemblage that contains a necklace of beads and a bronze buckle. The grave was disturbed, so the brooch is not necessarily part of this grave goods assemblage, although the reuse of Roman objects in Merovingian graves is not unusual. Such brooches are the so-called hinged brooches with strongly pronounced bow.¹¹⁵⁴

The context of the Pandhof brooch is not known. This brooch is a so-called thread brooch.¹¹⁵⁵ It is not certain whether this brooch was used as an antique in a Merovingian grave, was deposited in a late Roman grave or was lost in antiquity.

Brooch: bronze (cross bow brooch / brooch with three knobs)

Pandhof: 11342 (466-8).¹¹⁵⁶

Appendix 1: Figure

This bronze brooch was found in the grave of a woman which consisted furthermore of various beads, four bronze bracelets, a decorative bronze pin and a comb. It dates to the last quarter of the third and the fourth century, and is an antique in this grave, although it is not certain that the grave dates to the Merovingian period. A dating in the fifth century is also possible for this grave (see the section on bracelets).

Swastika brooch

¹¹⁵⁴ Van Buchem 1941, Pl. X-XI.

¹¹⁵⁵ Van Buchem 1941, Pl. XII.

¹¹⁵⁶ Ypey/Glazema 1955, 61. They referred to it as a bronze bow brooch.

Pandhof 19999 (471-3).

Appendix 1: Figure 34.

A bronze/silver brooch in the shape a swastika was found as a stray find. A parallel for this brooch can for example be found in Schretzheim grave 500.¹¹⁵⁷ It was found in a grave which dates to Stufe 3 (565-590/600), but is described as a find from the Roman period.¹¹⁵⁸ In Schretzheim the swastika brooch is an antique in a Merovingian grave. It remains uncertain whether the Pandhof brooch was a reused Roman object in a Merovingian grave, whether it was deposited in a grave from the Roman period or whether it was lost and never served the function of grave good.

Bracelets

Bracelets or arm rings are identified as such by their position in the grave and/or by their ring-like appearance with an appropriate diameter to fit around the arm. In the section on the simple rings of iron and bronze, which are for the majority identified as girdle hangers, it is mentioned that they can be identified as bracelets when exceeding a certain diameter. Some of the simple iron and bronze rings which are discussed in the section on girdle hangers are, in view of their diameter, possibly bracelets. In this section the rings with decorative elements are discussed. The three rings of jet or saphrolite are simple rings, but of an extraordinary quality. They are for now identified as 'decorative' accessories, although they were not necessarily bracelets or arm rings.

The eleven rings that are identified as bracelets (including the three rings of saphrolite) were all found in the Pandhof cemetery. Only one fragment of a bracelet was found in the Vrijthof cemetery. The absence of bracelets is in accordance with the observed rare occurrence of these finds in Merovingian cemeteries as it is discussed by the examples of arm rings in a selection of large cemeteries.¹¹⁵⁹

An elaborate overview for metal arm jewellery of the early medieval period (although over an extended area) is presented Wührer.¹¹⁶⁰ She created a typology in which she identified five main groups: *Kolbenarmringe*, bracelets of sheet metal, bracelets with animal head decoration, iron rings and a group that consists of remaining types. The bracelets from the Pandhof cemetery will be discussed according to this typology. It is more detailed than those of Siegmund, the Franken AG and Legoux, Périn and Vallet, and offers distribution maps for some of the types discussed. Moreover, some interesting subjects such as the way bracelets were worn and their association with 'female statuses' are discussed.

Fragment of a La Tène bracelet

Vrijthof : 95 (1478-3).

Appendix 1: Figure 35.

A fragment of a blue La Tène bracelet with three ribs on the outer surface was found in Vrijthof grave 95. It is part of a grave goods assemblage of a woman. This is based on the finds a various beads, two ear rings with garnet and a garnet disc brooch. Other finds from this grave are a pottery jug, a comb with case, a knife, bronze belt elements and two coins (now lost). The fragment of the bracelet was found near the right lower leg together with 62 small black beads and a coin (now lost). It can be assumed that these objects were carried in a purse, which was hanging down from the waist belt. The purse and its contents probably moved from their original position in the grave.

Fragments of La Tène bracelets are regularly found in the graves of woman.¹¹⁶¹ Such bracelets date approximately to the last three centuries before the beginning of the Common Era. This fragment is

¹¹⁵⁷ Koch 1977, Teil 2, grave 500, 106, Taf. 128.10.

¹¹⁵⁸ Koch 1977, Teil 1, 45.

¹¹⁵⁹ Marti/Meier/Windler 1992, 32-33, Tabelle 1.

¹¹⁶⁰ Wührer 2000.

¹¹⁶¹ Pescheck 1996, 94, 104.

therefore a reused pre-Merovingian 'object' in this grave.¹¹⁶² It is regularly mentioned that these fragments were carried in purses and that they had magical or protective characteristics, which were probably related to their blue colour. It is though that blue was a colour of importance for people in the early medieval period.¹¹⁶³

Bracelets: silver

Pandhof: 10514 (454-1)¹¹⁶⁴; 10564 (496-1)¹¹⁶⁵.

Appendix 1: Figure 35.

The two nearly identical solid silver bracelets have widened extremities and are both without decoration. The bracelet from Pandhof grave 10514 has a diameter of 7.7 cm and was found in a grave of a woman, of which the grave goods assemblage consisted furthermore of two silver earrings, one bronze and one silver finger ring, a necklace of amber and blue transparent beads and a decorative silver hair pin with garnets. It can be identified as a relative 'rich' grave.

The bracelet from Pandhof grave 10564 has a diameter of 6.9 cm and was found in a grave which, in contrast to the other Pandhof grave, contained only a silver finger ring.

Another comparable specimen was found in a Merovingian grave that was excavated in the Saint-Servatius church.¹¹⁶⁶ A number of three silver bracelets in one site is remarkable considering the distribution pattern of these bracelets as described by Wührer (see below).

These so called '*Kolbenarmringe*' are bracelets that can also be of gold or bronze. They can be with or without decoration, and are open rings with widened extremities (*Kolben*) with straight endings.

Wührer classified solid *Kolbenarmringen* of silver without decoration as type A.2.1.¹¹⁶⁷ In total she identified nearly 100 examples (including the two finds from the Pandhof) for this type over an extended research area (including countries in southern and Eastern Europe).¹¹⁶⁸ Wührer identified the main areas of distribution of these bracelets in the Middle Rhine area and in southwest Germany.¹¹⁶⁹ The closest by finds in the Meuse valley are a specimen found in Haillot (prov. Namur, Belgium) and one in Samson (Prov. Namur).¹¹⁷⁰

A section in Wührer's study deals with the social position of women that were buried with these bracelets.¹¹⁷¹ It shows that the associated assemblages of grave goods often consisted of various items of jewellery of precious metal, necklaces of amber beads etc.¹¹⁷² With regard to these remarks it can be assumed that Pandhof grave 10564 was disturbed. It seems plausible to suggest that the silver bracelet and silver finger were part of an elaborate grave goods assemblage.

Wührer dates the silver bracelets on the basis of their associated finds and concludes that they appear throughout the early Merovingian period (450/80-600). She states that they appear and disappear in Merovingian graves somewhat later than the gold specimens without decoration, but that the periods during which both types were used as grave goods show considerable overlap.¹¹⁷³

Siegmund dates the silver undecorated specimens in Rhineland phase 3 (485-530) and the Franken AG in phase 3 and 4 (460/80-565).¹¹⁷⁴ Legoux, Périn and Vallet classified similar bracelets as type 337, which dates in the period covered by their phases PM-MA3 (440/50-600/10) although predominantly in phase MA1 (470/80-520/30).¹¹⁷⁵

¹¹⁶² See the section on the deposition of antiques in Merovingian graves in chapter 3 of this thesis.

¹¹⁶³ See for example Pescheck 1996, 204; Koch 1997, Teil 1, 156; Mehling 1998, 26-28, 115-116.

¹¹⁶⁴ Ypey/Glazema 1955, 50.

¹¹⁶⁵ Ypey/Glazema 1955, 59.

¹¹⁶⁶ Panhuysen 1988, 320-322. This bracelet was found together with two bow brooches, a string of glass beads and two bird-shaped brooches

¹¹⁶⁷ Wührer 2000, 16-18. The two Pandhof bracelets are incorporated in her study (Katalog, 148, Niederlande 003a-b).

¹¹⁶⁸ Wührer 2000, 148, nrs. 003a and b (Maastricht, Pandhof).

¹¹⁶⁹ Wührer 2000, 16.

¹¹⁷⁰ Wührer 2000, 149, nrs. 016 and 024.

¹¹⁷¹ Wührer 2000, 113-125.

¹¹⁷² Wührer 2000, 115-116, Abb. 110.

¹¹⁷³ Wührer 2000, 17.

¹¹⁷⁴ Siegmund 1998, 80; Müssemeier *et al.* 2003 39.

¹¹⁷⁵ Legoux/Périn/Vallet 2004, 19, 40, 54 (type 337 (338 in the list, see erratum)).

Bracelets: bronze, twisted wire.

Pandhof: 11342 (466-2, 3, 4).¹¹⁷⁶

Appendix 1: Figure 35.

The three nearly identical bracelets from Pandhof grave 11342 were all formed by three twisted bronze wires. The bracelets are open, their fasteners consist of a hook at each extremity. The three rings have a diameter of respectively 7.0, 6.4 and 6.1 cm. The three bracelets belong to a grave goods assemblage of a woman, which consists furthermore of a necklace of glass beads, a bronze decorative pin (for hair or cloth) and a double composite comb, which date (except for the decorative pin of which the dating is ambiguous) in the early Merovingian period. A roman brooch, which dates in the last quarter of the third/fourth century, was also found in this grave.

Bracelets of one or more twisted bronze wires are classified by Wührer as type D.1.¹¹⁷⁷ At the time of publication nine examples were known to her; the Pandhof bracelets were not included in her analysis. Of the nine bracelets, three were formed by a single wire, two by two twisted wires, the other four bracelets have another construction which is not comparable to the Pandhof specimens. The find of three bracelets of twisted wires in the Pandhof grave can in this light be considered exceptional. Three of the five examples in Wührer's study that can be compared to the Pandhof rings can unambiguously be ascribed to graves that date in the Merovingian period. Two of these are formed by one twisted wire and one by two twisted wires. Wührer concludes that the Merovingian specimens are a simplification of comparable late Roman bracelets which can consist of as much as six twisted wires and are scarcely formed by just one or two wires. An example of a late Roman bracelet, however, which consists of two twisted wire is known from grave 245 of the cemetery of Cologne- Jakobstraße.¹¹⁷⁸

The fasteners of the Merovingian bracelets are according to Wührer also different from the late Roman examples. Merovingian bracelets have hooks at each extremity, such as the Pandhof bracelets have, and late Roman bracelets have fasteners that consist of one loop and one hook. With regard to the limited number of finds on which these conclusions are based, the proposed distinction between late Roman and Merovingian bracelets of twisted wires needs to be handled cautiously. A bracelet that consists of two twisted wires but has a fastener of a hook and a loop is for example known from Krefeld-Gellep grave 3007, which dates after 315.¹¹⁷⁹

The three bracelets from Wührer's research area with one twisted wire were found in graves which date respectively to the AMII (520/30-560/70), the JMI (600-630/40) and the JMIII (670/80-720). One of the two bracelets that consist of two twisted wires dates to the JMIII (670/80-720), the other has a fastener that should be regarded as an example of the late Roman period, which dating is in accordance with the associated finds. It should be questioned, however, if the bracelets in the Merovingian graves are not antiques. Martin for example regards all the bracelets of twisted wires as characteristic late Roman objects.¹¹⁸⁰ Bracelets that consist of three twisted wires (form 2 of Martin) are dated in the late fourth century and beginning of the fifth century.

On the basis of the form of the fasteners on the Pandhof bracelets and the associated grave finds, it can be assumed that bracelets which are formed by three twisted wires were either a long-living form or are, next to bracelets of one or two wires, also a characteristic form of the Merovingian period. The associated string of beads dates from the end of the fifth century to end of the sixth century, the associated hair pin dates, according to Legoux, Périn and Vallet, in the end of the sixth and in the seventh century (this dating, however, is questionable, they can also date in the fifth century (see the section on hair pins)), the composite comb dates, according to Dijkman and Ervynck, in the fifth century, the crossbow brooch to the late Roman period, and the other bracelet in the second half of the sixth century (see the section below). It is therefore not possible to date the bracelets more precisely, and

¹¹⁷⁶ Ypey/Glazema 1955, 61.

¹¹⁷⁷ Wührer 2000, 60-61.

¹¹⁷⁸ Friedhoff 1991, 176, 296, Taf. 99,3.

¹¹⁷⁹ Pirling 1989 (Graber 2902-3749), 60, Grab 3007.2c, Tafel 14.3.

¹¹⁸⁰ Martin, 1991, 9-10.

neither is it possible to establish whether these are relatively old objects in a younger grave or contemporary with the other finds. Bracelets of twisted bronze wire are not identified by Siegmund, nor are they by the Franken AG and Legoux, Périn and Vallet. The bracelets, despite the references, are not reliable chronological indicators for this Pandhof grave. It appears that they are not regular finds in Merovingian cemeteries, and considering the early burial phases in the Pandhof cemetery it can be suggested that this Pandhof grave is relatively early, it probably dates around the in the fifth or maybe in the first half of the sixth century.

Bracelets: bronze, sheet metal.

Pandhof: 11342 (466-5)¹¹⁸¹; 11371 (480-2); 10144 (35-1).

Appendix 1: Figure 35.

Next to the three bracelets of twisted wire a bracelet of bronze sheet metal was also found in Pandhof grave 11342. It is a closed specimen with a diameter of 6.7 cm and a width of 0.6 cm. The stamped in dot-in-circle decoration covers the outer surface completely.

Wührer classified bracelets of sheet metal with a width ranging from 0.2 to 0.4 cm and with decorations such as stamped-in dot-in-circles as type B.3.¹¹⁸² According to her, examples of this type are very rare and are only known from Southern Germany. Although the ring from the Pandhof is slightly broader, it is for now classified as Wührer's type B.3. The four examples mentioned by Wührer were found in graves that date in the second half of the sixth century (550-600). The associated finds from this Pandhof grave are considerably difficult to date unambiguously (see the section above), and dating this bracelet to the second half of the sixth century is in this stage of research preliminary.

Another ring of bronze sheet metal is known from Pandhof grave 10144. It has a diameter of 6.7 cm and a width of 1.3 cm. The decoration consists of a geometric stamped in pattern of various bands with dots and oblique stripes on a herringbone motive. The band in the middle shows a decoration of undulating ladder stripes curved around dots. A section of this ring is missing, but the rounded extremity with small bronze hollow knob indicates that it was an open bracelet, with a fastener that can be compared with for example some late Roman bracelets from Kaiseraugst.¹¹⁸³ This grave furthermore contained two simple rings of bronze, which are identified as girdle hangers, but cannot be dated precisely.

Fragments of bronze sheet metal with a decoration of stamped in dot-in-circles framed by a band of oblique lines along the edges were found in Pandhof grave 11371. It can be assumed that these fragments formed parts of a bracelet. The diameter cannot be reconstructed due to the fragmented condition of the object; the width, however, is approximately 1 cm. One of the fragments probably formed one of the extremities. It is round with a nail through it. Another fragment with a nail was bend and forms a hook. Apart from a fragment of a ring of bone, which is identified as a girdle hanger, no other finds are known from this Pandhof grave. These fragments and the bracelet from Pandhof grave 10144 are similar to a bracelet from Krefeld-Gellep grave 3007.¹¹⁸⁴ This grave contained six other bracelets, it dates after 315. It also fits in the group of late Roman bronze bracelets, such as the Pandhof specimen from grave 10144, of Kaiseraugst, which are dated in the second half of the fourth century. It seems plausible to date the two Pandhof graves in one of the earliest burial phases of the Pandhof site; perhaps a date in the fourth century is possible. Similar rings are not identified by Siegmund, the Franken AG and Legoux, Périn and Vallet.

Bracelets or rings of jet/sapropelite

Pandhof: 10108 (91-1, 2, 3)¹¹⁸⁵.

Appendix 1: Figure 35.

¹¹⁸¹ Ypey/Glazema 1955, 61.

¹¹⁸² Wührer 2000, 52.

¹¹⁸³ Martin 1991, 11-12, Abb. 6, 6-10.

¹¹⁸⁴ Pirling 1989 (Graber 2902-3749), 60, Grab 3007.2d, Tafel 14.4.

¹¹⁸⁵ Ypey/Glazema 1955, 58.

Three nearly identical black rings of jet or sapropelite are known from Pandhof grave 10108.¹¹⁸⁶ Two of these rings have a D-shaped section and an outer diameter of approximately 4.9 and 5.2 cm. The third ring also has a D-shaped section, but is much thicker. It has an outer diameter of 5.8 cm. This ring has a bulge of which it is not certain whether it is an imperfection or that it was created on purpose. Despite the high quality of these rings their identification as bracelets is uncertain. One of the rings, it is not known which one, was found near the left lower arm. This could indicate that it was used as decorative arm wear. Could it be the ring with the thickest section and bulge? One of the other two rings was found at the left upper leg, the other was found at the left lower leg. On the basis of their find position it is more likely to consider these two rings as girdle hangers (see the section on girdle hangers). The grave is that of a child. Rings are not unusual in children's graves, and another set of three similar rings in the grave of a child is known from grave 26 of the cemetery of Saint Denis (Paris). Two of these bracelets were found on the right arm, one was found on the left ankle.¹¹⁸⁷

No other finds are known from Pandhof grave 10108, so the dating of these bracelets/rings to either the late Roman or Merovingian period is problematic.

Four other parallels for these rings can be found in the cemetery Köln-Jakobstraße (Germany).¹¹⁸⁸ These date in the end of the third and beginning of the fourth century. Resembling rings were also found in the cemetery of Krefeld-Gellep, for example in graves 1882¹¹⁸⁹, 2702¹¹⁹⁰, 3168, 3203, and 3418.¹¹⁹¹ All these rings have a D-shaped section, and are identified as rings of sapropelite. The datable graves date to the fourth century.

In grave C of Spontin (Belgium) two bracelets/rings of which it is mentioned that they are of glass, were found. One is nearly black and probably made of jet. It has a D-shaped section. This grave dates around 480.¹¹⁹² In grave 2 of the cemetery of Furfooz (Belgium) two bracelets (*'annulaires en verre noir'*) were found, both with a D-shaped section and a diameter of 4.3 cm. Another bracelet of three twisted bronze wires was also found in this grave, together with three pottery vessels of the Roman period. This grave dates in the last three decades of the fourth century.¹¹⁹³

Considering these examples, a date in the last half of the fourth century seems plausible for the rings from the Pandhof cemetery. This grave could be a genuine late Roman grave, but the possibility that the rings were reused Roman objects in a Merovingian grave can for now not justifiably be rejected.

Earrings

Earrings appear in a variety of forms in cemeteries throughout the Merovingian period.¹¹⁹⁴ The term earring is generally used for objects found near both sides of the skull, what resembles the wearing of jewellery we nowadays refer to as earrings. The usually paired occurrence of such objects makes a reference to earrings even more likely. The question remains, however, if these 'earrings' were always worn in the same way (through the ear(lobe)) as is done in modern times. The construction of some Merovingian 'earrings' suggests otherwise. A large diameter can for example indicate that they were folded around the ears. Moreover, they could have been attached to leather straps that formed part of

¹¹⁸⁶ The material of similar rings in other cemeteries is alternatively referred to as glass or sapropelite. It remains for now uncertain whether the rings in these various publications are in fact all made of the same material. Jet and sapropelite are difficult to distinguish.

¹¹⁸⁷ Fleury/France-Lanord 1998, 41.

¹¹⁸⁸ Friedhoff 1991, Grab 64 (Taf. 70,7), 157b (Taf. 87,1), 275 (Taf. 108,3), 282 (Taf. 111,1), 176-177.

¹¹⁸⁹ Pirling 1974, 73-74, Grab 1822.12, Taf. 59.17 (Diameter 5.8 cm). This grave dates after 315.

¹¹⁹⁰ Pirling 1979, 62, Grab 2702.7, Taf. 58.14 (Diameter 4.2 cm). This grave dates to the first half or the middle of the fourth century.

¹¹⁹¹ Pirling 1989, 82, Grab 3168.7, Taf. 36.1 (Diameter 4.8 cm, grave dates after 303); 88, Grab 3203.1, Taf. 39.15 (Diameter 5.8 cm, found near the left arm); 104, Grab 3418.1, Taf. 67.11 (Diameter 8.5 cm).

¹¹⁹² Dasnoy 1966, 178, fig. 4, 5 and 6.

¹¹⁹³ Dasnoy 1969/70, 159-160, fig. 10, 6 and 7.

¹¹⁹⁴ Von Freeden 1979.

the headgear, or they might have been directly attached to veils or head bands.¹¹⁹⁵ Von Freeden offers a detailed typology of Alamannic earrings in the Merovingian period. This is a detailed typology for nearly all the forms of earrings known from the Merovingian period and is, for the greater part, adopted by Siegmund and the Franken AG.

Earrings: disc shaped extremities with inlay

Pandhof: 10407 (581-1, 2).¹¹⁹⁶

Appendix 1: Figure 36.

Grave 10407 from the Pandhof cemetery contained a pair of golden earrings. The rings of these earrings have a diameter of approximately 1.3 cm and end in a disc-shaped extremity. The extremities are hollow and contain some rests of the cement filling on which the inlays were applied. The other ends of the rings are pointed. These two Pandhof earrings are mirrored images of each other, so the 'stones' of both the earrings were visible when worn. The earrings are part of a grave goods assemblage that contains a necklace of glass monochrome beads and a decorative disc of antler. The earrings were found near each side of the skull.

These earrings belong to the group of earrings with round extremities with garnets such as categorized by Von Freeden (*Typ mit runder Almandinscheibe*).¹¹⁹⁷ Because no remains of sheets that divided the round cells are visible, it can be assumed that the discs each contained one round garnet. Von Freeden published this pair of earrings from Maastricht as '*unvollständige und fragmentierte Ohrringe*' because the inlays are lost.¹¹⁹⁸ She also considers the inlays to have been round garnets, such as those in the earrings from Naumburg grave 22.¹¹⁹⁹ Because of the associated decorative antler disc, Von Freeden compared Pandhof grave 10407 to Rittersdorf grave 139 and dates it as such, which is in the period 450-525.¹²⁰⁰ This date is based on the trefoil jar and a bell beaker that were found in this grave. Generally, earrings with disc shaped extremities with garnets date, according to Von Freeden, in the first quarter of the sixth century.¹²⁰¹

This group of earrings is considered to be the oldest group and precursors of this kind are not known. Their popularity is considered to be short lived with the outstanding examples being dated in the first 30 years of the sixth century. Although not many examples of this type are known, their distribution area is quite extended.¹²⁰² Nine earring pairs with disc extremities filled with garnet are discussed by Von Freeden. They are, next to Maastricht, known from Belgium, the Middle Rhine area and Southern Germany. In the discussion of finds associated with these earrings Von Freeden concludes that they belong to 'rich' grave goods assemblages of women with a relative high social status.¹²⁰³ Koch placed these earrings in a more recent publication (the first overview of this group of earrings was present by Koch in 1968 as type Barbing-Irmlauth)¹²⁰⁴ in phase SD4 (c. 510-530 (SD: South German phases)).¹²⁰⁵ Similar earrings are not identified by Siegmund, and neither are they by the Franken AG and Legoux, Périn and Vallet.

Earrings: fixed polygon (silver and gold).

Pandhof: 10514 (454-4, 5)¹²⁰⁶; 10349 (576-1, 2); 10986 (252-1); 11321 (418-15*)¹²⁰⁷.

Appendix 1: Figure 36.

¹¹⁹⁵ Von Freeden 1979, 412-413.

¹¹⁹⁶ Ypey/Glazema 1955, 57.

¹¹⁹⁷ Von Freeden 1979, 234-241.

¹¹⁹⁸ Von Freeden 1979, 240, Taf. 61.6.

¹¹⁹⁹ Von Freeden 1979, 240.

¹²⁰⁰ Von Freeden 1979, 240.

¹²⁰¹ Von Freeden 1979, 237-238.

¹²⁰² Von Freeden, 246-247 (Abb.1).

¹²⁰³ Von Freeden 1979, 238-239.

¹²⁰⁴ Koch 1968, 45, 177, 248, Karte 8 (after Von Freeden, book not available in the Netherlands).

¹²⁰⁵ Koch 2001, 52, 74, abb. 14 (code X10).

¹²⁰⁶ Ypey/Glazema 1955, 50.

¹²⁰⁷ Ypey/Glazema 1955, 47.

The earrings with fixed polygons from the Pandhof graves are all of silver, except the earring from Pandhof grave 11321, which is of gold (now lost). They all have cubical polygons.

The earrings from Pandhof graves 10986 and 11321 are single specimens, the others were found in pairs. The earrings consist of a ring with a diameter varying from 1.6 to 2.3 cm. One extremity ends in a fixed silver polygon, the opposite extremity is pointed.

The earrings from grave 10514 are part of a grave goods assemblage which consists of a silver 'Kolbenarmringe', a silver decorative pin with garnets, two finger rings (one of bronze and one of silver with garnets) and various amber and glass beads. This grave goods assemblage of a woman can be identified as relatively 'rich'.

Apart from the two silver earrings, Pandhof grave 10349 contained no other finds. In Pandhof grave 10986 a silver bird head that formed the top of a decorative pin was also found. It is not clear whether these graves originally contained more objects. The golden earring (lost) from grave 11321 on the other hand was found, as the earring from grave 10514, in one of the 'richest' graves of the Pandhof cemetery.

Von Freeden distinguishes between the earrings with a fixed polygon of the early Merovingian period and those of the later Merovingian period.¹²⁰⁸ The specimens from the Pandhof can be classified as her group 'Typ mit massiven Polyeder ohne steineinlagen in der älteren Merowingerzeit', and, as the type definition already implies, are considered to date to the early Merovingian period (450/80-600) in Alamannia.¹²⁰⁹ It is mentioned by Von Freeden that such earrings are also sporadically known from the later Merovingian period, and as a consequence it is suggested that these earrings are deposited for quite a long period in Merovingian cemeteries. Von Freeden discussed the earrings from Pandhof graves 11321 and 10514 and their associated finds for the reason to compare them with the finds from Southern Germany.¹²¹⁰ According to Von Freeden, these Pandhof earrings date to the second third part of the sixth century (ca. 530-570). This date is based on the associated finds.

Siegmund classified these earrings as Ohr2 and dates them in Rhineland phase 4-8 (530-640). The Franken AG maintained this type and date it in their phases 3-8 (460/80-670/80), with their most frequent occurrence starting in phase 6 (580/90-610/20).¹²¹¹ This was also observed by Von Freeden, both for the Alammanic and Frankish region.¹²¹² Legoux, Périn and Vallet date them in their phases PM-MA3 (440/50-600/10) but predominantly in their phases MA1-MA2 (470/80-560/70).¹²¹³ In regard of these remarks, a more general date for all the Pandhof earrings in the sixth century seems plausible.

Bronze earring with faceted stone

Pandhof: 15013 (269-2).

Appendix 1: Figure 36.

The bronze ring from Pandhof grave 15013 has a 'stone', probably of transparent bluish glass, mounted in a small bronze casing, cast in one piece with the ring. The form strongly resembles a finger ring with bezel. The 'stone' is carefully cut, what resulted in a multiple faceted surface, producing spectacular light effects. The ring has an outer diameter of 1.5 cm, what is relatively small for a finger ring. Although it is lacking its counterpart, this ring is identified as an earring of which the extremity became corroded to the rest of the ring (hence it now has a closed ring). This identification is supported by the fact that the casing with stone, because of its angled position in relation to the ring, is most visible when worn in the ear. A simple bronze finger ring was also found in this grave.

Similar rings are not identified by Siegmund or the Franken AG, nor are they by Legoux, Périn and Vallet. They classify finger rings with various mounted 'stones' as type 335 and date them to their phase

¹²⁰⁸ Von Freeden 1979, 249.

¹²⁰⁹ Von Freeden 1979, 277-293.

¹²¹⁰ Von Freeden 1979, 283-284, (by then known as finds from respectively grave 418 and grave 454).

¹²¹¹ Müssemeier *et al.* 2003, 23.

¹²¹² Von Freeden 1979, 284-285.

¹²¹³ Legoux/Périn/Vallet 2004, type 302, 18, 38, 54.

MA1 (470/80-520/30) and sporadically to phase MA2 (520/30-560/70).¹²¹⁴ The earring with stone probably fits in this tradition and can be dated accordingly.

Earrings: silver, added polygon casing with garnets

Vrijthof: 187 (1640-1, 1638-2).

Appendix 1: Figure 36.

In the group of earrings with polygon extremities a distinction is made between earrings with a fixed polygon (such as the group discussed above) and those with an added polygon (which is separately fixed to the ring.) Two types of the group of earrings with added polygon casings were found in the Vrijthof cemetery.

One of the earrings of the pair from Vrijthof grave 187 is nearly complete and intact, of the other specimen the ring and polygon casing are separated and the casing itself is entirely fragmented.¹²¹⁵ The rings of both earrings are simple and of silver. The inlays of the intact silver polygon casing consist of four rhombic garnets and eight triangular garnets in between. Gold foil can be observed underneath the garnets. The rhombic garnets are placed in raised cells, the triangular garnets are placed in cut out spaces. The ring pierces the casing through the flat rhomboid sides which are without cells and inlays. The original appearance of the fragmented casing was probably similar to its counterpart in view of its remaining garnets and ring. The opposite ends of the rings of both specimens are lost. They could have been pointed or hooked. The ring of which the polygonal casing became separated shows a bulge that probably served as a 'lock' for the casing. This 'lock' cannot be observed on the complete specimen.

Von Freeden classified similar earrings as *Durchbrochen gearbeitete Polyederkapseln*.¹²¹⁶ This classification implies that the casings have cut out openings in which the garnets were set. The triangular garnets of the Vrijthof specimen were set in this way, the rhomboid garnets were set in elevated openings, which form one part with the casing. Von Freeden described examples of which the casings are of gold or silver; the inlays are always garnets, although the number of garnets can vary. Von Freeden dates these earrings, on the basis of associated finds, in the first half of the sixth century.¹²¹⁷

Siegmund dates this type of earrings in Rhineland phases 4-8 (530-640).¹²¹⁸ This is an extended period, and the researchers of the Franken AG point out that Siegmund's type Ohr4 can be divided in an early and late variant, such as Von Freeden has noticed for the Alamannic region. The difference between the two types is considered to be the material of the casing (silver and gold for the early type and bronze for the later type, although silver is for this type also possible) and the material of the inlays (garnets for the early type and glass paste for the late types).¹²¹⁹ The earrings from the Vrijthof cemetery with their silver casing and garnets can be assigned to the early group; Ohr4A of the Franken AG. They can therefore be dated in their phases 3-5 (460/80-580/90) although its most frequent occurrence is observed in phase 4 (510/20-565). This coincides better with the dating of Legoux, Périn and Vallet. They date similar earrings earlier than Siegmund; sporadically in their phase PM (440/50-470/80), but predominantly in phases MA1-MA2 (470/80-560/70), although they can also occur sporadically in the phase thereafter.¹²²⁰

Earrings: silver, added polygon casing with applied cells with glass paste inlays

Vrijthof: 95 (1485-1,-2)

Appendix 1: Figure 36.

¹²¹⁴ Legoux/Périn/Vallet 2004, type 335, 19, 40, 54.

¹²¹⁵ The fragmented casing of this earring was first assigned to another grave, but reconstructed as part the ring found in Vrijthof grave 187.

¹²¹⁶ Von Freeden 1979, 249-253.

¹²¹⁷ Von Freeden 1979, 251-252.

¹²¹⁸ Siegmund 1998, 42.

¹²¹⁹ Müssemeier *et al.* 2003, 23-24.

¹²²⁰ Legoux/Périn/Vallet 2004, 18, 38, 54 (type 303).

A pair of silver earrings composed of silver twisted wires with an added silver polygonal casing was found in Vrijthof grave 95. The rings were found near the left and right sides of the skull. One of the casings is gone astray, but it can be assumed that it was originally part of the assemblage of grave goods and was similar to the remaining casing. This polygonal casing consists of six rhomboid shaped segments connected by small triangular zones. Four of the rhomboid zones have an applied raised cell in the same shape, but smaller, and their inlay consists of a greenish glass paste. At the four corners of all the four rhomboid cells, small cylindrical cells, which also have a greenish glass paste as inlay, can be observed. The cylindrical cells are formed in one part with the rhomboid cells.

The remaining casing is not attached to the twisted ring anymore, but as some parallels show, the ring entered and left the casing through the rhomboid shaped surfaces without inlay. The round 'depressions' in the middle of these surfaces confirms this. In the corners of each rhomboid surface without decoration, four bulbs of silver can be observed. These could be the remnants of small cylindrical shaped cells, such as Von Freeden described for the two rhomboid shaped sides of the earrings from Mindelheim (grave 102) and Ötlingen (grave 5).¹²²¹ Because the rings go through the middle of these sides, no larger cells with inlay were applied. The Vrijthof earrings were part of a grave goods assemblage of a woman which also contained a rosette shaped garnet disc brooch, numerous beads, a comb with case, a knife and a small bronze belt buckle.

Von Freeden classified similar earrings as examples of the group of earrings with polygonal casings and defined this group as '*Typ mit Polyederkapsel in der jüngeren Merowingerzeit*' and more specifically '*polyederkapseln mit aufgesetzten Fassungen*'.¹²²² Von Freeden dates these earrings in the JM II (630/40-670/80).¹²²³ She mentions that these earrings probably do not originate in the Alamannic region because most specimens were, at the time of her publication, found in the Frankish region.¹²²⁴ In Siegmund's research area, however, these earrings are rare. Earrings with applied polygon casings are in the Rhineland only known from two graves of the cemetery of Junkersdorf.¹²²⁵ One of these pairs (Junkersdorf grave 49) is similar to the type described in the section above (from Vrijthof grave 187). The other pair (Junkersdorf grave 450) is similar to the pair from Vrijthof grave 95. The pairs, which would be classified as two different types with the classification of Von Freeden, are classified as one type in Siegmund's typology. This type dates to Rhineland phase 4-8 (530-640).¹²²⁶

Despite the silver casing, the earring from Vrijthof grave 95 can be classified as Franken AG type Ohr4B (see the section above), on the basis of the glass paste inlays.¹²²⁷ They date this type in their phases 6-8 (580/90-670/80). Although the Franken AG mention the material of the casing and inlay as the main discriminating characteristics for the old and young types, another important feature is the occurrence of applied cells of various forms for the young types (of which the rhomboids with small cylindrical corners such as on the Vrijthof specimen can be frequently observed), which are mostly filled with glass paste but can sporadically contain garnets.

These earrings can be classified as type 304 of Legoux, Périn and Vallet, which dates in their phases MA3-MR1 (560/70-630/40).¹²²⁸ This typology makes a clear distinction between the two sorts of polygonal casings, as the Franken AG and Von Freeden proposed. The ones with applied rhomboid and cylindrical cells are in the typo-chronology of Legoux, Périn and Vallet also the later variant.

Ring

Vrijthof: 274 (1792-2).

Appendix 1: Figure 36.

¹²²¹ Von Freeden 1979, 264-265.

¹²²² Von Freeden 1979, 264-267.

¹²²³ Von Freeden 1979, 269-273.

¹²²⁴ Von Freeden 1979, 274-275.

¹²²⁵ Siegmund 1998, 41-42.

¹²²⁶ Siegmund 1998, 42.

¹²²⁷ Müssmeier *et al.* 2003, 23-24. A similar specimen from Junkersdorf grave 450 (La Baume 1967, tafel 29) has a silver casing, yet is classified as type Ohr.4B by the Franken AG.

¹²²⁸ Legoux, Périn, Vallet 2004, type 304, 18, 38, 54.

This ring of silver twisted wire can be compared to rings that are identified as ear rings with a polygon casing with garnets or glass (see the sections above). Its counterpart was not found, and it can be assumed that a polygonal casing, either applied or fixed, was originally part of it. It was found near the skull in a grave which contained also a garnet disc brooch, a simple bronze ring and a biconical pot. This grave can be identified as the grave of a woman. Earrings of twisted silver wire and a fixed or applied polygon casing date to sixth and seventh century. A more precise dating cannot be obtained for this ring.

Decorative pins

Decorative pins are pins that can be associated with the hairstyle and clothing of women. Möller distinguished veil-, hair- and cloak-pins in her overview of pins that were associated with the costume of Frankish and Alamannic women.¹²²⁹ The assignation to one of these categories is mainly based on their find location in the grave.¹²³⁰ Pins that were found close to head are identified as hair- or veil pins and it is, according to Möller, also possible to identify certain hairstyles on the basis of their specific find location in relation to the skull. Cloak pins are identified as such on the basis of a find location on the breast or lower body. Möller observed that hair- or veil pins scarcely occur together with cloak pins, and that cloak pins which fastened the lower part of the cloak were not identified in the western part of the Frankish territory but only in the eastern part and the Alamannic region.¹²³¹ Does this coincide with the finds from Maastricht?

Grave/Context/Find	Ornaments	Polygonal head	Spherical head	Biconical head	Spoon shaped head	Total
Vrijthof (1330-1)				1		1
Vrijthof 75					1	1
Vrijthof 308					1	1
Pandhof (349-1)			1			1
Pandhof (131-1)			1			1
Pandhof (311-1)	1					1
Pandhof 10032	1					1
Pandhof 10042	1					1
Pandhof 10047		1				1
Pandhof 10068			1			1
Pandhof 10069		2				2
Pandhof 10514	1					1
Pandhof 10641					1	1
Pandhof 10796		2				2
Pandhof 10828		4	2			6
Pandhof 10968		1	1			2
Pandhof 10986	1					1
Pandhof 11342			1			1
Total	5	10	7	1	3	26

Table 28. The distribution of decorative pins over the Vrijthof and Pandhof cemeteries.

¹²²⁹ Möller 1976/1977.

¹²³⁰ Möller 1976/1977.

¹²³¹ Möller 1976/77, 31-32.

Decorative pins are only known from the Pandhof cemetery, with the exception of one stray find (pin with biconical head) and two bronze pins with scoop shaped heads from the Vrijthof cemetery (table 28). The pins are categorised by their appearance; pins with various ornamented elements and pins with a head shape which is either polygonal, spherical, biconical or spoon shaped are identified. The pins with a polygonal head were most frequently found, with an exceptional number of four in grave 10828. This grave contained also two pins with a spherical head. Two morphological different pins are also known from grave 10968 in which one with a spherical head and one with a polygonal head were found. The question is whether these pins also served a different function. The distinction between the two main groups of decorative pins (hair/veil and cloak pins) is based on the parallels found in Möller's work and will be verified against the find-locations of the pins in the graves of both the Maastricht cemeteries.

Pins with various ornaments

Pandhof: 10032 (110-2)¹²³²; 10042 (60-2)¹²³³; 10514 (454-6)¹²³⁴; 10986 (252-2)¹²³⁵; 19999 (311-1).

Appendix 1: Figure 37.

Five pins of various materials, all with another sort of ornament, are known from the Pandhof cemetery, one is known from the Vrijthof cemetery. A gold pin with a head which consist of a gold casing with some remnants of paste on which assumable a decorative 'stone' was placed, was found in Pandhof grave 10042. The head is separated from the pin, of which only some fragments remain. The pin was found in a grave which contained women related objects such as a filigree disc brooch and a number of beads. It was found near the right upper side of the skull and can therefore be identified as a veil-or hair pin. Möller identified only one pin with a cup-shaped head in which a 'stone' of bluish glass was set.¹²³⁶ This pin had a length of 8.6 cm. It was found underneath the head, lying in an oblique position. Möller identified it as a hairpin that is related to the hair-style *Knotenfrisur* (pinned up hair).¹²³⁷ This pin dates to Stufe III of Böhner (525-600). It cannot be verified if this pin resembles the Pandhof pin, but for now, on the basis of the cup-shaped head, this is assumed. No other parallels for this pin are known to me. This specimen can be classified as type 317 of the typology of Legoux, Périn and Vallet, which dates to their phase MA3 (560/70-600/10), although it can also appear sporadically in the period just before.¹²³⁸ This classification is based on their description of this type (cup-shaped head with garnet or glass), but does not resemble the depicted example. Such pins are not identified by Siegmund, neither are they by the Franken AG.

A silver gilded bird-shaped head of a pin is associated with Pandhof context 10986, together with a silver earring. The shank of the pin is lost. It is drawn in the original documentation with a flat section.¹²³⁹ The head of the pin is, together with the earring, a stray find in the sense that these objects are not associated with skeletal remains or an identified grave. Möller mentioned various silver pins with bird heads and shows that they were used both for the hair and for the cloak. Because it was found in the proximity of an earring it can very carefully be assumed that the Pandhof pin was deposited as a hair pin. Möller dates hair pins with bird heads in *Stufe* II (450-525).

Pins with bird-shaped heads are classified by Legoux, Périn and Vallet as type 314 and are dated in their phase MA1 (470/80-520/30), but also sporadically in the phase before, PM (440/50-470/80).¹²⁴⁰ The Franken AG classified these pins as Nad3 and date them in phase 3 (460/80-510/25).¹²⁴¹

¹²³² Ypey/Glazema 1955, 55.

¹²³³ Ypey/Glazema 1955, 46.

¹²³⁴ Published in: Möller 1976/1977, 36; Ypey/Glazema 1955, 50.

¹²³⁵ Ypey/Glazema 1955, 65.

¹²³⁶ Möller 1976/1977, 42, nr. 7. The examples Möller mentions are only described, not depicted. This pin was found in the cemetery of Réville (*Manche*, France) and published in: Scuvée, F., 1973. *Le cimetière barbare de Réville (Manche) VI et VII siècles*. This publication is not available in the Netherlands.

¹²³⁷ Möller 1976/77, 24, Abb.8.

¹²³⁸ Legoux/Périn/Vallet 2004, 18, 39, 54 (type 317).

¹²³⁹ Pandhof archive.

¹²⁴⁰ Legoux/Périn/Vallet 2004, 18, 39, 54 (type 314).

¹²⁴¹ Müssemeier *et al.* 2003, 25.

A silver pin (length 17.8 cm) with a polygon ornament with garnets in the upper section of the shank and a spoon-shaped head is known from Pandhof grave 10514 and is part of a 'rich' grave goods assemblage of a woman. This assemblage consisted furthermore of silver earrings, a silver bracelet, and a silver and bronze finger ring. This pin was published by Möller as example of the group '*Einzelne Nadel neben den Kopf: Haarkranzfrisur*'.¹²⁴² This classification and assignation to a specific hair-style is based on the find location of this pin at the right side below the head.¹²⁴³ Möller dated such pins in *Stufe* II (450-525). Legoux, Périn and Vallet identified similar pins as type 311 and date them in their phases MA2-MR1 (520/30-630/40), although predominantly in phase MA3 (560/70-600/10).¹²⁴⁴ Such pins are not identified by Siegmund or the Franken AG. The associated silver bracelet dates in the second half of the fifth century and the first half of the sixth century.

A resembling pin was found in grave 18 from the cemetery of Samson (prov. of Namur, Belgium) along with a pair of small disc brooches with garnets, a pair of earrings with added polygon casings with garnets and a bronze buckle with glass inlay on the base of the tongue. In the grave a half-*siligula* of Athalaric (527-534) was present which provides a terminus post quem (527) to this grave.¹²⁴⁵ The dating of Legoux, Périn and Vallet of such pins into the second half of the sixth century seems therefore plausible.

The head of the bronze pin from Pandhof grave 10032 has the shape of a halberd. The only other find from this grave is a bronze plate buckle (beads are also mentioned on the field drawing, but these are lost). The pin was found near the head and it can therefore be identified as a hair pin. It should be noticed, however, that this context only consists of a skull. All the finds from this grave were found in the direct surroundings of the skull. The grave might have been disturbed, and these associated objects can be in a secondary position.

Similar pins are not known from the region studied by Legoux, Périn and Vallet, neither are they from the research areas of Siegmund and the Franken AG. A bronze pin with a head that forms a miniature francisca was found in grave 20 of the cemetery of Samson (Belgium) which dates in the second half of the sixth century.¹²⁴⁶ The head of this pin is not a resembling form of the Pandhof halberd pin, but can be seen in a similar tradition.

A bronze pin with ornamented head is known as stray find from the location Pandhof. This shank of this pin has a round section, the head is flat. The head is formed by an upside down triangle which rests on two opposite mushroom like ornaments. Similar pins are not identified by Siegmund, nor are they by the Franken AG and Legoux, Périn and Vallet. This pin probably dates in the late Roman period. It is uncertain whether it was deposited in a late Roman grave or that it was a reused object in a Merovingian grave.

Pins: polygonal head

Pandhof: 10047 (92-1); 10069 (65-1, 2); 10796 (142-1, 2); 10828 (240-2, 4, 5, 6); 10968 (245-2).

Appendix 1: Figure 37.

One of the ten pins (of which seven are of silver, one is of bronze and two are silver plated bronze specimens) with polygonal heads is a singular pin, the others are part of sets of two or more pins. This pin from Pandhof grave 10047 was found in the grave of a child (as the excavation documentation mentions) at the right side of the pelvis. No other finds are known from this grave.

All the Pandhof pins with polygonal heads are more or less alike. They have undecorated shanks with round sections and a head of more or less an identical cubical polygonal shape. The two exceptions are the pin from Pandhof grave 10796, a bronze silver-plated pin which has a long shank with an engraved

¹²⁴² Möller 1976/1977, 36, Liste II, nr. 5.

¹²⁴³ Möller 1976/1977, 19-21, Abb.4-5.

¹²⁴⁴ Legoux/Périn/Vallet 2004, 18, 39, 54 (type 311).

¹²⁴⁵ Dasnoy 1968, 324 and fig. 18.

¹²⁴⁶ Dasnoy 1968, 326-327, Fig. 20.3, 332.

¹²⁴⁷ Ypey/Glazema 1955, 60.

fishnet decoration, and the pin from Pandhof grave 10069, which has a rectangular polygonal head with a small profiled knob. One of the pins from Pandhof grave 10828 (240-4) is the only bronze specimen in this group of pins, the other pin from Pandhof grave 10796 is also a silver-plated bronze specimen..

All the pins belong to more or less elaborate grave goods assemblages of women, except for the pins from grave 10796. Next to the two pins, various beads and a francisca were found in this grave. It remains uncertain whether the assignation of the francisca to this grave is false or that this is an exceptional grave of a woman to which a 'masculine' object was added, or visa versa. The pins were found close to the right hand.

The set of six pins (four with polygonal and two with spherical heads) from Pandhof grave 10828 is remarkable. They were found all together at the location of the left upper leg. A remark in the old documentation refers to the find of a needle case at this position. An object, however, that resembles some kind of needle case is not present in the collection currently known. A bronze finger ring and various beads were also found in this grave.

The two pins from grave 10069 were found near the top of the head. No other finds are known from this grave. The pin from grave 10968 was found near the feet. This grave contained also a silver finger ring, a silver pin with spherical head and four glass vessels. These glass vessels are all of a form that can be dated to the late Roman period or early medieval period.

Pins with polygonal heads are generally considered to be hair-or veil pins.¹²⁴⁸ This is supported by the fact that they are generally found in pairs or in a set of more than two pins. According to the find locations of the pins in the finds list of Möller, pins with polygonal heads could have been used both as hair-or veil pins and as fasteners of the cloak.¹²⁴⁹ Only one of the Pandhof sets was found near the head. For the other pins it remains uncertain if they were found in their original position (except for the pins from grave 10828, which were supposedly found in a case) and what function they served.

Similar pins are classified by Legoux, Périn and Vallet as type 313. They date predominantly in their phase MA1 (470/80-520/30) and sporadically in phase PM (440/50-470/80).¹²⁵⁰ The Franken AG identified these pins as Nad4 for which the explicit remark is made that they are generally found near the head in the graves of women.¹²⁵¹ They are not included in their chronological analysis, but are referred to as finds from the fourth century to the second half of the seventh century.¹²⁵² Two silver pins with polygonal heads, similar to the Pandhof specimens, are for example known from a fourth-century grave from Krefeld-Gellep.¹²⁵³

Roth and Theune distinguished small and large pins with polygonal heads (small: type 38 *Polyeder nadel, klein*; large: type 62 *Polyeder nadel gros*) in their typo-chronological analysis of objects from the graves of women in Southern Germany. Type 38 belongs to their fashion phase E (or second part of SW♀II) dated to c. 610-670.¹²⁵⁴ However, they do not give precise indications as to what is small and large. The Maastricht specimens, however, seem to fall in the category 'small', except the one with fishnet decoration.

In regard of these remarks it must for now be concluded that it is difficult to ascribe the Pandhof pins to a specific phase; they can be early and late. Further research on the origin and continuation of production and use of these objects after the late Roman period is required. For the typo-chronological analysis of the Pandhof graves they are now considered to be not datable finds.

Pins: spherical head

Pandhof: 10068 (93-1); 10828 (240-3, 9); 10968 (245-1); 11342 (466-6)1255; 19999 (349-1); 19999 (131-1).

¹²⁴⁸ Müssemeier *et al.* 2003, 25.

¹²⁴⁹ Möller 1976/77, 36-50.

¹²⁵⁰ Legoux/Périn/Vallet 2004, 18, 39, 54 (type 313).

¹²⁵¹ Müssemeier *et al.* 2003, 25.

¹²⁵² Müssemeier *et al.* 2003, 25.

¹²⁵³ Pirling 1974, 73-74, Grab 1822.9, Taf. 59.1,2.

¹²⁵⁴ Roth/Theune 1988, 31-35.

¹²⁵⁵ Ypey/Glazema 1955, 61.

Appendix 1: Figure 37.

Four bronze, two silver and one bone pin with spherical head were found in the Pandhof cemetery. The pin of bone from Pandhof grave 10068 was found near the skull together with various beads and a fragment of a large bronze ring. The two silver pins with spherical head from Pandhof grave 10828 are part of a set of six pins which were found together, presumably is a case, at the location of the left upper leg (see section above). Of one pin only the head remains, of the other pin a part of the shank has gone astray (rest: 4 cm).

The pin from grave 10968 was found near the feet, together with a silver pin with polygonal head. It has a length of 7.6 cm. The four glass vessels from this grave are all early in date, but are difficult to assign unambiguously to either the late Roman or early Merovingian period. The position of the pin from Pandhof grave 11342 is not known. It has a length of 9.1 cm. This pin was found in a grave which contained also three bracelets of bronze twisted wire, a bracelet of bronze sheet metal and a composite comb. Another bronze pin, now lost, is published with these finds in the publication of Ypey and Glazema.¹²⁵⁶ The bronze bracelets presumably date early; either to the late Roman period or early Merovingian period (see the section on bracelets).

The two other silver pins (nrs. 349-1 (length 5.8 cm) and 131-1 (length 4 cm)) of the Pandhof cemetery are stray finds and know no association with other finds.

Pins with spherical heads are generally identified as pins that secured the veil, and are rare in graves of the Merovingian period.¹²⁵⁷ The pins that Möller identified as veil-pins have lengths from 2.8 cm to 6.4 cm, with the exception of two pins from Kirchheim/Ries (Germany) which are exceptional with a length of 9.1 and 9.3 cm.¹²⁵⁸ The pins from Pandhof graves 10968 and 11342 are relatively long, for the pins from grave 10828 the original length cannot be established. The stray finds 349-1 and 131-1 are the shortest pins and seem to have the most suitable length for veil-pins.

It can be questioned of pins with spherical heads but long shanks should always be identified as veil-pins. The find locations of the Pandhof pins do not offer solid evidence for such a function. Furthermore, it is remarkable that the Pandhof pin with the shortest shank is the only pin with a genuine spherical head. A definition as 'domed-shaped' seems to be more appropriate for the heads of the other pins. Should these pins be regarded as another type, maybe with another function?

Möller dates the use of veil-pins, mainly on the basis of finds in Castel Trosino and Nocera Umbra, already in the sixth century. In the seventh century they were, according to Möller, more generally used as grave goods in the Frankish-Alamannic world.¹²⁵⁹ Siegmund did not identify pins with spherical heads, nor did the Franken AG. Legoux, Périn and Vallet classified them as type 318, which dates in their phases MA3-MR2 (560/70-660/70).¹²⁶⁰ Their dating, however, is not based on strong evidence, and should for now be regarded as conditional.¹²⁶¹

In the typo-chronological analysis of the graves of women in Southern Germany this type of pin (type 70: *Kugelkopfnadel* (*Schleiernadel*)) belongs to fashion phases H and I (or SW♀IV), which date to c. 610-670.¹²⁶² It seems at first sight plausible to regard the Pandhof pins with spherical heads as examples of the first three quarters of the seventh century. In view of their association with finds that date earlier than the seventh century (see for example grave 11342) and the remarks made above, some of these pins probably need to be identified differently than veil-pins and be dated earlier. Or maybe the use of veil-pins should be dated earlier than is suggested in the various typo-chronologies. It is not certain whether the pin of bone can be regarded as part of this group.

¹²⁵⁶ Ypey/Glazema 1955, 61.

¹²⁵⁷ Möller 1976/77, 15-16.

¹²⁵⁸ Möller 1976/77, 35, nrs. 1-7.

¹²⁵⁹ Möller 1976/77, 17-18.

¹²⁶⁰ Legoux/Périn/Vallet 2003, 18, 39, 54 (type 318).

¹²⁶¹ Legoux/Périn/Vallet 2004, 11, 54, type 318. Objects that are dated by the 'grey accentuation' of the phases are only very scarcely present in these phases.

¹²⁶² Roth/Theune 1988, 32-35.

Pins: biconical head

Vrijthof: 0 (1330-1).

Appendix 1: Figure 38.

One bronze pin with a biconical shaped head and a pointed shank with a circular section is known as a stray find from the Vrijthof cemetery. Similar pins are not known from the research areas of Siegmund, the Franken AG and Legoux, Périn and Vallet. It might be not Merovingian in date, but Roman.

Pins: spoon shaped head

Vrijthof: 75 (1383-1); 308 (1735-1). Pandhof: 10641 (493-1).

Appendix 1: Figure 38.

The pin with spoon shaped head from Vrijthof grave 308 has a pointed shank with a triangular section. It has a length of 17.5 cm. The upper part of the shank has a circular section and a cast ribbed decoration. The pin was found in a disturbed grave near the right side of the skull. If this was the original position, the pin can be identified as a hair pin.

The pin from Vrijthof grave 75, with a length of 10.2 cm, has a shank with a circular section of which the upper part shows a cast ribbed decoration. The other finds from this grave are iron belt elements, two pottery vessels and a knife. These finds are not indicative for the gender of the buried person. The pin was found, together with the knife, near the right lower leg.

The majority of the shank from Pandhof grave 10641 is lost. Its original length cannot be established. The upper part of the shank is twisted. This pin was found in the grave of a child together with various beads. The exact find location is not known.

Möller mentioned some pins with a spoon-shaped head and shanks with various decorations as hair- and cloak pins.¹²⁶³ Similar, but smaller pins are not considered by Möller, these are according to her merely toilet implements and not used as adornment.¹²⁶⁴ Both the Vrijthof pins are long; only the length of the Pandhof pin cannot be established. On the basis of their find locations, the pin from Vrijthof grave 308 can be identified as a hair pin and the pin from Vrijthof grave 75 as a fastener of the cloak.

Similar pins are classified by Siegmund as Nad2.2 and seem to be restricted to graves of women. They are dated in Rhineland phase 7 (585-610).¹²⁶⁵ The Franken AG maintained this type and date it in their phases 5-7 (565-640/50). Legoux, Périn and Vallet classified such pins as type 310 and date them in phase MA1-MA3 (440/80-600/10).¹²⁶⁶ This type of pin (*type 58 Spatelkopfnadel*) belongs to fashion phases H and I (or SW $\frac{1}{2}$ IV) in the typo-chronology of the graves of women in Southern Germany and dates to c. 610-670.¹²⁶⁷ It seems plausible to date the Maastricht pins in the end of the sixth century and the first half of the seventh century.

Finger rings

Twenty finger rings are known from the Vrijthof and Pandhof cemeteries. They are identified at first by their size and shape and their resemblance to objects we nowadays refer to as finger rings. Finger rings can best be identified as such when found at the position of the hands (fingers). This find location could not always be established for the Vrijthof and Pandhof pins. A distinction is made between simple bronze, silver and gold rings, and rings decorated with an additional element, usually a decorative plate, worked in various ways, here referred to as a bezel (table 29). Nine rings with a so-called bezel were found in the Pandhof cemetery and one is known from the Vrijthof cemetery.

¹²⁶³ Möller 1976/77, 36-50.

¹²⁶⁴ Möller 1976/77, 14, note 1.

¹²⁶⁵ Siegmund 1998, 44.

¹²⁶⁶ Legoux/Périn/Vallet 2003, 18, 39, 54 (type 310).

¹²⁶⁷ Roth/Theune 1988, 32-35.

The differences between the finds from the Vrijthof cemetery and Pandhof cemetery stands out. Three simple bronze finger rings and one bronze ring with a bronze decorative plate (bezel) were found in the Vrijthof cemetery. Rings of silver and gold and rings with bezels of different materials were all found in the Pandhof cemetery, with one exception in the Vrijthof cemetery (table 29).

Context/grave/find	Bronze	Silver	Gold	Ring with bezel	Total
Pandhof 10793 (86-1)				1	1
Pandhof 10093 (78-1)			1		1
Pandhof 10885 (139-5)	1				1
Pandhof 10828 (240-1)	1				1
Pandhof 10968 (245-3)		1			1
Pandhof 19999 (343-2)				1	1
Pandhof 19999 (347-1)	1				1
Pandhof 11260 (373-1)		1		1	2
Pandhof 19999 (397-1)				1	1
Pandhof 10514 (454-2)	1			1	2
Pandhof 10500 (469-5)				1	1
Pandhof 10564 (496-2)		1			1
Pandhof 19999 (584-1)	1			1	2
Vrijthof 48 (1539-1)	1				1
Vrijthof 187 (1638-1)	1				1
Vrijthof 198 (1741-1)	1				
Vrijthof (8888-183)	1				1
Total	9	3	1	7	20

Table 29. The distribution of finger rings over the Vrijthof and Pandhof cemeteries.

Three graves of the Pandhof cemetery contained more than one finger ring. It appears that these sets of finger rings consisted of a least one finger ring with bezel. The deposition of two or more rings were, according to Früchtel, not related to 'rich' graves, but, in terms of richness, to 'mediocre' grave goods assemblages.¹²⁶⁸ The work of Früchtel deals with various aspects of finger ring depositions in graves, but she did not assign a date to them.¹²⁶⁹ The major discussions concern the way the rings were worn (their singular or paired occurrence and their position in relation to the body) and the differences between the rings from Southern Germany and those from the Rhineland. Früchtel concluded that the presence of more than one ring in a grave is not exclusively associated with men or women or a certain age group.¹²⁷⁰ Sets of rings (in South-western Germany) were predominantly worn on the left hand, in some cases both on the left and right hand, and only sporadically they were all worn on the right hand.¹²⁷¹ In Southern Germany this practice is characteristic for the late Merovingian period (600-720). In earlier phases multiple rings in one grave were more frequently deposited as the contents of purses or as girdle hangers.

¹²⁶⁸ Früchtel 2004, 120.

¹²⁶⁹ The complete analysis of the finger rings can be found in her *Magisterarbeit* (Unpublished, not available in the Netherlands). The work from Hadjadj (2008) on finger rings from Northern Gaul offers a detailed catalogue of various finger rings but no new insights regarding their dating or other interpretative subjects.

¹²⁷⁰ Früchtel 2004, 113-114, 119. The associations in Southern Germany are in accordance with the general association of finger rings with gender and age (around 80% of the rings were found in graves of women of which 63% are adults, more or less 13% of the rings were found in the graves of adult and young men).

¹²⁷¹ Früchtel 2004, 119-121, Abb. 4.

Früchtl identified four basic groups of finger rings (after Ristow/Roth). Group 1: the simple rings of equal width without decoration; group 2: rings with simple decoration; group 3: rings with a clearly identifiable decorated plate (bezel); group 4: rings with stone- or glass inlays on the bezel and those with gems and complex constructions.¹²⁷² A more detailed typo-chronology was not incorporated in this recent article of Früchtl, the description and dating of the rings will therefore follow, where possible, the work of Siegmund, the Franken AG and Legoux, Périn and Vallet, and others where possible. Früchtl's work is more interesting for interpretative questions than it is for typo-chronological refinements. The finger rings are classified by their material in the following sections. A distinction is furthermore made between simple rings (cast or sheet metal) and rings with a bezel. Cast specimens are distinguished from rings of sheet metal on the basis of their closed construction; rings of sheet metal have two endings which are connected.

Finger rings: simple, bronze

Vrijthof: 198 (1741-1). Pandhof: 10828 (240-1).

Appendix 1: Figure 39.

The group of simple bronze finger rings from the Vrijthof and Pandhof cemeteries counts two cast specimens. The closed bronze ring from Vrijthof grave 198 is formed in one piece. It is part of the grave goods assemblage of a woman (based on the original presence of various beads, now lost) and found near the position of the left hand.¹²⁷³

A cast bronze ring with an outer surface that consists of eighth facets (i.e. an octagonal ring) was found in Pandhof grave 10828. It is part of an assemblage of grave goods of a woman, which consists furthermore of a string of beads, six decorative bronze pins and a miniature glass vessel which served as a pendant.

Finger rings are rare in the Rhineland area and are as a consequence not further classified by Siegmund, except for the rings with specific features.¹²⁷⁴ No chronological information on simple bronze finger rings can as a consequence be found in Siegmund's work; neither can it be found in the typo-chronology of the Franken AG or Legoux, Périn and Vallet.

Finger rings: simple, silver.

Vrijthof: 187 (1638-1); 48 (1593-1). Pandhof: 10514 (454-2); 10564 (496-2¹²⁷⁵); 10968 (245-3); 11260 (373-1); 10885 (139-5); 19999 (347-1).

Appendix 1: Figure 39.

Two simple finger rings of silver were found in the Vrijthof cemetery, and six in the Pandhof cemetery. One of the Vrijthof rings and four of the Pandhof rings are cast specimens. The simple cast ring without decoration from Vrijthof grave 187 is part of the grave goods assemblage of a woman which consists furthermore of a string of beads, two earrings and two garnet disc brooches; the finger ring was found around a finger bone of the right hand. The ring from Pandhof grave 10514 is broken, but seems to have been a cast specimen. This assemblage consists of another finger ring (silver), some beads, two silver earrings and a bronze bracelet.

The cast ring from Pandhof grave 10564 was found in a grave which also contained a silver bracelet and a finger ring of gold (lost). It has a diameter of 1.9 cm. In the publication of Ypey and Glazema it is described as a ring with 10 angels (a decagonal ring). This feature is only slightly visible, but is nonetheless present. According to the photograph in the publication of Ypey and Glazema, the ring was found around a finger bone. The simple cast ring nr. 347-1 from the Pandhof cemetery was a stray find. It has a diameter of 1.8 cm and a width of 0.7 cm. No other finds can be associated with this ring. The

¹²⁷² Früchtl 2004, 113-114.

¹²⁷³ On the basis of the description of the find location in the excavation administration; the field drawing, however, points towards a find location near the left shoulder.

¹²⁷⁴ Siegmund 1998, 81.

¹²⁷⁵ Ypey/Glazema 1955, 59.

cast ring from Pandhof grave 11260 has a diameter of 2.1 cm and is without decoration. It is a very thin ring, but a slight bulge can be observed on its surface. This could be a decorative, although very simple, decorative element of the ring. It is not worked, and for now it is regarded as a simple silver ring. It was found in a grave of which the only other find is another silver finger ring with a bezel that consists of a silver casing which contains an engraved carnelian.

The ring of sheet metal from Pandhof grave 10968 has a diameter of 1.9 cm. and a width of 0.2 cm. It shows an engraved decoration of a zigzag line which covers the outer surface of the ring. This ring was found in a grave which also contained two decorative hair or cloth pins, both of silver, and five glass vessels which are all difficult to date unambiguously to either the late Roman or early Merovingian period.

The ring of sheet metal with decoration from Vrijthof grave 48 is similar to the ring from Pandhof grave 10885. The Vrijthof ring has a diameter of 2.2 cm. It has punched in/engraved parallel lengthwise applied lines. The ring from Vrijthof grave 48 is part of a grave goods assemblage of a woman and was found near the left hand.

The resembling ring from Pandhof grave 10885 is associated with 'neutral' grave goods.

Summarizing, all the simple silver rings, except for the stray find and the ring in the 'neutral' grave, were found in the graves of women. Simple silver finger rings are not identified by Siegmund and the Franken AG as a separate type, nor are they by Legoux, Périn and Vallet. Considering their associated finds, it can be assumed that these simple silver rings were part of both the late Roman and early Merovingian grave depositions.

Finger rings: simple, gold.

Pandhof: 10093 (78-1).

Appendix 1: Figure 39.

The finger ring from Pandhof grave 10093 is a simple cast ring of gold with a diameter of 1.9 cm and a width of 0.8 cm. No other finds are known from this grave. A remark in the old documentation refers to its discovery around the middle finger of the left hand.

Finger ring: gold, bezel and ring with filigree

Pandhof: 10564 (496-3*).¹²⁷⁶

Appendix 1: Figure 39.

The ring from Pandhof grave 10564 is only known from the old documentation and the publication of Ypey and Glazema. The old documentation reveals that it was found in a grave with a silver bracelet and silver ring (see section above on simple silver rings), and that it had decoration of filigree. The filigree can be observed on the bezel and the middle of the band which forms the ring. The silver bracelet with which it was found dates to the end of the fifth and first half of the sixth century.

Finger ring: silver spiral, silver casing with Roman gem

Pandhof: 10044 (584-1, 2).

Appendix 1: Figure 39.

A ring of silver, twisted in a spiral, was found in a tuff sarcophagus with a silver setting that contained a carnelian stone in which a bird is engraved. This silver setting could have formed the bezel of this ring. The engraved stone such as the one in the silver setting is known from the Roman period. It is not unusual to find such gems in Merovingian rings. The other find from this sarcophagus were two jewels (they resemble garnets) in a silver setting. A date around the end of the fifth century was proposed for

¹²⁷⁶ Ypey/Glazema 1955, 59.

theses jewels. The tuff sarcophagus indicates that the spiral ring was, together with the gem in silver setting, a late Roman find in a burial that can probably be dated somewhat later, in the sixth century.

Silver finger rings: bezel with roman gems

Pandhof: 11260 (373-2)¹²⁷⁷; 10021 (90-1*).¹²⁷⁸

Appendix 1: Figure 39.

The bezels of the rings from Pandhof grave 11260 and setting 584-2 (see above; context unknown) are characterised by a silver setting in which a Roman engraved carnelian was placed. The ring from Pandhof 11260 is complete; the ring itself is of silver and the carnelian 'gem' shows an engraved side-view of a bird. The ring has a diameter of 2.1 cm. It is band shaped and has a width of 0.5 cm. On the outer surface of the ring two lengthwise punched in lines were applied. The complete bezel is oval and the largest diameter of this bezel is 1.3 cm. The bezel is not at one with the ring, they were constructed separately. Filigree (pearl thread) is applied along the outer edge of the bezel. The carnelian is set in the elevation of thin silver foil. Apart from a silver ring no other finds are known from this grave.

A resembling silver setting with engraved carnelian (584-2), although somewhat smaller and without a ring attached to it, was found in a tuff sarcophagus. It is assumed that it originally formed the bezel of a silver spiral finger ring (see the section above). On the middle of the back side of the bezel a small bulge of silver can be observed; the bezel was probably fixed to the ring on this place. The edge of the bezel consists of filigree (pearl thread); the carnelian is set in the elevation of thin silver foil. This carnelian has an engraved image that portrays a bird, although with a different appearance than the bird on the gem from Pandhof grave 11260. It is a frontal view of a bird in the act of picking something from the ground.

A ring (of silver or gold) of which the bezel contained a stone (carnelian) with the image of a bull was found in grave (sarcophagus) 10021. This ring is now lost, but a photograph of it was published in the work of Ypey and Glazema. The ring had a diameter of 2 cm. It was found together with multiple silver coins that were used as pendants, and garnets of various forms that were set in silver settings.

Engraved carnelians are known from the Roman period.¹²⁷⁹ They were set in rings, but the reuse of such gems in Merovingian jewellery, of which rings form the majority, is not an unusual phenomenon.¹²⁸⁰ No exact parallels for the images on the Pandhof carnelians can be found, but numerous gems with various portrayals of birds are illustrated.¹²⁸¹

In answering the question of whether the rings date to the Roman period or were reused in Merovingian rings, the additional find from Pandhof grave 11260, a simple silver finger ring, is of not much help: it is simple and could be both Roman and Merovingian in date. The same can be said for the silver spiral ring that was found with bezel 584-2. The additional finds in the sarcophagus are Roman coins that were transformed into pendants, and the garnets in silver settings are probably also of an early date. For now it is assumed that the three rings (the complete ring, the bezel and spiral ring and the ring which is now lost), date to the (late-) Roman period.

Silver finger ring: bezel with garnets

Pandhof: 10514 (454-3)¹²⁸².

Appendix 1: Figure 39.

In Pandhof grave 10514 an elaborately worked finger ring was found. The ring and the ground plate of the bezel are formed in one piece and are of silver. The ring has some punched in dot and line decoration. The bezel is a round silver ground plate with four radial cells with garnets, of which three are

¹²⁷⁷ Ypey/Glazema 1955, 65.

¹²⁷⁸ Ypey/Glazema 1955, 48-49.

¹²⁷⁹ See for example Henkel (1913), who offers an elaborate overview of Roman rings with gems, or Guiraud (1988: *Intailles et camées de l'Epoque romaine en Gaule*).

¹²⁸⁰ Ament 1991, 401-402.

¹²⁸¹ Henkel 1913, Tafel LXXVII.

¹²⁸² Ypey/Glazema 1955, 50.

lost. This ring is part of a relatively 'rich' grave goods assemblage consisting furthermore, next to another finger ring of bronze, of a silver bracelet, silver earrings and a necklace of amber beads. No parallels for this ring are known to me at this moment. Considering the dating of the other finds from this grave it is for now dated in the sixth century.

Bronze finger rings: various bezels

Vrijthof: 0 (8888-2). Pandhof: 10500 (469-5); 10793 (86-1); 19999 (343-2); 19999 (397-1).

Appendix 1: Figure 39.

The remaining rings of the Vrijthof and Pandhof cemeteries with bezel are of bronze and have bezels of various forms. The bronze ring with bezel from the Vrijthof cemetery is a stray find. It has a circular plate with an engraving. Similar rings are classified by Legoux, Périn and Vallet as type 334 and dated in their phases MA3-MR2 (560/70-660/70).¹²⁸³ Siegmund classifies these rings as Rhineland type Rng 3.1 but maintains Böhner's dating of these rings (Stufe IV: seventh century).¹²⁸⁴

The ring from Pandhof context 10793 resembles type 27 (gold) of Henkel.¹²⁸⁵ It is made of bronze thread which forms a spiral bezel. According to Henkel these rings are Roman in date. It is a stray find and no other finds can be associated with it. However, it was found together with a finger bone (according to the information in the Pandhof archive), and it can be assumed that was part of a disturbed Roman grave.

A bronze ring with a bezel in the form of a flat undecorated surface (343-2) was found as a stray find, but is associated with a bronze strap end which dates to the end of the sixth century. It is uncertain whether this strap end is indicative for the dating of this ring.

A corroded ring with a bezel in the form of some kind of knob was found in Pandhof grave 10500. Part of the ring is lost. The other finds from this grave are two pottery pots which date to the Merovingian period. It is not certain whether this ring was actually a finger ring. No parallels were found; the dating of this ring remains uncertain.

A simple ring was found as a stray find (ring 397-1). No other finds can be associated with this ring. It seems that it was formed in one piece, but one side of the ring is very thin. It can be assumed that a bezel was originally present on this section of the ring. On the basis of this present appearance it is difficult to assign a date to it.

It appears that the most outstanding finger rings of the Pandhof and Vrijthof cemeteries are associated with other, but always more simple, finger rings. According to Früchtl this paired occurrence does not necessarily coincide with elaborate sets of grave goods. In the case of Pandhof grave 11260 and probably Pandhof ring 584-2 this can be acknowledged, but the ring of Pandhof grave 10514 is part of a 'wealthy' grave of a woman. The majority of the Vrijthof and Pandhof rings were found in the graves of women. The rings are difficult to date on the basis of parallels. Some further typo-chronological research is required for this category of grave goods.

Decorative pendants

From the Vrijthof and Pandhof various gold pendants with filigree decoration and Roman coins are known. Such pendants are commonly components of strings of beads. Apart from these specimens a miniature jug of glass from the Pandhof cemetery, which was also part of a string of beads, is discussed in this section on decorative pendants.

¹²⁸³ Legoux/Périn/Vallet 2004, type 334, 19, 40, 54.

¹²⁸⁴ Siegmund 1998, 81.

¹²⁸⁵ Henkel 1913.

Pendants: gold with filigree (and garnet)

Vrijthof: 110 (1624-1); 187 (1636-1, -2). Pandhof: 10220 (303-1); 11321 (418-2).

Appendix 1: Figure 40.

Four small pendants of gold, decorated with filigree, were found; three in the Vrijthof cemetery and one in the Pandhof cemetery. Pandhof grave 11321, one of the richest graves of this cemetery, revealed a somewhat larger specimen of gold which has also garnets applied to it.

Two pendants of which the form can, compared to the circular specimens, at best be described as lunula (although not an exact lunula shape) with a honeycomb pattern of gold filigree were part of a necklace of beads from Vrijthof grave 187. They belong to an elaborate grave goods assemblage of a woman, which consists among others of garnet disc brooches and silver earrings. The string is characterised by a majority of red coloured beads, although its general appearance is not predominantly red. The complete string is dated in Maastricht phases D-G (510/20-640/50).

The pendant from Vrijthof grave 110 is circular and shows a geometric pattern of circles of filigree and was an element of a necklace too. This formed part of an elaborate grave goods assemblage of a woman. The string to which this pendant belongs is characterized by a diversity of beads of which the yellow and white coloured beads make up the majority. Only two amethysts beads were also part of this string. The complete necklace is dated to Maastricht phase D-H (510/20-670/80).

The small pendant from Pandhof grave 10220 is circular and decorated with a swastika pattern of filigree. Again it was part of a necklace and of an elaborate grave goods assemblage of a woman. The necklace to which this pendant belonged has only a small number of beads (compared to the two Vrijthof strings), of which the predominant colour is yellow/white. No amethysts beads are known from this grave. The complete string is dated in Maastricht phase C-G (460/80-640/50).

Pendants of this kind, without further specification of their shape and decoration pattern, are classified by Siegmund as type Per 6.1 and assigned to Rhineland phases 5 to 7 (555-610). The Franken AG also classified the various forms of pendants (round, triangular and grape-shaped) as a single type. They indicate that a chronological difference is difficult to make between the circular and grape shaped pendants, but suggest that the triangular ones seem to be older. The first appearance of the round ones is somewhat earlier (in phase 4b: 530/45-565) than the grape-shaped ones, but continue to be present for the greater part of phase 5 (565-580/90). However, the dating of gold pendants seems to be somewhat more complicated than this.

The pendants in grave III,99 of the cemetery of Saint-Severin in Cologne (Germany), especially number 12, show that they are still an element of necklaces in the late seventh century.¹²⁸⁶ However, those in grave III,73 date from around 570.¹²⁸⁷ Ypey discussed a number of necklaces in which gold pendants occur on the occasion of his publication of the grave finds from Beuningen (Netherlands).¹²⁸⁸ A typical combination is the necklace of amethyst beads and gold pendants.¹²⁸⁹ The round gold pendants of Beuningen look very much alike the pendants of Vrijthof grave 110, although the circles of the decoration of the Beuningen pendants are pressed-in motifs and not of filigree. Ypey mentions gold round pendants with filigree from Hailfingen, Nordendorf and Worms.¹²⁹⁰ A detailed search for parallels of these necklaces has not been undertaken, it would certainly have produced more examples of such necklaces with these (round) pendants.¹²⁹¹ It has been suggested that amethyst beads in combination

¹²⁸⁶ Päffgen 1992, 1, 432-433; 2, 276-280; 3, Taf. 58, 13.

¹²⁸⁷ Päffgen 1992, 1, 432; 2, 232-239, nrs 10d-e; 3, Taf. 54, 5-6.

¹²⁸⁸ Ypey 1973.

¹²⁸⁹ See also Koch 2007, 368-369.

¹²⁹⁰ Ypey 1973, 453-454.

¹²⁹¹ The latest publication of Koch contains several references to such finds (Koch 2007, 57, Abb. 37, 129, Abb. 14-15, 368, Abb. 74); from Sandhofen Grave 115 four specimens are known, from Bösfeld Grave 578 seven, and from the cemetery of Viernheim a total of five specimens were uncovered (all these cemeteries are located in the proximity of present-day Mannheim). All the mentioned pendants are round; parallels for the shape of the two 'lunula' Vrijthof pendants seem to be scarce. It appears that the decoration patterns of filigree on all the pendants are considerably different.

with gold pendants were a Mediterranean phenomenon of the last decennia of the sixth century.¹²⁹² The Beuningen finds seems to contradict this and suggests that they can occur much later as well. This observation has been explained by presenting the later specimen as late survivals, the number of them, however raises doubts about this explanation. Ypey suggested that the parallel necklaces he presented were all of seventh century date.¹²⁹³ Klein-Pfeuffer indicates that there may have been two independent phases in which gold pendants were popular.¹²⁹⁴ The first phase is from before the middle of the sixth century to the beginning of the seventh century (c. 530-610), the second is from c. 670/80 (end of the *jüngere Merowingerzeit* II) to c. 710 (in the *jüngere Merowingerzeit* III).

It is that we conclude that, in view of this discussion and the accompanying finds, the round pendant of Vrijthof Grave 110 and the one from Pandhof grave 10220 may well date from the first phase (c. 530-610). The lunula-shaped pendants of grave 187 are designated as such although they are almost round pendants. An almost identical example is found in the cemetery of Rödingen (Kreis Düren, Germany).¹²⁹⁵ It was accompanied by two round pendants with a central boss, two earrings with polygonal ornaments and a necklace with amber, amethyst and redbrown (clay?) beads. Janssen dates the grave in the *Ältere Merowingerzeit* III and *Jüngere Merowingerzeit* I (c. 560/570-630/640). A date in the *Jüngere Merowingerzeit* may be a bit too early. Truly lunula-shaped pendants have a different form.¹²⁹⁶ It might be suggested that the pendants from Vrijthof grave 187 will date from the *Ältere Merowingerzeit* III (560/70-600).

The gold pendant from Pandhof grave 11321 is fixed to a gold wire. It is a circular pendant, but of thinner plate gold than the smaller one describe above. The pendant shows a filigree decoration and two triangular cells with garnet inlay. The accompanying grave goods are part of one of the most elaborate grave goods assemblages of a woman in the Servatius complex, consisting among others of gold earrings, a rock-crystal ball, bow brooches and garnet disc brooches. Comparable specimens are not known to me, but a thorough search in publications of cemeteries from other regions must sure give some insights in the distribution pattern of this specific pendants. Such an overview will be published in the second volume of the all-round analysis of the Servatius complex. However, the combination of filigree and garnet on pendants of gold is peculiar. This is a combination which can be found on filigree brooches. It is mentioned by Koch that gold pendants with filigree are a characteristic of Langobard female costume (of the upper class); the combination with garnet on a pendant with filigree (three specimens in the grave of a rich woman in Eltville, Rhineland (Germany)) conceals, according to Koch, the unsatisfactory try-out of filigree workmanship.¹²⁹⁷ This might suggest that the pendant from the Pandhof dates around the middle of the sixth century (the presumed Lombard princess, buried in Cologne, carried five pendants with filigree. She must have been, according to Koch, an example for her contemporaries in the Rhineland).¹²⁹⁸

Similar pendants are not known from the lower Rhine area or from the research area of the Franken AG and Legoux, Périn and Vallet. On the basis of the accompanying grave goods the grave can be dated in Maastricht phases D-G (510/25-640/50).

Pendants: miniature glass jug

Pandhof: 10828 (240-10).

Appendix 1: Figure 40.

¹²⁹² See discussion in Paffgen 1992, 432.

¹²⁹³ Another late seventh century necklace of this type is known from Lahr Burgheim (Germany). See *Die Alamannen*, Stuttgart 1997, 461 and Krohn/Bohnert 2006, 100-112, but it is not relevant for our discussion of round pendants.

¹²⁹⁴ Klein-Pfeuffer 1993, 64.

¹²⁹⁵ Janssen 1993, 354, Tafel 131, nr. 9.

¹²⁹⁶ See for instance those of grave V,20 of the cemetery of Saint-Severin in Cologne (Paffgen 1992, 1, 431; 2, 481-484, nr 9a; 3, Taf. 77, 6); Lahr Burgheim grave 10 (Krohn/Bohnert 2006, Abb 107). See also Maczynska 2005.

¹²⁹⁷ Koch 2007, 368-369.

¹²⁹⁸ Koch 2007, 368.

The miniature jar from Pandhof grave 10828 is of semi-transparent dark blue glass with a decoration of yellow opaque glass threads.¹²⁹⁹ The grave goods assemblage associated with this pendant consists of a bronze finger ring, various decorative hair (veil) pins and an ensemble of beads which formed a necklace together with this miniature jug. The ensemble of beads is dominated by white and transparent green beads and dates to Maastricht phase B-F (400-610/20). It was difficult to date this grave either as early or late, because the discussion of the decorative pins is unambiguous considering their assignation to a specific chronological period (see the section on decorative hair (veil) pins of silver). The miniature jug, however, is known to be a Roman *altstucke* in this grave.

Schulze describes similar objects not as pendants but as *krugperlen* (jar beads).¹³⁰⁰ They are products of the late Roman period, but as Schulze mentions, also known as '*altstucke*' in early medieval graves. A good parallel is for example known from the grave Junkersdorf 527-4.¹³⁰¹ In her overview of its distribution pattern Schulze distinguished jar beads which were found in *Germania Libra* or the Roman provinces as Roman finds, and beads which were found in graves that can be dated to the migration period.¹³⁰² From the migration period just four examples are known, of which the specimen from the Pandhof cemetery is listed as one example.¹³⁰³ Schulze interprets these objects as amulets.¹³⁰⁴

Pendant: silver fragment

Pandhof 11321 (418-9).

Appendix 1: Figure 40.

It can be assumed that this setting contained a decorative element. The suspension hole with the remnant of a wire indicated that it could have been attached to for example a string or a belt. The setting resembles the upper construction of a setting in which usually a crystal ball was fixed. However, this assemblage of grave goods from Pandhof grave 11321 already contained a silver setting with crystal ball, and it is rather unusual that more than one of such objects was deposited in a single grave. For now it remains an unidentifiable 'pendant'.

Pendants: coins

Vrijthof: 48 (1586-2); 100 (1434-21). Pandhof: 10094 (22-7, 8, 9); 10021 (90-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17); 10932 (193-1); 11321 (418-28); 10042 (60-7); 10133 (81-2); 10554 (490-1); 10885(139-7, 10); 19999(9999-7); 19999 (351-1).

Coins are identified as pendants when a suspension hole is applied. The suspension hole mostly served to fix the coins to strings of beads. Sometimes some remnants of metal wire can still be observed on the coins. Coins with suspension holes, thus pendants, were for the majority found in the graves of women, and it appears that they are all Roman coins (table 30). Altered Roman coins are not unusual finds in Merovingian graves. The majority of the coin pendants from the Vrijthof and Pandhof cemeteries were found in graves which were of a considerable later date than the coins were minted (table 30).¹³⁰⁵

Grave / Context	Coin	Date coin	Date grave
V 48 (1586-2)	Follis; Constantinus I	330-334	565-640/50
V 100 (1434-21)	-	-	565-670/80
P 10094 (22-7)	As III; Valens	364-378	400-565
P 10094 (22-8)	As IV; indet	c.280-500	

¹²⁹⁹ Published in Schulze 1978, 55-57, Abb. 6, 66, Liste V.42.

¹³⁰⁰ Schulze 1978, 51.

¹³⁰¹ La Baume 1967, Taf. 33, 527,4.

¹³⁰² Schulze 1978, 57, Abb 6.57.

¹³⁰³ The other three are known from Junkersdorf-Cologne (Germany), Kaiseraugst (Switzerland), and Newel, Kr. Trier-Saarburg (Germany).

¹³⁰⁴ Schulze 1978, 56.

¹³⁰⁵ The determinations of the Roman coins were provided by drs. P. Beliën (Keeper Ancient Coins and Engraved Gemstones at the Geldmuseum, Utrecht)

P 10094 (22-9)	Antoninianus, Barbarian imitation?; indet.	270-300	
P 10021 (90-2)	Denarius; Traianus	98-117	460/80-565
P 10021 (90-3)	Denarius; Traianus	98-117	
P 10021 (90-4)	Denarius; Traianus	98-117	
P 10021 (90-5)	Denarius; Lucilla	164-181	
P 10021 (90-6)	Denarius; Antonius Pius	145-160	
P 10021 (90-7)	Denarius; Lucilla	164-181	
P 10021 (90-8)	Denarius; Antonius Pius, Diva Faustina I	141-145	
P 10021 (90-9)	Denarius (imitation); Antonius Pius	155-156	
P 10021 (90-10)	Denarius; Hadrianus	117-138	
P 10021 (90-11)	Denarius; Antonius Pius, Faustina II	145-161	
P 10021 (90-12)	Denarius; Marcus Aurelius, Faustina II	161-175	
P 10021 (90-13)	Denarius; Marcus Aurelius	163-164	
P 10021 (90-14)	Denarius; Antonius Pius	148-149	
P 10021 (90-15)	Denarius; Vitellius	69	
P 10021 (90-16)	Denarius; Vespasianus	77-78	
P 10021 (90-17)	Denarius; Vespasianus, Domitianus Caesar	77-78	
P 10932 (193-1)	As IV; indet	c.300-500	<-640/50
P 11321 (418-28)	Solidus; imitation after Anastasius I	c.500-600	510/25-580/90
P 10042 (60-7)	Denarius; Antonius Pius, Diva Faustina	141-145	565-640/50
P 10133 (81-2)	Follis; Comstantinus I	335-337	610/20-640/50
P 10554 (490-1)	As I; Magnentius	351-353	-
P 10885(139-7)	Follis; Comstantinus I	316-330	565-610/20
P 10885 (139-10)	Follis; Constantinus II	335-341	
P 19999 (9999-7)	Follis; Comstantinus I, c.s.	337-341	-
P 19999 (351-1)	Antoninianus; indet	c.222-253	-

Table 30. The distribution of coin-pendants over the Vrijthof and Pandhof cemeteries, their minting date and their deposition date. V = Vrijthof. P = Pandhof.

A number of 16 coins of silver in Pandhof grave 10021 (tuff sarcophagus) is remarkable. All the coins date to the first and second centuries. This grave, however, contained only a number of jewels on the basis of which it is difficult to date this grave more precisely than to the earliest phases of the Merovingian period (see the section on jewels). Considering the tuff sarcophagus (which in general date to the sixth century), it is sure that these coins were deposited as *altstucke*, but it remains obscure to which period the deposition of the ensemble dates exactly, but the phase around the end of the fifth century seems plausible (see the section on jewels), on the basis of which it can be concluded that these coins have been circulation during a period of approximately 300 years, or that they were found in a grave or as stray finds somewhere in the fifth century (see for a discussion the section on pre-Merovingian antiques in Chapter 3 of this thesis). The remainder of the altered coins are also antiques in the grave, although they did necessarily circulated for a long time as the silver coins from Pandhof grave 10021 probably did. Only the coin from Pandhof grave 11321 seems to be contemporaneous with the associated grave goods assemblage. For the coin from Pandhof grave 10932 it is possible that it was contemporaneous with the associated grave goods.

Next to these altered Roman coins a series of unaltered coins were also found in Vrijthof graves, although predominantly in Pandhof graves. For now they are discussed as Merovingian grave goods, but in the second volume of the all-round analysis of the Servatius complex this specific category of finds

will be analysed more thoroughly. Questions regarding the backgrounds of these specific coins in the Roman period and their distribution pattern will be addressed in this analysis.

Girdle hangers and amulets

The expression *Gürtelgehänge* (girdle hangers) can often be found in publications of Merovingian cemeteries. This expression refers to a variety of objects, generally known from graves of women, which are regularly found in the area of the upper legs (usually the left upper leg). Apart from the simple bronze and iron rings, these are various objects that are identified as amulets and jewels, but also more common objects such as combs and knives (discussed in the sections on purses and utensils). It is thought that these objects were attached to thin straps or simple rings that were hanging down from the waist belt or that they were the contents of purses, which themselves were often also girdle hangers. Amulets are generally regarded to be objects such as rock-crystal balls, decorative discs made of antler or bronze, specific shells and snails, specific animal teeth, chatelaines and '*Herkuleskeule*' (*donar-amulettes*).¹³⁰⁶ They are often identified as 'amulets', with for example protective and healing characteristics, since a functional, or rather practical use is difficult to identify for these objects.

Simple rings: girdle hangers, purse fasteners or bracelets?

Simple bronze and iron rings of different sizes are quite common grave goods, found in graves of both men and women. Simple rings of bone are less frequently found, although this may be due to their fragility. When found around the area of the pelvis and upper legs, it is assumed that simple rings served as the fastener of a purse that was hanging down from the belt, or that they were hanging down from the waist belt to hook things like knives, combs, tweezers etc. on to it.¹³⁰⁷ A bracelet, however, can also be found at the position of the pelvis or upper legs (depending of how the arms were positioned in the grave) and the identification of simple rings with a considerable diameter as bracelets is therefore also an option. Siegmund identifies simple iron rings as 'arm rings' (bracelets) when they are found in the area where the hands are supposed to be and when they have a diameter between 6.2 and 8 cm.¹³⁰⁸ When simple rings are found in graves of men they are often interpreted as an element of rider accessories. How can the simple rings of bronze, iron and bone from the Maastricht cemeteries be identified? An identification as bracelets can be rejected for the small rings from the graves of women, the identification of the other rings remains ambiguous as will be discussed below. For now it suffices to mention that the iron rings (ten) outnumber the bronze rings (eight) in the Vrijthof cemetery, in contrast to the Pandhof cemetery where one iron ring and eleven bronze rings were found (table 31). Sometimes some metal remnants are still attached to the rings. These can be the remains of formerly attached objects. Furthermore, a grave can contain a variable number of rings as it can for example be observed in Vrijthof grave 110, which is exceptional with a total number of seven iron and bronze rings.

Grave / Context	Iron	Bronze	Bone	Total
Vrijthof 97	2	-	-	2
Vrijthof 110	5	2	-	7
Vrijthof 194	-	1	-	1
Vrijthof 230	-	1	-	1
Vrijthof 258	1	-	-	1

¹³⁰⁶ Siegmund 1998, 82; Koch 1977, 79, 85-86.

¹³⁰⁷ Pescheck 1996, 42-44.

¹³⁰⁸ Siegmund 1998, 80.

Vrijthof 274	1	-	-	1
Vrijthof 0	1	4	-	5
Vrijthof total	10	8	-	18
Pandhof 10042	-	1	-	1
Pandhof 10068	-	1	-	1
Pandhof 10144	-	2	-	2
Pandhof 10248	-	2	-	2
Pandhof 10360	1	-	-	1
Pandhof 15013	-	1	-	1
Pandhof 11371	-	-	1	1
Pandhof 19999	-	4	-	4
Pandhof total	1	11	1	13
Total	11	19	1	31

Table 31. The distribution of simple rings of iron, bronze and bone over the Vrijthof and Pandhof cemeteries.

Simple rings of iron

Vrijthof: 97 (1474-1, 1475-1); 110 (1627-1, 1628-1,-3,-5,-12); 258 (1832-1); 274 (1798-1); 0 (1849-4). Pandhof: 10360 (575-1).

Appendix 1: Figure 40.

The difference between the number of simple iron rings between the Vrijthof cemetery and the Pandhof cemetery is remarkable, as was already mentioned above. The diameters of the iron rings vary from 3.8 to 8.3 cm (table 32).

Ring	Diameter
Vrijthof 110 (1628-3)	8.3
Pandhof 10360 (575-1)	6.2
Vrijthof 97 (1475-1)	5.9
Vrijthof 274 (1798-1)	5.8
Vrijthof 258 (1832-1)	5.7
Vrijthof 110 (1628-12)	5.4
Vrijthof 110 (1627-1)	5.3
Vrijthof 97 (1474-1)	4.4
Vrijthof 110 (1628-1)	4.2
Vrijthof 110 (1628-5)	3.8
Vrijthof 0 (1849-4)	-

Table 32. The diameters of the iron rings from the Vrijthof and Pandhof cemeteries.

The ring from Pandhof grave 10360 was part of a grave goods assemblage of a man (determined on the basis of the seax). The ring was found in the eastern part of the grave where the feet of the deceased are supposed to have been located (no skeleton remains were found), but the grave seems to be disturbed and the edges of the eastern part of the grave are not clearly identified. Therefore any interpretation of the iron ring from this grave is ambiguous. The other iron rings from the Vrijthof cemetery were all found in the graves of women.

The excavation of Vrijthof grave 110 led to the discovery of two bronze and five iron rings. From the iron rings one stands out in size. Ring 1628-3 has an outer diameter of 8.3 cm and is the largest of the iron rings from this grave but also of all those found in the Vrijthof and Pandhof cemeteries. One of the bronze rings from this grave is with an outer diameter of 8.4 cm of comparable size. Siegmund refers to iron rings with a size between 6.2 and 8 cm as bracelets.¹³⁰⁹ The iron ring with a diameter of 8.3 cm was found at the position of the left upper leg (somewhat lower than the position of the left hand can be assumed to have been), together with the other, much smaller, simple (iron and bronze) rings (except iron ring 1627-1, which was at an other location). It can be assumed that all these rings were hanging down from the waist belt and were used to carry various objects. None of these rings are for now interpreted as the fastener of a purse, because a small bronze buckle and strap end from this grave are identified as purse elements (assuming that just one purse was deposited), which were found at the same position as the rings. A knife, a little bronze bell and a decorated bone pin are objects from grave 110 that could have been attached to the iron and bronze rings, but could also have been the contents of the purse. Ring 1627-1 was also found near the left upper leg, but as a singular find just above the cluster of the other rings. An identification of this ring as a small bracelet (outer diameter 5.3 cm) is possible.

The remaining iron rings from the Vrijthof graves were all found at the position of the left upper leg and it can therefore be assumed that they were purse fasteners or belt appendages. Only the ring from Vrijthof grave 274 was found next to the body at the position of the left hand. The outer diameter of this ring measures 5.8 cm, and it could therefore be identified as a small bracelet (in view of the measurements of iron bracelets mentioned by Siegmund). From this grave no objects are known that could have been attached to the ring or that could be identified as the contents of a purse.

In Vrijthof grave 97 two iron rings were found. From this grave various objects (comb, boar teeth, 'Herkuleskeule') are known that can either be identified as the contents of a purse or as objects that were hooked to a ring and hanging down from the belt. It can be assumed that ring 1474-1 had the function of girdle hanger to which the comb was attached. This ring shows some bronze remains (rests of a chain?) and the excavation drawing shows that the comb (of which only a fragment remains) was found beneath this ring. The other ring (1475-1) was found at the position of the left hand, and the diameter of 5.9 cm may indicate that it was a small bracelet. A function as purse fastener can also be assumed, the purse was then deposited in the left hand of the deceased.

Siegmund dates the larger simple iron rings, which he identifies as bracelets, in his phase 8 (610-640).¹³¹⁰ He identifies the smaller iron rings as components of girdle hangers but does not date them to a specific phase. Simple iron bracelets or small rings are not identified by the Franken AG. Legoux, Périn, and Vallet classify simple iron rings as elements of girdle hangers and date them to their phases MA2-MR1 (520/30-630/40).¹³¹¹

Rings: bronze

Vrijthof: 110 (1628-2, 4); 194 (1502-2); 230 (1767-12); 0 (1849-1, 1849-2); 0 (1740-1); 0 (1106-1). Pandhof: 10144 (35-2, 3); 10042 (60-3); 10068 (93-2); 15013 (269-1); 10248 (324-3, 4); 19999 (339-1); 19999 (430-2); 19999 (524-3, 4).

Appendix 1: Figure 41.

For four of the bronze rings that were found in the Vrijthof cemetery no find context is known. The absence of their context information makes it difficult to ascribe a specific function to these specimens. The diameter of the bronze rings from both cemeteries varies from 1.1 to 8.4 cm; the majority is rather small compared to the iron specimens (table 33).

¹³⁰⁹ Siegmund 1998, 80-81.

¹³¹⁰ Siegmund 1998, 81.

¹³¹¹ Legoux/Périn/Vallet 2004, type 357, 19, 41, 54.

Ring	Diameter
Vrijthof 110 (1628-2)	8.4
Vrijthof 110 (1628-4)	4.4
Vrijthof 194 (1502-2)	1.1
Vrijthof 230 (1767-12)	8.3
Vrijthof 0 (1849-1)	1.7
Vrijthof 0 (1849-2)	1.9
Vrijthof 0 (1740-1)	3.3
Vrijthof 0 (1106-1)	2.0
Pandhof 10144 (35-1)	3.9
Pandhof 10144 (35-2)	3.7
Pandhof 10042 (60-3)	8.0
Pandhof 10068 (93-2)	-
Pandhof 15013 (269-1)	2.1
Pandhof 10248 (324-3)	2.6
Pandhof 10248 (324-4)	4.6
Pandhof 19999 (339-1)	5.5
Pandhof 19999 (430-2)	3.8
Pandhof 19999 (524-3)	1.5
Pandhof 19999 (424-4)	

Table 33. The diameters of the bronze rings from the Vrijthof and Pandhof cemeteries.

The ring from Vrijthof grave 194 is, with a diameter of 1.1 cm, remarkable small. It belongs to the grave contents of a man (on the basis of the seax). This ring was found at the location of the left upper leg and is for now identified as a girdle hanger or the fastener of a purse.

The two bronze rings from Vrijthof grave 110 are part of an assemblage of seven rings (see above) found in the grave of a woman. The rings of this assemblage (except one iron ring) are identified as girdle hangers to which various objects were attached. The bronze ring with a diameter of 8.4 cm from this grave could have been a bracelet, although it is found somewhat lower than the assumed position of the left hand.

The bronze ring from Vrijthof grave 230 was found left of the left upper leg, together with a shear, key, pieces of flint, a decorative disc of antler and a small bronze plate buckle (purse buckle). In view of these finds, this ring probably functioned as a girdle hanger, or belonged to the contents of the purse. The appearance of this ring is different from the other simple bronze rings. It is partly thickened, and the section is faceted at this part of the ring; the thinner part has a circular section. The ring is closed with the two extremities which are folded around each other. The ring is asymmetric; the diameter varies between 4.6 and 8.3 cm. On the basis of these features it can also be assumed that it was worn as a bracelet.

Four of the eleven rings from the Pandhof cemetery are without context. Their diameters vary from 1.5 to 5.5 cm. A further identification for these rings is difficult without context information.

The two rings from Pandhof grave 10144 were, together with a bronze bracelet (see the section on bracelets), the only finds known from this grave. Of the ring with a diameter of 3.7 cm a part is missing, it also shows an element of silver attached to it. The fastener of the ring with a diameter of 3.9 cm is an attached bronze wire. Both rings are smaller than the bracelet, which has a diameter of 6.7 cm. This makes an identification of these smaller rings as bracelets unlikely. Their classification as girdle hangers, however, cannot be sustained because of their unidentified position in the grave.

The ring from Pandhof grave 10042 is with a diameter of eight cm one of the largest of the collection of simple bronze rings. It is part of a grave goods assemblage of a woman, which consists furthermore of beads, a brooch and a coin pendant. The ring was found at the position of the left hand and can be identified as bracelet. It is discussed in this section, and not in the section on bracelets, for it compares best with the other simple rings for which the identification as girdle hanger or bracelet remains ambiguous.

Only a fragment remains of the ring from Pandhof grave 10068, which is not sufficient to establish its original diameter. It was found with the remains of a bronze hair pin and four coins. On the basis of these finds it can be assumed that the grave goods were deposited in the grave of a girl (the documentation mentions the burial of a child). The find location of this ring in the grave is unknown.

The ring from Pandhof grave 15013 was found together with finds that are typical for a grave of a woman, although the coherency of this assemblage is questionable (the documentation mentions that it consists of dispersed finds from the upper layer). The ring is too small to be identified as a bracelet, and another function must be thought of.

The ring with a diameter of 2.6 cm from Pandhof grave 10248 is too small to be identified as a bracelet. The other bronze ring from this grave has a diameter of 4.6 cm and is open with two extremities which are folded backward. This 'decorative' element can be an indication for its function as a small bracelet. The location of this ring in the grave is not known and cannot substantiate this assumption.

Simple bronze rings are not classified by Siegmund or the Franken AG, nor are they by Legoux, Périn, and Vallet.

Simple ring: bone

Pandhof: 11371 (480-1).

The bone ring from Pandhof grave 11371 was found together with a bronze fragment of a bracelet/ring (see above). The bone ring is only partly preserved, but a diameter of approximately 8 cm can be reconstructed. On the basis of this diameter it can also be identified as a bracelet. Information on the find location, however, is not available. Not much is published about bone (arm) rings, and it is difficult to date this ring to a specific phase.

(Rock-crystal) balls in a (silver) frame

Vrijthof: 0 (8888-3). Pandhof: 11321 (418-1)¹³¹².

Appendix 1: Figure 42.

A 'ball' of iron in a silver frame was found in the Vrijthof cemetery. Its find context and associated finds are not known. The iron ball is very weathered, as is the bronze frame. This frame consists of two silver bands without decoration, which have partly decayed. Another folded band is attached to these two bands on top of the ball with a nail by which a loop is formed. A fragment of a small bronze ring is still attached to this loop. It probably served to attach the ball to some part of the clothing.

The rock-crystal ball from Pandhof grave 11321 is of an extreme good quality; the rock-crystal is bright and the silver frame well made.¹³¹³ The loop of the silver frame consists of a solid stem on which at both flat sides a simple cross is engraved. The solid stem turns into a relatively large loop, which is partly damaged at the upper side. Two incised lines can be observed on the surface of the bands that form the frame. The grave goods assemblage from Pandhof grave 11321 consists among other finds of two silver gilded bow brooches. Rock crystal balls in a frame are often found in association with bow brooches.¹³¹⁴ The exact find locations of the rock-crystal ball and bow brooches from grave 11321 are not known, and their relation to the clothed body cannot be reconstructed. The other finds from this grave are two garnet disc brooches, a silver buckle, a gold jewelled pendant with garnet inlays, and a string with

¹³¹² Ypey/Glazema 1955, 47.

¹³¹³ Hinz 1966, 215 (The rock-crystal ball from Maastricht is mentioned).

¹³¹⁴ Hinz 1966, 212, Abb.1, 219-221, Abb.5.

various beads. This grave can be considered to be one of the 'richest' equipped graves of the Pandhof cemetery.

Rock-crystal balls in silver frames are the most conspicuous amulets deposited in Merovingian graves. Hinz published an article in which he especially focuses on rock-crystal balls and their relation to the clothing.¹³¹⁵ The find locations of these objects in graves point towards a considerable uniformity in the way they were worn. The rock-crystal balls are particularly found in 'rich' equipped graves of women.¹³¹⁶ Hinz dates the majority of the rock-crystal balls in the middle and the second half of the sixth century.¹³¹⁷ Siegmund (after Hinz), dates rock crystal balls in Rhineland phases 4-8 (530-640).¹³¹⁸ The Franken AG maintained this type and date it to their phases 3-7 (460/80-640/50).¹³¹⁹ Legoux, Périn and Vallet date rock-crystal balls in their phases MA1-MA3 (470/80-600/10).¹³²⁰ The framed iron ball from the Vrijthof cemetery does not fit into the categorization of Hinz.¹³²¹ Because the context of the Vrijthof find is not known, nothing can be said about the grave goods assemblage it belonged to and neither about the way this amulet was related to the body at the moment of deposition. Hinz, however, thinks that balls of another material than rock-crystal should be dated to the same period. The iron ball in a bronze casing from the cemetery of Schretzheim was found in the grave of a woman (probably of old age), which dates to Stufe 6 (660-680).¹³²² Another iron ball, although in a silver fitting, is known from grave 45 of the cemetery *Staßenheim "Aue"*.¹³²³ It seems plausible to date the framed ball from the Vrijthof in the seventh century.

Hercules-club

Vrijthof: 97 (1500-1).

Appendix 1: Figure 42.

One example of a so-called *Herkuleskeule* or *Donar-Amulett* of bone is known from Vrijthof grave 97. It has a length of 4.2 cm, is prismatic and is decorated with incised lines. The suspension loop is partly missing. The *Herkuleskeule* was found at the position of the left upper arm, which does not correspond with the general assumption that these objects were girdle hangers or carried in a purse. In this grave two iron rings were found in the area of the left upper leg. The other girdle-hangers from this grave such as a boar tooth and a fragment of a comb (complete comb on excavation drawing but now lost) were probably attached to these rings. The *Herkuleskeule* perhaps moved from its original position in the grave. Parallels for this type of object are known from many cemeteries over an extended area.¹³²⁴

Siegmund only classified bronze specimens which he dates in Rhineland phase 8 (610-640). The Franken AG maintained this type but also consider the specimens of bone. Both the bone and bronze *Herkuleskeule* are dated in the second half of the sixth and the first half of the seventh century.¹³²⁵ Legoux, Périn and Vallet date these objects (*massue d'Hercule*) in their phases PM-MR2 (440/50-520/30).¹³²⁶ This seems rather early regarding the dating of the Franken AG.

Decorative discs of antler

Vrijthof: 100 (1435-1), 230 (1767-9). Pandhof: 10037 (108-4)¹³²⁷; 10074 (27-24); 10407 (581-19)¹³²⁸.

¹³¹⁵ Hinz 1966.

¹³¹⁶ Hinz 1966, 218, 220.

¹³¹⁷ Hinz 1966, 218.

¹³¹⁸ Siegmund 1998, 82.

¹³¹⁹ Müssemeier *et al.* 2003, 40.

¹³²⁰ Legoux/Périn/Vallet 2004, type 339, 19, 40, 54.

¹³²¹ Hinz (1966, 22) mentions various materials for the balls in silver frames.

¹³²² Koch 1977, Teil 1, 86; Teil 2, grave 598, 127, Taf. 157.8.

¹³²³ Koch 2007, 88, Abb. 92.

¹³²⁴ See for example Aufleger (1996, 643) and Werner (1964, 176-197).

¹³²⁵ Müssemeier *et al.* 2003, 40.

¹³²⁶ Legoux/Périn/Vallet 2004, 19, 40, 54 (type 344).

¹³²⁷ Ypey/Glazema 1955, 56.

¹³²⁸ Ypey/Glazema 1955, 57.

Appendix 1: Figure 42.

Two decorative discs of antler were found in the Vrijthof cemetery and three in the Pandhof cemetery.¹³²⁹ The discs from Vrijthof grave 230 and Pandhof grave 10074 are weathered to such a degree that it cannot be established whether these objects originally had some kind of decoration. The disc from Vrijthof grave 230 shows some small and one large perforation along the edge. The large perforation probably served as a suspension hole. Although flints were found in this grave it is identified as that of a woman, based on the comb with case and the string of beads (now lost, but registered on the excavation drawing) worn around the neck. The other finds are a shear, a key and a latch lifter key, which were found, together with the flints and the decorative disc, near the left arm. These objects could have been the contents of a purse of which its former occurrence is assumed because of the presence of a bronze plate buckle that is identified as the fastener of a purse.

The Pandhof disc from grave 10074 shows a hole in the middle but no further perforations along the edge can be observed. It was found in the grave of a woman (based on the find of various beads in this grave).

The discs from Pandhof graves 10037 and 10407 are decorated on both sides. The disc from grave 10407 shows a cross and additional dot-in-circle decoration.¹³³⁰ It has also small perforations along the edge. The other finds from this grave are two earrings and various beads on the basis of which this grave is identified as that of a woman.

A dot-in-circle decoration can also be observed on the disc from Pandhof grave 10037. This disc also has an incised geometric pattern on the middle of the disc and small perforations along the edge. Two pottery vessels were also found in this grave. The remnants of a silver ring can be an earring what points towards the identification of this grave as that of a woman.

Only a small weathered fragment remains of the disc from Vrijthof grave 100. Some traces of incised lines along the edge can be observed on this fragment. It was part of the grave goods assemblage of a woman (based on the presence of various beads) and found near the left upper leg.

Decorative discs of antler are quite common finds from Merovingian cemeteries and are known to have been found in graves of women with grave good assemblages of variable 'richness'.¹³³¹ The edges of, for example, the decorative discs from the cemetery of Schretzheim are extensively perforated and most of the discs from this cemetery are decorated on both sides.¹³³² Objects of antler are supposed to have been associated with fertility and growth, because of their yearly renewal.¹³³³ As many parallels show, decorative discs were attached to a strap hanging down from the waist belt and are often found near the left upper leg.

Decorative discs of antler were not identified in the research area of Siegmund, nor were they identified by the Franken AG. The discs from Schretzheim, which are much alike those of the Vrijthof and Pandhof cemeteries, date to the second part of the sixth century.¹³³⁴ In Kleinlangheim a decorative disc, with on both sides extended circle decoration and perforations along the edge, was found in grave 226. It was the grave of a woman who died at an age between 20-25 years.¹³³⁵ Because it was found with objects that are typically purse contents, it is suggested by Pescheck that this disc could also have served as a form of fastener or decoration of the purse.¹³³⁶ This grave dates to the AM III (560/70-600). Legoux, Périn, and Vallet date these objects in their phases MA3 (560/70-600/10).¹³³⁷

¹³²⁹ Dijkman/Ervynck, 1998, 40-41, Fig. 26, 70.

¹³³⁰ Koch created a distribution map (2001, 198-202, Abb. 88, Tabelle 3, 545-548, Liste 5) of decorative discs of antler with dot-in-circle ornaments. Both the Pandhof discs were incorporated in this overview.

¹³³¹ Koch 1977, 82.

¹³³² Koch 1977, 81-82.

¹³³³ Aufleger 1996, 643; Koch *et al.* 1996, 989-990.

¹³³⁴ Koch 1977, 81-82.

¹³³⁵ Pescheck 1996, 30-31, 103, Taf. 52.18.

¹³³⁶ Pescheck 1996, 103.

¹³³⁷ Legoux/Périn/Vallet 2004, 19, 41, 54 (type 359).

Animal tooth

Vrijthof: 97 (1498-2).

Appendix 1: Figure 43.

Two pieces of the tusk of an animal, probably of a boar (swine), from Vrijthof grave 97 belong to a grave goods assemblage of a woman (determined by the *Herkuleskeule*) and is found at the left upper leg together with a comb and iron ring.¹³³⁸ It can be assumed that the tooth, like the comb, was attached to the iron ring (with an additional wire?), found at the same position, that was probably hanging down from the belt, or that it formed the contents of a purse. The tooth is quite weathered and a suspension loop can therefore not be discerned. Animal teeth are quite common grave goods. It is suggested that wearing such teeth transferred the strength of the associated animals, and/or that it was of help when suffering from dental problems. It is therefore not surprising that teeth like these are the only amulets made of the skeletal remains of animals that are also known from graves of men.¹³³⁹ It was mentioned by Koch that the occurrence of the tooth of boars but also bears are rare in Schretzheim.¹³⁴⁰ The grave of a girl in which a tusk of a boar was found dates to Schretzheim Stufe 4 (590/600-620/30).

Siegmund does not mention the presence of animal teeth in the lower Rhineland, nor do the Franken AG for their research area. Legoux, Périn and Vallet mention animal teeth but do not differentiate between the different animals they belonged to. They describe these teeth as pendants and date them in their phases MA1-MA3 (470/80-600/10).¹³⁴¹ The two graves of Kleinlangheim in which a tooth of a boar was found are both the graves of women and date to the AM III (560/70-600).¹³⁴² Regarding the dating of some other finds from Vrijthof grave 97 (two iron plate buckles of shoes that date in the second half of the sixth century) it seems plausible to date the Vrijthof boar tusk to the second half of the sixth century and beginning of the seventh century.

Spindle whorls of glass and baked clay

Vrijthof: 105 (1470-3); 264 (1837-2). Pandhof: 10161 (452-2); 19999 (410-1).

Appendix 1: Figure 43.

One spindle whorls of baked clay are known from the Vrijthof cemetery and two from the Pandhof cemetery. The spindle whorl from Vrijthof grave 105 was found near the right side of the pelvis, for the specimen from Pandhof grave 10161 the exact find location in the grave is not certain. The find context of the other spindle whorl of baked clay from the Pandhof is not known.

The spindle whorl from Vrijthof grave 264 is of green transparent glass with combed threads of opaque white glass. It was found quite far from the right side of the body (right upper leg) and the actual assignment of the spindle whorl to this grave is uncertain. If so, the three spindle whorls that were found in graves belong to grave goods assemblages that can only be described as 'neutral'.

Legoux, Périn and Vallet classified spindle whorls of baked clay as type 347 and date them in their phases MA1-MR1 (470/80-630/40).¹³⁴³ They classified spindle whorls of glass as type 367 which dates predominantly in their phases PM-MA1 (440/50-520/30) and sporadically in phases MA2-MA3 (520/30-600/10).¹³⁴⁴ Siegmund identifies spindle whorls of green glass with opaque white threads as girdle hangers and dates them in Rhineland phases 3-4 (485-555).¹³⁴⁵ The Franken AG maintained this type and date it in their phase 3 (460/80-510/25).¹³⁴⁶ Both Siegmund and the Franken AG did not classify

¹³³⁸ The determination of this specimen as an animal tooth is uncertain, and requires further investigation. For now it is discussed as such.

¹³³⁹ Kokabi 1994, 92.

¹³⁴⁰ Koch 1977, 85, Taf. 33.3-12.

¹³⁴¹ Legoux/Périn/Vallet 2004, type 343, 19, 40, 54.

¹³⁴² Pescheck 1996, graves 227 and 299, 30, Taf. 53.24, 77.4, 83.227.14, 85,299,9.

¹³⁴³ Legoux/Périn/Vallet 2004, 19, 40, 54. (type 347).

¹³⁴⁴ Legoux/Périn/Vallet 2004, 19, 41, 54 (type 367).

¹³⁴⁵ Siegmund 1998, 82.

¹³⁴⁶ Müssemeier *et al.* 2003, 40.

spindle whorls of beaked clay. If these were girdle hangers remains questionable; the spindle whorl from Vrijthof grave 105 could also have been carried in a purse.

Amber pendants

Vrijthof: 110 (1628-6). Pandhof: 10128 (40-2); 10186 (26-4).

Appendix 1: Figure 43.

The pendant from Vrijthof grave 110 is a large polished cone-shaped piece of amber and is approximately 5 cm long, as is the specimen from Pandhof grave 10128. Both pendants have a suspension hole. The specimen from Pandhof grave 10128 is irregular shaped and less polished than the Vrijthof amulet. The amber 'bead' from Pandhof grave 10186 is, with a length of approximately 4 cm, is placed within the same category. It cannot be established whether this specimen had a suspension hole; the upper part of this bead is missing. Because of their measurements they are not considered to be 'normal' amber beads such as numerous are known to form parts of strings of beads. For its amulet character, however, no hard evidence can be given and parallels of such objects are not known until now. The main suggestion for their identification as amulets is evoked by the position of the object in the Vrijthof grave. The pendant from this grave was found near the left side of the upper left leg together with a range of simple iron and bronze rings (which were probably hanging down from the belt), a bronze bell and a purse buckle and strap end. It can be assumed that this amber pendant was carried in the purse or that it was hanging down from the belt attached to one of the rings. The amber object from Pandhof grave 10128 was not found in a position apart. It was found, together with a string of beads, at the neck. Objects with a presumed 'magical' character could also have been worn as visible and therefore decorative items.¹³⁴⁷ A relatively large piece (4.4 x 1.5 cm) of unprocessed amber was found in grave 101 of the cemetery of Rödingen.¹³⁴⁸ According to the *Handwörterbuch des deutschen Aberglaubens*, as Herget mentions, amber has protective and curing characteristics. Amber beads are used as grave goods throughout the Merovingian period, an exact date for these large pendants is difficult to establish.

Bronze bell

Vrijthof: 110 (1628-11).

Appendix 1: Figure 43.

The remains of a little bronze bell consist of a bell-shaped object with a suspension loop and fragments of bronze rings attached to it. The position in the grave, left to the left upper leg, and the suspension loop indicate that the bell was hanging down from the belt, although it could also have been carried in the purse that was found at the same position. Because a functional explanation for the presence of a bell is hard to give, it is for now identified as an amulet.

Small bronze bells are not unusual finds in Merovingian cemeteries. For example in the cemetery of Müngersdorf, three specimens were found.¹³⁴⁹ Grave 142 of the cemetery of Müngersdorf shows, next to the bell, six rings, which is another similarity with Vrijthof grave 110 (which also contained six rings), as is the fact that both are the graves of a woman. The same can be concluded for Müngersdorf grave 91, although this grave contained only three rings. Müngersdorf grave 149, in which the third bell was found, was also the grave of a woman. In this grave no rings were found. The graves of Müngersdorf date in the end of the sixth and beginning of the seventh century.¹³⁵⁰ Another bell that is comparable to

¹³⁴⁷ See for example the references of Pescheck to the magical characteristics of amber and glass beads (Pescheck 1996, 104, note 827).

¹³⁴⁸ Herget 2006, 90-91, Abb. 30, 101.

¹³⁴⁹ Fremersdorf 1955, 142.13, 149.13, 91b.19

¹³⁵⁰ Fremersdorf 1955, Teil 1, 131-135.

the Vrijthof specimen was found in the cemetery of Schretzheim of which the concerning grave dates in Stufe 4-5 (560/600-650/60).¹³⁵¹

Although small bronze bells are present in the cemeteries of Müngersdorf and Oberkassel, which both belong to Siegmund's research area, they are not discussed and classified by Siegmund, nor are they by the Franken AG. Similar objects are neither mentioned by Legoux, Périn and Vallet. It seems plausible, with regard to the dates of graves from other cemeteries that contained bells, to date the Vrijthof bell in the second half of the sixth century and first half of the seventh century.

Keys

Vrijthof: 99 (1413-4*); 166 (1540-1); 230 (1767-8). Pandhof: 19999 (270-1)¹³⁵².

Appendix 1: Figure 43.

The four bronze keys from both the Vrijthof and Pandhof cemeteries are all different in form. The key from Vrijthof grave 230 has a solid stem and a loop in the shape of a ring. It was part of a grave goods assemblage of a woman and was placed in a purse or hanging down from the belt.

The key from Vrijthof grave 166 does not have a stem and is attached to a separate bronze ring. It was also part of a grave goods assemblage of a woman. The location of the key in the grave indicates that it could have been part of the contents of a purse or that it was hanging down from the belt.

The key (lost after excavation) from Vrijthof grave 99 is part of a grave goods assemblage that on the basis of the finds (for now) can only be defined as neutral (two glass vessels and a bronze plate buckle with strap end). The little bronze plate buckle is classified as element of the waist belt, so no indications for the former presence of a purse can be identified in this grave. The key was found to the right of the presumed position of the pelvis (no skeletal remains are present except a skull). The grave seems to be disturbed so this position is probably not the original one.

The ring key from the Pandhof cemetery (context unknown) is made of bronze. It is a ring with a stem with a biting end. Such keys are known from the late Roman period.¹³⁵³ A resembling ring key, however, was found in grave 857 of the cemetery of Cutry.¹³⁵⁴ This key was deposited in a purse of which the contents were found between the upper legs. It was the grave of a woman of approximately 15 years, which dates to Cutry phases A/B/C II (470/80-520/30).

Bronze keys from Merovingian graves are considered as one typological group by Legoux, Périn and Vallet and are classified as type 350, which dates in their phase MA1-MA3 (470/80-600/10).¹³⁵⁵ A key that resembles the one from Vrijthof grave 230 was found in Cutry grave 952 (of a woman) and is dated to Cutry phase C/D/E (520/30-600/10).¹³⁵⁶ Siegmund defined one type for keys of various forms and placed them in the group of '*Gürtelgehänge*' and therefore as specific items found in the graves of women. Keys were, according to Siegmund, used as grave goods throughout the Merovingian period.¹³⁵⁷ Keys were not identified by the Franken AG. Considering the dating of Legoux, Périn and Vallet and the specific examples from the cemetery of Cutry it is plausible to date the ring key from the Pandhof earlier than the Vrijthof keys.

Chatelaine: decorative element

Vrijthof: 138 (1551-1*).

Appendix 1: Figure 44.

¹³⁵¹ Koch 1977, grave 543, Tafel 139.10.

¹³⁵² Ypey/Glazema 1955, 65.

¹³⁵³ See for example Henkel 1913, Tafel LXXII.

¹³⁵⁴ Legoux 2005, 121, Planche 92.

¹³⁵⁵ Legoux/Périn/Vallet 2004, 19, 41, 54 (type 350).

¹³⁵⁶ Legoux 2005, 120, 952, Planche 143.

¹³⁵⁷ Siegmund 1998, 83.

A bronze element of a chatelaine was found in Vrijthof grave 138, but disappeared in the post-excavation period. Photographs and drawings from the archive of Ypey are available, so a reconstruction and description of this find can be made. The decorative element is made of bronze and has a length of 4.5 cm. The upper extension has a suspension hole, of the three lower extensions (or 'legs') one is missing. These 'legs' have an opening in their far ends. The object has some punched-in circle decoration on both sides around the opening in the middle. Another hole can be observed on the left side of the central part of the object.

A chatelaine generally consists of bronze and/or iron shackles with different sorts of decorative elements. Chain-elements, however, were not found in Vrijthof grave 138. The decorative element was found on the left side of the chest, what is an unusual position for girdle hangers. The grave, however, is undisturbed. No other finds are known from this grave.

The decorative elements of chatelaines show a variety of forms. An exact parallel for the specific decorative element of the Vrijthof cemetery is not known to me, although a specimen from Coulommies-et-Marqueny (French Ardennes) shows some resemblance to it.¹³⁵⁸ This bronze element also consists of three 'legs' and an upper extension with a suspension hole. The whole surface is covered with a punched-in dot-in circle decoration. The two additional horizontal extensions (arms) of the upper extension are not present on the Vrijthof specimen. The specimen from France is complete in the sense that some shackles of the chain to which it was attached to the girdle are still present and that five small (bronze?) objects (a bell, two crosses of metal foil and two cones) are still attached to the extensions. It can be assumed that small objects were originally also attached to the Vrijthof specimen. The chatelaine from France dates to the seventh century.

Siegmund identified chatelaines as a type, but does not discuss the decorative elements that can form a part of these girdle hangers. He dates chatelaines in Rhineland phase 8 (610-640).¹³⁵⁹ The Franken AG maintained this type and neither discuss the variety of decorative elements. They date these girdle hangers to their phases 6-8 (580/90-670/80).¹³⁶⁰ Legoux, Périn and Vallet identified four types of decorative elements of chatelaines.¹³⁶¹ None of these, however, resemble the Vrijthof specimen. The four types of Legoux, Périn and Vallet all date predominantly to their phase MR1 (600/10-630/40), yet can occur sporadically in the phases before (560/70-600/10) and after (630/40-660/70). It seems plausible to date the Vrijthof specimen in the first half of the seventh century.

Shackles / chains

Vrijthof: 48 (1593-2, 1594-1). Pandhof: 10061 (48-3); 10118 (42-2); 10248 (324-5); 19999 (408-2).
Appendix 1: Figure 44.

Shackles of iron and/or bronze can form the chains of chatelaines.¹³⁶² The bronze shackles (1594-1) from Vrijthof grave 48 can be identified as the remains of a probably longer chain. They were found at the position of the lower left arm together with a bronze plate buckle. It can be assumed that this chain was attached to the belt. The buckle and chain probably moved from their original position in the grave. The other chain element from this grave (1593-2) was found at the position of the pelvis. It consists of a bronze ring with three bronze shackles. This object was probably also attached to the belt. It is uncertain whether the shackles were part of a chatelaine. The other objects from this grave are various beads, a finger ring and bronze belt fittings.

The shackles from the Pandhof graves are all single bronze elements. The element from Pandhof grave 10061 was found in a grave which also contained a string of beads. The grave goods assemblage from Pandhof grave 10118 consists furthermore of a string of beads and a bronze latch lifter key (girdle

¹³⁵⁸ This specific find is published in '*Childeric-Clovis. Rois des Francs*' 1983, 91-92, nr. 117. The original publication of this find was not mentioned in this publication.

¹³⁵⁹ Siegmund 1998, 83.

¹³⁶⁰ Müssemeier *et al.* 2003, 40-41.

¹³⁶¹ Legoux/Périn/Vallet 2004, type 363-366, 19, 41, 54.

¹³⁶² Siegmund 1998, 83.

hanger). The shackle with find number 408-2 (context unknown) was found with a fragment of a comb. The shackle from Pandhof grave 10248 was found in a grave of a woman which consists furthermore of some fragmented beads and two simple bronze rings (see above). It appears that all the shackles from the Vrijthof and Pandhof cemeteries were found in the graves of women. It is uncertain whether they formed part of chatelaines or that they served to attach various objects to the girdle.

Siegmund dates chain elements (although only the components of '*Stangengliederketten*') in Rhineland phase 8 (610-640).¹³⁶³ The Franken AG date these in their phases 6-8 (580/90-670/80).¹³⁶⁴ Legoux, Périn and Vallet identified various shackles as one type and date them in their phases MR2-MR3 (630/40-700/10).¹³⁶⁵

Bronze cases

Pandhof: 10068 (93-3); 10133 (81-1); 10554 (490-2).

Appendix 1: Figure 44.

Three bronze cylindrical cases were found in the Pandhof cemetery. They all have a length of more or less 3 cm. Grave 10068 is the grave of a woman (based on the string of beads) in which also bronze coins and a hair pin of bone was found. The other find from grave 10133 was a silver coin, reused as a pendant. On the basis of this find it can be assumed that it was the grave of a woman. Next to the bronze case the grave goods assemblage from grave 10554 consisted furthermore of some beads and a bronze coin that was reused as pendant. It can with reasonable certainty be concluded that the bronze cases were all deposited in the graves of women. Their position in the grave is not known and as a consequence it is difficult to ascribe a specific functional or symbolic meaning to them, also because exact parallels were not found.

Siegmund mentions that some authors refer to bronze cases as derivations of bone *Herkuleskeule* and that some identified them as *Nadelbüchsen* (needle holders).¹³⁶⁶ Despite the ambiguous function it is known that these objects are mainly part of the grave goods assemblages of women and children.¹³⁶⁷ Siegmund dates them in Rhineland phase 8 (610-640).¹³⁶⁸ No such objects can be found in the typology of Legoux, Périn and Vallet.

Latch lifter keys: iron and bronze.

Vrijthof: 230 (1767-7). Pandhof: 10118 (42-1)¹³⁶⁹; 10143 (24-1)¹³⁷⁰.

Appendix 1: Figure 44.

The latch lifter key from the Vrijthof cemetery is of iron, it has a length of 12.8 cm; the two Pandhof specimens are of bronze (11.2 cm and 11.8 cm). The three keys of the Vrijthof and Pandhof have a shank with a T-shaped extremity. They all have a suspension hole at the top of the shank. The iron key from Vrijthof grave 230 was found with other utensils or girdle hangers such as a comb with case, a small bronze key, a shear and a knife. The associated plate buckle that served as the fastener of a purse was found with these 'utensils' near the left upper leg, which suggests that these objects were deposited in a purse.

The bronze key from Pandhof grave 10143 has a decoration of cast ribs on the upper part of the shank which is interrupted by a smooth segment on which some vague incised lines can be observed. It is the only find that is known from this context.

¹³⁶³ Siegmund 1998, 83.

¹³⁶⁴ Müsseseimer *et al.* 2003, 40-41.

¹³⁶⁵ Legoux/Périn/Vallet 2004, 19, 41, 54 (type 356).

¹³⁶⁶ Siegmund 1998, 83.

¹³⁶⁷ Siegmund 1998, 83.

¹³⁶⁸ Siegmund 1998, 83.

¹³⁶⁹ Ypey/Glazema 1955, 54; Steuer 1982, 227.

¹³⁷⁰ Ypey/Glazema 1955, 54; Steuer 1982, 227.

The upper part of the shank of the key from Pandhof grave 10118 has a decoration of cast ribs, which are interrupted by four smooth segments. The incised zigzag lines on these segments are clearly visible. The T-shaped extremity of this key is, in contrast with the other keys, not in line with the shank in the sense that they bend towards the back (or forwards).

These objects are often referred to as keys or girdle hangers. They differ from 'normal keys' and are also referred to as latch lifter keys. Martin suggests that (iron) keys of this kind were not used for doors but for little wooden boxes in which a woman retained her personal possessions.¹³⁷¹ Grave 27 of the cemetery of Basel-Bernerring, in which an iron latch-lifter key was found, was constructed in the period around 570.¹³⁷² Pescheck also refers to iron latch-lifter keys as openers for wooden boxes in which toilet utensils were kept.¹³⁷³ The iron key from the cemetery of Kleinlangheim was found in a grave of a woman which dates to AM III (560/70-600). Steuer listed several interpretation possibilities for decorative keys (although predominantly for those found in pairs) such as the two from the Pandhof: a practical use is discarded due to their execution in silver or bronze and the absence of marks of their use. The options mentioned vary from their symbol as female authority over the household to symbols of Christianity.¹³⁷⁴

Siegmund does not identify latch-lifter keys, nor do the Franken AG. Legoux, Périn and Vallet classified all the iron latch-lifter keys as type 351 and date them to their phases MA1-MA3 (470/80-600/10), although this is mentioned to be based on a small number of examples from their research area.¹³⁷⁵

Bronze specimens are not identified by Legoux, Périn and Vallet, and for now these bronze keys of the Pandhof cemetery are dated according the iron latch lifter keys. Because of their resemblance to the iron latch-lifter keys it can be assumed that the bronze ones served the same function, although a decorative function as girdle hanger seems more likely. Two bronze specimens, although more 'decorative' were found in Junkersdorf grave 30. It is a relatively 'rich' equipped grave of a woman with, among other finds, two bow brooches and two bird brooches. It can be assumed that these two grille hangers were merely decorative and that bronze girdle hangers of this kind had a symbolic reference to their iron counterparts. Junkersdorf grave 30 dates to the end of the fifth and beginning of the sixth century. It seems plausible to date the bronze girdle hangers from the Pandhof cemetery earlier than the iron latch-lifter key from the Vrijthof cemetery.

Purses

Purses can be found in the graves of both women and men, and were often attached to the waist belt. The contents of the purses of men show a variety of objects such as fire-steels and flints, shears, keys, tweezers, knives and combs. The contents of the purses of women show the same range of objects, although generally without fire-steels and flints.¹³⁷⁶ Here just the purse itself will be discussed, of which the leather or textile, has mostly decayed. Other objects should therefore be sought for to indicate their former presence. These objects can be metal fittings such as buckles, strap ends and plates being recovered at the presumed location of the purse (generally the upper legs and pelvis) in the grave. An additional indication for the identification of such fittings as part of a purse is the presence of the above mentioned objects at the same location. Therefore, as in many other cases, the position in the grave is important for the identification of buckles, plate buckles, strap ends and other appliqués as the fittings of purses.

¹³⁷¹ Martin 1976, 89, 261-269.

¹³⁷² Martin 1976, 140.

¹³⁷³ Pescheck 1996, 46, Taf. 77,10.

¹³⁷⁴ Steuer 1982, 196, 202-221.

¹³⁷⁵ Legoux/Périn/Vallet 2004, 11, 19, 41 (type 351).

¹³⁷⁶ Purses and their contents are frequently discussed. See for example Koch 1977, 131; Pescheck 1996, 67; Haas-Gebhard 1998, 43; Ament 1993, 92-94.

Purse: with bronze bird-shaped fittings

Vrijthof: 166 (1540-2, 3, 4, 5, 6, 7, 8, 9, 10).

Appendix 1: Figure 45.

Grave 166 of the Vrijthof cemetery produced one bronze plate buckle, one bronze strap end, and 7 bronze mounts which all belong to a single purse. The excavation documentation reveals that the objects were already identified as the components of a purse during the excavation of the grave. A drawing of the position of the elements in situ exists, and therefore their exact position in relation to each other is known, although no leather or textile remains of the purse are left, with the exception of some traces on the strap end and one of the fittings. The plate buckle is small and consists of a rectangular loop with a fixed plate which is decorated with three punched in dot-in-circles. The strap end shows the same decoration and has some textile or leather remains attached to it, which probably are remnants of the actual purse. The mounts consist of four triangular shaped mounts, which are identified as the corner pieces of the purse (see drawing). Besides these four mounts two bird shaped mounts are identified; their locations are reconstructed at the right and left side of the purse, which means that the birds are outward looking. The circular fitting is placed at the centre of the purse. All the fittings show the same punched in dot-in-circle decoration, and the circular fitting also a cut-out cross-motive. It is suggested that the central position of this mount (and thus the central position of the cross) might indicate that it refers to Christian values.¹³⁷⁷ On the other hand it is suggested that the bird heads refer to ancient Germanic values in that they are Odin's eagles. In Werner's view this multiplication of symbols (both Christian and non-Christian) was intended to enhance their protective powers.

The purse of Vrijthof grave 166 belongs to a grave goods assemblage of a woman, as the other objects from this grave, a necklace of beads and a garnet disc brooch, indicate. The only object that can be interpreted as the contents of this purse is a bronze ring with a bronze 'key' attached to it. It was found at the same location as the purse, near the lower left arm. This location does not correspond with the position (the upper left leg) where purses are generally found. This could be a consequence of some movement of the objects during burial or afterwards. The purse might also have been buried with the deceased holding it, or it was 'hanging down' from the shoulder.

A nearly similar purse was found in *Niederzier, Kr. Düren* (Germany).¹³⁷⁸ This purse was also recognised as such during the excavation of the grave and consequently lifted as a block after which it was analysed in a laboratory. The actual size of this purse was 12 by 12 cm, and the locations of the various mounts on the purse could be established. These fittings are considered to represent the front flap of the purse. Like for the purse from the Vrijthof, four of these fittings show a triangular shape, two of them are bird-shaped and one of them, located on the middle of the purse, is round. The bird-shaped fittings, however, are somewhat different in shape than those of the Vrijthof purse, as is the plate of the plate buckle. The Vrijthof plate buckle is rounded whereas the plate buckle from Niederzier is triangular. All the Niederzier mounts show the same dot-in-circle decoration as those of the Vrijthof purse. From the specimen from Niederzier one mount is identified as a corner mount of the purse behind the flap (the other one is missing). A round leather button is identified as the fastener of the purse flap. No button or other corner mounts were found with in the Vrijthof grave.

The purse from Niederzier was found at the left lower leg. This raised questions about how the purse was related to the body during burial.¹³⁷⁹ Becker and Paffgen refer to grave 41a in Ingelheim where a similar purse is considered to have been hanging down from the shoulder.¹³⁸⁰ For the purse from Niederzier it is thought to have been hanging down with a leather strap from the belt.

¹³⁷⁷ See Werner 1950, 55-56.

¹³⁷⁸ Becker/Paffgen 1993.

¹³⁷⁹ Becker/Paffgen 1993, 173.

¹³⁸⁰ Zeller 1990, 309-312, Tafel 13 and 17.

The purse from Niederzier is placed within a group of women's purses of the later seventh century, first described by Werner in connection with the *fürstengrab* from Wittislingen.¹³⁸¹ Although rectangular purses such as those of the Vrijthof cemetery are considered a single group, the variety in decoration with metal fittings is considerable as Werner already demonstrated. The almost identical ornamentation of the Maastricht and Niederzier examples is remarkable. Similar purses were mainly found in Belgium, northern France and the Rhine valley north of Mainz.¹³⁸² They are not known from Siegmund's research area. Legoux, Périn, and Vallet classified similar purses as type 361 and date them in their phases MR1-MR2 (600/10-660/70).¹³⁸³

Purses: buckles (rectangular)

Vrijthof: 96 (1528-1); 201 (1501-1); 210 (1744-1); 259 (1834-1); 205 (1654-3); 0 (1618-2).

Appendix 1: Figure 45.

Six bronze rectangular buckles that can be associated with purses were found in the Vrijthof cemetery. They could have served as the fastener of the purse or could have attached the purse to a leather strap. These buckles have approximately the same size, of which an average strap width of 1 cm can be deduced. The preserved tongues (3x) are of iron and are of a 'simple' shape. Four of the six buckles show a faceted rim, just one shows some decoration.

All six buckles are identified as components of purses, although traces or remains of leather or textile are absent. Their identification as purse fittings is mainly based on their relation to the body. All the buckles were found at the position of the pelvis, and the size of these buckles is too small for them to have functioned as fastener of a waist belt. The location at the pelvis indicates that the purse was either attached to the belt or that it was attached to a strap that was wrapped around the shoulder at the moment of deposition. Moreover, the associated finds with some of the buckles are generally identified as purse contents. Similar buckles can be placed in Siegmund's typological group Sna. 1.1.¹³⁸⁴ The buckles of this group are described as little bronze rectangular buckles without additional elements and are considered to belong to a purse or strap attached to the waist belt. They date in Rhineland phase 5 (555-570). Within the category of rectangular buckles, Legoux, Périn and Vallet make a distinction between buckles with flat loops and those with faceted loops, a distinction not made by Siegmund. This morphological element does not have any chronological significance because both type 124 and 125 date in their phases MA1-MR1 (470/80-630/40).¹³⁸⁵ Legoux, Périn and Vallet do not refer to their association with purses.

Purses: plate buckles

Vrijthof: 48 (1590-1); 110 (1628-7, 8); 230 (1767-1); 293 (1702-1); 0 (1175-1).

Appendix 1: Figure 45.

Five plate buckles from the Vrijthof cemetery can be identified as components of purses. Again the position in relation to the body and the associated purse contents are regarded valid evidence for their identification as such. As with the simple buckles, however, no leather or textile remains were found to substantiate this conclusion.

The specimen from Vrijthof grave 230 shows a rounded fixed plate with some punched in decoration of little triangles and dots. This plate buckle was found at the location of the upper left leg. It was associated with some typical contents of a purse, namely two pieces of flint, a shear, a key, a latch lifter key, a decorative disc of antler and a comb.

¹³⁸¹ Werner 1950, 52-57, Tafel 12.

¹³⁸² Becker/Päffgen 1993, 49.

¹³⁸³ Legoux/Périn/Vallet 2004, 19, 41, 54 (type 361).

¹³⁸⁴ Siegmund 1998, 40.

¹³⁸⁵ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 124 and 125).

The Vrijthof plate buckle with round plate 1175-1 (without context) is undecorated. It is identified as the fastener of a purse, although it very well could have been part of the leg wear if it was originally part of a pair.

These plate buckles are not known from the lower Rhineland. Legoux, Périn and Vallet describe a type of plate buckle that resembles the Vrijthof specimens, but they define the examples of this type exclusively as shoe buckles.¹³⁸⁶ These date in their phases MA3-MR1 (560/70-630/40).

A plate buckle with a fixed triangular plate is known from Vrijthof grave 293. This plate buckle resembles type 130 in the typology of Legoux, Périn and Vallet, although they defined this type also exclusively as a shoe buckle.¹³⁸⁷ The position in the grave of this plate buckle, at the pelvis, indicates that an identification as a purse component is more likely. This buckle is probably too small to have functioned as the fastener of a waist belt. This plate buckle can be ascribed to Siegmund's Sna. 2.2, although the examples of this type are interpreted as elements of the leg wear (*Wadenbindengarnitur*). These plates buckles are, according to Siegmund, generally found in graves of women, whereas the plate buckle from Vrijthof grave 293 belongs to a grave goods assemblage of a man. Siegmund dates these plate buckles in Rhineland phases 7-8 (585-640) although they can already be found in phase 5 (555-570), although only sporadically.¹³⁸⁸ Legoux, Périn and Vallet date these plate buckles to their phase MA2-MR1 (520/30-630/40).¹³⁸⁹

Of the plates of the other two plate buckles only some remains are present. The loop of the plate buckle from Vrijthof grave 110 is ribbed; a feature that can be observed on the buckles that are identified as type 120 in the typology of Legoux, Périn and Vallet.¹³⁹⁰ The Vrijthof plate buckle is much smaller and can on the basis of the location at the upper left leg and the associated finds (mainly various iron and bronze rings) be identified as an element of a purse. Siegmund distinguished just one category of small bronze buckles with plate (Sna 2.2), but identified them as fittings of leg wear. It is possible to identify the plate buckle from Vrijthof grave 48 as such too, because the location at which it was found is near the left knee of the deceased. This find, however, does not have a counterpart on the other leg and is for now identified as an element of a purse. The plate buckles from Vrijthof graves 110 and 48 are difficult to classify on the basis of existing typologies. A date in the second half of the sixth century and first half of the seventh century seems plausible. Further research on the function and date of small buckles and plate buckles is required for the Merovingian period.

Purses: strap ends

Vrijthof: 86 (1389).

Appendix 1: Figure 45.

Three strap ends from the Vrijthof cemetery are identified as components of purses. The purse from Vrijthof grave 166 provides us with an example for the position of a strap end in relation to the purse (see above). The strap end from Vrijthof grave 110 was found with a plate buckle (see above), the strap end from Vrijthof grave 86 was found on the pelvis without any other metal purse mounts. It belonged to a strap with a width of approximately 2 cm. It can be assumed that this strap end is too small for a waist belt (a belt with a reconstructed width of approximately 5 cm was deposited in this grave) what makes its identification as an element of a purse more likely. This grave contained an elaborate belt with iron mounts, a seax and rivets that can be associated with the seax scabbard. An identification of this strap end as part of a strap that attached the seax with scabbard to the waist belt is also an option, but its separate location from the seax indicates otherwise.

¹³⁸⁶ Legoux, Périn, Vallet 2004, 16, 30, 53 (type 131).

¹³⁸⁷ Legoux/Périn/Vallet 2004, 16.

¹³⁸⁸ Siegmund 1998, 40.

¹³⁸⁹ Legoux/Périn/Vallet 2004, 16, 30, 53 (type 130).

¹³⁹⁰ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 120). This type dates to phase MA3 (560/70-600/10).

It is difficult to classify or date strap ends without any additional information. Siegmund and the Franken AG only mention them in relation to other belt- or strap fittings. Legoux, Périn, and Vallet, however, classified simple strap ends as type 199 and date them in their phases MA1-MR1 (470/80-630/40).¹³⁹¹

Jewels and jewels in a setting

Pandhof: 10021 (90-18, 19, 20, 21, 22, 23, 24); 19999 (584-3, 4).

Appendix 1: Figure 46.

Next to the 16 *denarii* which were reused as pendants and a gold or silver finger ring (now lost) this Pandhof tuff sarcophagus contained seven jewels of which three are mounted in a silver setting. The documentation in the Pandhof-archive, however, also refers to a find of a string of predominantly amber beads (62 beads), three blue beads of a stretched biconical shape, and two gold-in-glass beads, and some fragments of green beads. This string is now lost. The drawing of two of the amber beads point out that they resemble the rounded amber beads from Pandhof grave 11321 (418-10), which dates to Maastricht phases C-E (460/80-580/90), and that the three blue beads resemble the beads from Pandhof grave 10799 (128-5), which dates in Maastricht phases C-F (460/80-610/20). This grave can, on the basis of these beads, be identified as that of a woman. The string and the tuff sarcophagus are indications that it was not a burial in the time that the coins were minted, or just thereafter. It is of a later date. The two silver settings with a jewel (probably garnet) with find number 584 were also found in a sarcophagus (in which a child was buried). The other finds are a silver ring in which a Roman gem was set, and fragments of a bronze pin.

Two jewels from Pandhof tuff sarcophagus 10021 are oval and domed, one is transparent violet (90-22), and the other has a pale light red colour (90-23). The third jewel is slightly larger and is of a round plano-convex shape and transparent light red (90-24). The fourth jewel is round and domed and is yellowish/orange, not transparent (90-21).

A plano convex garnet in a round silver setting was described by Quast.¹³⁹² It can be assumed that the three stones/jewels from Maastricht were originally fixed in a setting, or that they were meant to be fixed as such. Probably the massif fourth yellowish/orange jewel was also supposed to be fixed in a silver setting, but for this specific stone no parallels were found. Another option is that the jewels were supposed to be applied to another object, such as for example a plate buckle.

A jewel of another appearance is the large oval domed carneol which is fixed in a silver setting. The setting is a band around the base of the carneol with triangles pointing upwards which in fact fixate the stone. No parallels for this particular shape in a silver setting are known to me, but it is known that carneol was a material often used in Roman jewellery. For now it remains uncertain whether the ensemble should be dated in the (late) Roman period, or whether the stone is a reused specimen in a later fabricated setting, which, however, was constructed to fit this particular stone.

The second setting is shaped as a drop; it is of gilded silver, has a upward standing rim in which a drop shaped stone (it is difficult to decide whether it is a carneol or garnet, although garnet seems unlikely compared to for example the garnet disc brooches from the Pandhof) stone is fixed. In the middle of the stone a circle of gold is applied (this technique is referred to as 'plate-inlaying' by Ament, because it does not resemble the usual way garnets were worked).¹³⁹³ Similar objects are known as decorative elements of various objects but mainly of plate buckles.¹³⁹⁴ A good example is a plate buckle from Criel (Dép. Seine-Maritime) of which on the plate four drop shaped silver settings with garnet with a gold

¹³⁹¹ Legoux/Périn/Vallet 2004, 17, 34, 53 (type 199).

¹³⁹² Quast 1993, 29.

¹³⁹³ Quast 1993, 86, with a reference to Ament.

¹³⁹⁴ Quast 1993, 55.

circle in the middle are applied.¹³⁹⁵ Quast refers to this plate buckle (after Ament) as type Komorn-Gültlingen-Bingen. A number of the plate buckle of this type could be dated on the basis of their associated finds, and a date in the fifth century applies to all of them.¹³⁹⁶

The third setting from Pandhof grave 10021 (90-18) is of gilded silver. It is round with a carved, standing rim in which the flat round violet stone or garnet is mounted; again it is difficult to decide whether it falls inside the tradition of garnet jewellery as it is known from the Merovingian period. On the back, in the middle of the ground plate, the remnants of a nail can be observed. The jewel could have been attached to a ring which was worn as finger ring. The two silver settings with jewel, find number 584 (context unknown, although it is registered that these finds are, together with a finger ring with Roman gemstone, from a sarcophagus) resemble the jewel from Pandhof grave 10021 but are slightly smaller and are not gilded. For these two specimens also it was difficult to decide whether the stones were garnets. It was mentioned in the documentation that this grave was one of a child (milk teeth were found).

A comparable specimen was found in the cemetery of Gültlingen.¹³⁹⁷ Different interpretations were suggested, of which the bezels of a finger ring was one. Schulze-Dörlamm identified a small round bronze setting with a round garnet as belt stud, as she also proposed for the a drop shaped garnet in a silver setting.¹³⁹⁸ This setting has a nail on the back side of the ground plate of which it can be assumed that it served to fix it to the belt. The Pandhof specimens also have some remnants of a nail on their backsides.

Quast also mentions a garnet in a round silver setting as a find from Gültlingen. Quast noticed that Werner identified it as the knob of a sword bead and that Lindenschmitt identified it as a finger ring. Two other round silver casings, these with flat garnets, are known from Buchen, Gültlingen. They are identified as belts studs that belong to a belt which was fastened by a *Meerschaumschnalle*.¹³⁹⁹ Such objects are dated in the Flonheim-Gültlingen phase (end of the fifth century, beginning of the sixth).

Regarding the (gilded) silver settings with garnets/jewels, several options of their function are suggested, and a final solution can not be offered here. It can, with considerably certainty, be suggested that they were deposited in the sarcophagus of a woman regarding grave number 10021, and in the sarcophagus of a child regarding the two other settings with find number 584 (context 10044). It is remarkable that both these burials were in a sarcophagus. The remaining four stones/jewels from grave 10021 which were not fixed in a setting were maybe designed to be transformed into such ensembles. Considering the remarks on the lost beads from this grave and the references to similar finds it seems plausible to date these jewels in the second half of the fifth or beginning of the sixth century. For the carneol this is difficult to decide, since parallels were not available, but a date in the same phase, around the end of the fifth century, is proposed.

Beads

The strings of beads from the Vrijthof and Pandhof cemeteries are dated on the basis of the typochronological classification of their individual beads (see the next sections). The majority of the beads consist of glass and amber beads; the beads of other natural stones (amethyst and rock-crystal) and of precious metal (gold or silver) are less frequent in number. It is generally accepted that the colour,

¹³⁹⁵ Quast 1993, 85, Abb. 50,c.

¹³⁹⁶ Quast 1993, 86.

¹³⁹⁷ Quast 1993, 29, Abb. 12.

¹³⁹⁸ Schulze-Dörlamm 1990, 263, Taf. 77,10,12.

¹³⁹⁹ Quast 1993, 55.

shape and decoration of the glass beads are the best chronological indicators; the beads of natural stone can be polished and/or cut in specific shapes but the chronological significance of these features is not firmly established.

Different shades of the same basic colour can be observed in the group of glass beads, which is particularly a result of production processes, but which was also influenced by post-depositional processes. Beads can sometimes be corroded to such an extent that the original colour is hard to distinguish. Here, only the basic colours black, white, blue, green, red, orange/ochre and yellow are used as typological criteria; a classification of all colour nuances would be unworkable and does not represent the complete pallet of original nuances.¹⁴⁰⁰

The typological works of glass beads have focussed mainly on the decorated beads, despite the fact that the majority of glass beads were not decorated. Moreover, decorated beads were only deposited in considerable quantities in a limited number of phases, while undecorated beads are specific for the remaining phases.¹⁴⁰¹ Numerous typo-chronologies of beads are available of which some are indispensable for the classification of certain groups of Merovingian beads. Substantial and elaborate studies on the typology and chronology of beads were published, and an interesting historiography of this specific field of research is offered by Sasse and Theune.¹⁴⁰² The typo-chronologies of Koch (the beads from the cemeteries of Schretzheim and Pleidelsheim) and Siegmund (the lower Rhine area) will be the starting point for the analysis of the Vrijthof and Pandhof beads with decoration. The undecorated beads will be classified according to Siegmund's typology. The Franken AG maintained this typology except for some alterations in the dating of the beads, which will be followed for the analysis of the Maastricht beads. Supplementary information can hardly be obtained from the work of Legoux, Périn and Vallet.¹⁴⁰³ Their typo-chronology is difficult to apply because the single beads that are characteristic for one of the four combination groups are only depicted; their features were not described. It can be questioned whether these examples provide sufficient information for the classification of the variety of beads from Maastricht and whether the typology will offer extra insights.

Siegmund and the Franken AG placed the beads in combination groups, which are created on the basis of the result of a seriation of all the beads-types identified.¹⁴⁰⁴ These combination groups are better datable than the individual bead types that can have extended circulation periods. A seriation was not performed on the beads from Maastricht; the dating of the beads and strings relies on other typo-chronologies and a thorough analysis of the typo-chronological development of the beads and strings of beads from the Meuse region around Maastricht is a subject for further research. The researchers of the Franken AG mentioned that the enormous amount of beads originating from their research area made it impossible, within the limited research time available, to create an independent typology. The beads were therefore classified according to Siegmund's typology and processed as such in a seriation. Adjustments, however, were made in Siegmund's scheme of combination groups (Table 34). The Franken AG identified five combination groups as a result of their seriation, whereas Siegmund identified nine groups.¹⁴⁰⁵ The boundaries of these combination groups were drawn on the basis of the substantial appearance of new types and/or disappearance of other types of beads.¹⁴⁰⁶ The Franken AG concluded that of their five groups the groups I, II and V could be identified rather unambiguously; the boundaries of groups III and IV were less obvious and remain questionable. It was in these groups, however, that the majority of the strings were placed. The Franken AG concluded that strong chronological indications for the refined division of nine chronological groups of Siegmund were not found. As a consequence, the Franken AG identified phases in which the beads of the combination groups II, III and IV occur either

⁹⁶⁵ This is a general applied typological procedure for the classification of beads (see for example Siegmund (1998, 57-62) and Koch (1977).

⁹⁶⁶ Siegmund 1998, 57.

¹⁴⁰² Sasse/Theune 1997.

¹⁴⁰³ Legoux/Périn/Vallet 2004, type 374-377, 19, 42-43.

¹⁴⁰⁴ Siegmund 1998, 58.

¹⁴⁰⁵ Müssemeier *et al.* 2003, 25-39; Siegmund 1998, 57-61.

¹⁴⁰⁶ Müssemeier *et al.* 2003, 36.

sporadically or predominantly (predominantly is indicated in bold characters in table 34). As a consequence, the date-ranges of these three groups show a considerable overlap.

Siegmund 1998			Franken AG 2003		
Combination group	Phase	Date	Combination group	Phase	Date
Group A	Late roman/ 3-4	(late Roman/485-555)	Group I	3	(460/80-510/25)
Group B	2	(440-485)	Group II	2-5	(400-580/90)
Group C	3-early 4	(485-555)		3-4	(460/80-565)
Group D	Late 4-6	(530-585)		3-5	(460/80-580/90)
Group E	4-6	(530-585)	Group III	4-5	(510/25-580/90)
Group F	6-7 early 8	(570-610/20)		5-8	(565-670/80)
Group G	7- early 8	(585-640)		6-7	(580/90-640/50)
Group H	Late 8-9	(610-670)	Group IV		
Group I	9-10	(640-705)			
			Group V	8-9/10	(640/50-750)

Table 34: Combination groups of beads and their dating by Siegmund and the Franken AG.

It would be interesting to discover which combination groups can be found in the collection of beads from Maastricht and how they compare to the results of Siegmund and the Franken AG. The huge amount of beads, and therefore the excessive amount of time this exercise would take, leaves this a topic for future research.¹⁴⁰⁷ Moreover, the research of the Franken AG seems to indicate that an extremely detailed description and analysis of beads does not seem to produce detailed chronological insights. It is for this reason that it is decided to publish the beads in such a way as to allow other researchers to use the Maastricht evidence in full detail. For now the typo-chronologies of Siegmund, the Franken AG and Koch are used as tools to classify and date the beads and strings of beads of the Vrijthof and Pandhof cemeteries. First the individual beads will be classified and dated; the results are the basis for the dating of the strings as ensembles of beads (see the next sections).

Amber beads

Vrijthof: 68 (1149-10: 3x); 85 (1418-2: 1x); 95 (1482-2: 1x); 110 (1624-25: 1x); 166 (1539-2: 10x); 178 (1516-1: 3x); 187 (1636-6: 3x); 187 (1637-5: 14x; 1: 1x); 187 (1640-2: 1x); 247 (1752-4: 2x, 7: 1x); 258 (1831-2: 17x); 274 (1792-3: 10x); 277 (1807-3: 15x); 314(1172-6: 1x). Pandhof: 10042 (60-10: 1x); 10068 (93-4: 1x); 10100 (59-14: 1x); 10122 (73-2: 9x); 10168 (520-11: 1x); 10365 (562-7: 26x); 10510 (448-3: 1x); 10514 (454-7: 20x); 10796 (142-12: 1x); 11321 (418-10: 33x; 18: 43x) 19999 (428-4: 1x); 10227 (321-2: 40x); 11252 (365-1: 36x; 365-2: 4x).

Most of the amber beads are irregular or almond/drop shaped, especially those from the Vrijthof cemetery. It appears that the majority of the amber beads from the Pandhof are smaller and more carefully shaped than those of the Vrijthof. The Pandhof beads are for example globular (Pandhof grave 11321 and 10365, biconical (strings 321 and 365, context unknown) and disc-shaped (Pandhof grave 10514). The bead from Vrijthof grave 247 (Appendix 1: Figure 63) is remarkable because of its long broad cylindrical shape and grooves along the edges.

Amber beads were used in strings throughout the Merovingian period. They form the majority in strings of Siegmund's combination groups C and D (485-585). The Franken AG only mention amber beads as

¹⁴⁰⁷ A new simplified scheme to classify the undecorated beads is developed for the analysis of the beads from several cemeteries that are studied in the Anastasis-project (research-term 2010-2013, Amsterdam Archaeological Centre) but was not available yet for the typo-chronological analysis of the Vrijthof and Pandhof beads.

characteristic for their combination groups II (predominantly phase 3-4: 460/80-565) and III (phase 3-5: 460/80-580/90) when they form more than 20% of a string.¹⁴⁰⁸ Both Siegmund and the Franken AG do not define amber beads as a type and do not consider the various forms of these beads.

The Vrijthof and Pandhof strings which consist of a majority of amber beads can be dated according to Siegmund and the Franken AG. The beads which occur less frequent in strings are difficult to date precisely. Typo-chronologies for the classification of amber beads of various shapes are not available. According to Christlein small amber beads date from the early Merovingian period (*Schicht 1*: 550-570/80).¹⁴⁰⁹ This was also observed by Koch.¹⁴¹⁰ It seems that this is in accordance with the finds from the Pandhof cemetery.

Amethyst beads

Vrijthof: 48 (1587-1: 9x); 85 (1418-3: 2x); 110 (1624-18: 2x); 285 (1819-3: 1x); 315 (1151-1: 14x). Pandhof: 10042 (60-8: 13x); 10074 (27-19: 2x); 10856 (172-1: 6x); 19999 (428-2: 1x).

The amethyst beads from the cemeteries Vrijthof and Pandhof either make up an entire string or form the majority in two strings from the Vrijthof cemetery and three strings from the Pandhof cemetery. The other amethysts beads where part of strings that consisted of various beads. Relatively high numbers of beads are known from both the cemeteries, regarding the number of only five amethyst beads that are known from Siegmund's research area.¹⁴¹¹ Most of the beads are relatively large and almond shaped, a minority is small. With regard to the number of beads it was mentioned by Koch that the highest number of amethyst beads in strings appear in *Stufe 3* (565-590/600) of Schretzheim, in *Stufe 4* (590/600-620/30) this number has diminished.¹⁴¹² The highest number of amethyst beads in strings from this cemetery is six beads, what makes the number of four strings from Maastricht with six or more than six beads remarkable. The chronological significance of the number of beads in a single string cannot clearly be observed for the Vrijthof and Pandhof strings.

Christlein noticed that strings with amethyst beads were regularly associated with gold filigree pendants.¹⁴¹³ Although five such pendants are known from Maastricht, only one is associated with a string of beads that consists, among other beads, of two small amethysts beads. Amethyst beads, because of their frequent association with gold filigree pendants, their rare occurrence and the fact that it is clearly an imported object from far away, can be interpreted as exclusive grave goods in our region. The Franken AG maintained Siegmund's type Per 5.2 and considered the amethysts beads to be especially characteristic for combination group IV which dates in their phases 5-8 (565-670/80).¹⁴¹⁴ Koch also shares the general belief that amethysts beads appear in the second half of the sixth century, which is supported by the evidence of the cemetery of Schretzheim.¹⁴¹⁵

Rock-crystal beads

Vrijthof: 308 (1737-2: 1x). Pandhof: 10061 (48-4: 1x); 10365 (562-6: 1x); 10227 (321-4: 1x).

Rock-crystal beads are a rare phenomenon in the Vrijthof and Pandhof cemeteries and never appear more than once in a string of beads. The specimen from Vrijthof grave 308 was found as a singular bead. It is a large biconical bead of turbid rock-crystal. The rock-crystal beads from the Pandhof are all small and belong (grave 10365 and string 321, context unknown) to strings of predominantly amber beads and (grave 10061) to a string with predominantly white and red opaque beads with decoration.

In the Rhineland they belong to combination group C (mainly late fifth, first half of the sixth century) which coincides with the presence of the beads from the Vrijthof and Pandhof in strings that

¹⁴⁰⁸ Müssemeier *et al.* 2003, 37.

¹⁴⁰⁹ Christlein 1966,

¹⁴¹⁰ Koch 2001, 162, *Kombinationsgruppe A*.

¹⁴¹¹ Siegmund 1998, 77.

¹⁴¹² Koch 1977, 72.

¹⁴¹³ Christlein 1966, 74.

¹⁴¹⁴ Siegmund 1998, 77; Müssemeier *et al.* 2003, 38.

¹⁴¹⁵ Koch 1977, 72.

predominantly exist of amber beads. Siegmund mentions that rock-crystal beads can occur elsewhere over a much longer time-span.¹⁴¹⁶ The Franken AG did not identify rock-crystal beads as a type.

Millefiori beads (leaf type)

Vrijthof: 68 (1149-2: 2x); 95 (1482-2: 5x); 187 (1637-2: 1x); 314 (1173-2: 3x); Pandhof: 10118 (42-3: 12x); 10407 (581-3: 4x; 18: fragments).

Except for one, the twenty-seven *millefiori* beads from the Vrijthof and Pandhof cemeteries all have more or less the same shape but have various decoration patterns and are either of a blue or red base colour. The decoration patterns of nearly all the beads are vague and difficult to describe in detail. It can be concluded, however, that all the beads are so-called *Millefiori* beads of the leaf type. They are characterised by floral decoration motifs. All the beads are globular or slightly biconical, except for the bead from Vrijthof grave 187, which is a relatively large, short cylindrical, bead. Apart from the twenty-seven *millefiori* beads some fragments of such beads were recovered from Pandhof grave 10407. Koch provided us with a detailed typology of *millefiori* beads.¹⁴¹⁷

The two beads from Vrijthof grave 68 both have two red opaque border bands. The *millefiori* pattern in between has a blue colour, the specific details cannot be observed anymore. It is difficult to classify these beads more precisely than to the group of globular beads with red border bands, of which some seem to have a middle field which is completely blue (except for the decoration motifs), such as for example Koch type M33.

The five beads from Vrijthof grave 95 are all globular. Three have red opaque border bands, but various decoration patterns. One of the beads resembles Koch type M27, another type M25 and the last one type M52. The two other beads are blue with some vague red and white motifs. These cannot be classified more precisely than to the group without red opaque border bands (Koch types M1-M17).

The short cylindrical bead from Vrijthof grave 187 is of blue opaque glass of which the decoration became vague. The only option for this bead is Koch type M56.

Two beads from Vrijthof grave 314 are much alike. They both have two red opaque border bands and a centre of blue fields with a yellow or white leaf-motif and fields which are of another colour but very vague. The two beads can be classified as Koch type M21 or M22. The other bead from Vrijthof grave 314 has blue opaque fields on which the decoration is clearly visible and blue opaque fields on which the decoration is vague. It can be classified as Koch type M 9 or M11.

The twelve beads from Pandhof grave 10118 are considerably weathered, their decoration is difficult to identify in detail. Red opaque border bands can be observed on four of these beads. Some details of the beads can be compared to the typology of Koch, but on the basis of this information alone a precise classification can not be reached and will be refrained from for now.

The four beads from Pandhof grave 10407 have the best identifiable decoration patterns. All four have red opaque border bands. Two beads resemble type M27 of Koch, one bead resembles type M22, and one resembles type M36. All these beads date in *Stufe* 3 (565-590/600) of Schretzheim on the basis of which it can be questioned what the chronological significance of such a detailed typology is.

Siegmund only distinguished three shapes of beads in the group of *millefiori* beads: the short cylindrical beads (Per 2.12), the globular beads (Per 2.13) and the long faceted beads with six sides (Per 2.14).¹⁴¹⁸ He mentions that the globular beads were a long used type and that they are difficult to assign to a specific chronological phase. The short cylindrical beads, such as the one from Vrijthof grave 187, are regarded as typical for his combination group C and D (485-585), as are the long six sided beads. The Franken AG consider only these long faceted beads as a chronological significant type.¹⁴¹⁹

¹⁴¹⁶ Siegmund 1998, 76-77.

¹⁴¹⁷ Koch 1977, 215-218, Farbtafel 6; Koch 2001, Frabtafel 8.

¹⁴¹⁸ Siegmund 1998, 67.

¹⁴¹⁹ Müssemeier *et al.* 2003, 37.

Another recent study, of Volkmann and Theune, is primarily concerned with leaf type *millefiori* beads.¹⁴²⁰ This article deals with the research history of such beads, their exchange (trade) and the explanation of certain distribution patterns, next to some typo-chronological remarks. A classification scheme is proposed, on the basis of which the beads can be described uniformly.¹⁴²¹ A nice overview of the appearance of the various types per *Stufe* in south-western Germany is presented, which demonstrates the chronological significance of Koch's typology. The cemetery of Schretzheim, on which Koch's typo-chronology was based, provided a number of 197 beads which is the highest find concentration known so far. Volkmann and Theune mention also that a number of five or more *millefiori* beads in 16 graves in Schretzheim is an exceptional number, of which especially Schretzheim grave 553 with 12 specimens stands out.¹⁴²² The number of 12 *millefiori* beads that were found in Pandhof grave 10118 should with regard to this remark be considered remarkable, as should the number of more than four beads (next to the complete beads numerous fragments remain) from Pandhof grave 10407 and Vrijthof grave 95. The millefiori beads of the Vrijthof and Pandhof show a variety of colours and patterns, and were, except for the ones of which the decoration pattern became vague, classified according to Koch's refined arrangement of beads. However, no discussion exists on the chronological significance of the individual types. Koch observed that *millefiori* beads are not known from graves of *Stufe* 1 in Schretzheim. They were found in a few graves of *Stufe* 2, and strings with five or more millefiori beads were found mainly in the graves of *Stufe* 3 and 4 (565-620/30). Millefiori beads are not a characteristic feature in *Stufe* 5; the ones found in graves of this *Stufe* were, according to Koch, survivals in a younger string of beads. The typo-chronological development of leaf type *millefiori* beads in Southern Germany, mainly on the basis of the finds from the cemetery of Schretzheim, was also discussed by Volkmann and Theune.¹⁴²³ From their analysis it follows that the types such as identified for the Vrijthof and Pandhof mainly date in *Stufe* 3 of Schretzheim. The beads identified as type 56 (Vrijthof grave 187) and 25 (Vrijthof grave 95) date in *Stufe* 2, and the bead identified as type 52 (Vrijthof grave 95) in the second half of *Stufe* 4. The discrepancy in date between the two beads from Vrijthof grave 95 is remarkable and could mean either that the typo-chronology of Volkmann and Theune does not apply to other regions or that one of the *millefiori* beads from Vrijthof grave 95 is a reused specimen.

***Retticella* beads**

Vrijthof: 187 (1637-3: 1x); 258 (1831-8: 1x). Pandhof: 10365 (562-5: 2x).

The four *retticella* beads from the Vrijthof and Pandhof cemeteries are large specimens of a short cylindrical shape. The bead from Vrijthof grave 187 and one from Pandhof grave 10365 are alike, the two other beads have different colours and patterns.

Siegmund classified all the *retticella* beads from his research area as a single type (type Per 2.11).¹⁴²⁴ Koch on the other hand identified various types on the basis of their shape, colour and decoration pattern. The two resembling beads from Vrijthof grave 187 and Pandhof grave 10365 can be classified as Koch type 48,14.¹⁴²⁵ The other two beads do not match one of Koch's types exactly.

Koch dated the short cylindrical *retticella* beads, regardless of their colour and pattern, in *Stufen* 2-3 (545/50-590/600) of the cemetery of Schretzheim. Siegmund placed the *retticella* beads in combination group D (phases 4-6: 530-585). The Franken AG maintained this type and placed these beads in combination groups II and III, which dates in their phases 2-5 (400-580/90, although predominantly in phases 3-5 (460/80-580/90)).¹⁴²⁶

¹⁴²⁰ Volkmann/Theune 2001.

¹⁴²¹ Volkmann/Theune 2001, 548, Tab. 4.

¹⁴²² Volkmann/Theune 2001, 540-542.

¹⁴²³ Volkmann/Theune 2001, 531-534, Abb.4-5.

¹⁴²⁴ Siegmund 1998, 66-67.

¹⁴²⁵ Koch 1977, Teil 1, 211; Teil 2, Farbtafel 4.

¹⁴²⁶ Müssemeier *et al.* 2003, 37.

Beads of gold

Pandhof: 10102 (23-2: 1x); 11321 (418-20: 2x).

Three small beads from the Pandhof cemetery are constructed of gold thread into a biconical shape. The gold bead from Pandhof grave 10102 was found with four other beads and a silver buckle. It is uncertain whether these beads originally formed a string with other beads.

The two gold beads from Pandhof grave 11321 are similar to the bead from Pandhof grave 10102. They are thread on a string which predominantly consists of globular amber beads. This string was found in what can be called (on the basis of various silver and gold jewels) one of the 'richest' graves of the Pandhof cemetery. The finds from this grave date mainly in the first half of the sixth century.

A number of four resembling gold beads are known from the famous grave of a woman in the cathedral of Cologne (530/40).¹⁴²⁷ The presence of three beads of gold thread in the Pandhof cemetery, and especially the presence of two such beads in grave 11321, is remarkable since they are scarcely found in graves of women in the Merovingian period. Beads of gold thread are not identified by Siegmund, nor are they by Legoux, Périn and Vallet. It seems plausible to date these beads according to the finds from Cologne in the first half of the sixth century.

Metal-in-glass beads (silver and gold foiled beads)

Gold-in-glass

Pandhof: 10252 (333-4: 1x); 10799 (128-12:11x; 128-8:6x; 128-4:10x; 128-9: 4x); 10252 (333-4: 1x); 11321 (418-23: 2x).

Silver-in-glass

Vrijthof: 48 (1587-10: 1x); 68 (1149-4: 7x); 178 (1516-5: 2x); 187 (1636-5: 6x; 1637-6: 34x).

Silver-in-glass beads are only known from the Vrijthof cemetery, the gold-in-glass beads only from the Pandhof cemetery.¹⁴²⁸ The beads have a cylindrical segmented or a compressed globular shape, except for four beads from Pandhof grave 10799 (128-9), which are formed by two segments which expand in a club shaped extension. These four beads date in the fifth century.¹⁴²⁹

It appears that the gold-in-glass beads from the Pandhof are somewhat larger and of a better quality than the silver-in glass-beads from the Vrijthof. The majority of the silver-in-glass beads are in a bad condition: the outer glass layer is weathered and the silver foil has disappeared or is difficult to identify. In these cases the beads can easily be confused with the transparent segmented white beads (without metal foil), which are common finds in graves of the Merovingian period. The identification of some of the Vrijthof beads as either silver-in-glass beads or segmented white beads remains therefore questionable.

The metal-in-glass beads from Kaupang (Norway) have been object of scientific research.¹⁴³⁰ It was concluded that a layer of metal foil was wrapped around a core of glass and subsequently covered with transparent glass, and that the layer of metal foil consisted of silver for both the 'silver and gold' beads. The gold beads appeared as such by a cover of a yellow or amber coloured layer of transparent glass. Early medieval gold foiled beads, however, can have an actual gold foil layer.¹⁴³¹ The Vrijthof and Pandhof beads have not been subject to this kind of scientific research. It is for now assumed that actual gold foil layers are present in the beads with a golden appearance until demonstrated otherwise.

Siegmund dates the silver-in-glass (type 40.1) and gold-in-glass beads (type 40.2) as beads of combination groups C-E (485-585). The Franken AG combined the two types in their type Per40 which predominantly dates in their phases 3-4 (460/80-565).¹⁴³²

¹⁴²⁷ See for example Wieczorek *et al.* 215, Abb. 153 (Originally published in Doppelfeld 1960a, 89 ff; 1960b, 168 ff.)

¹⁴²⁸ The identification of some beads remains uncertain due to their bad condition. The predominance of the gold-in glass beads in the Pandhof cemetery as opposed to the Vrijthof cemetery can, however, assumed to be correct.

¹⁴²⁹ Périn/Legoux/Vallet (2004, type 374-6, 42) identified beads of this shape as characteristic for strings of type 1. They date in their phases PM-MA1 (440/50-520/30).

¹⁴³⁰ Astrup/Andersen 1988, 225-226.

¹⁴³¹ Hirst/Bliek 1981.

¹⁴³² Müssemeier *et al.* 2003, 37.

Black glass beads

(Table 35-36).

One hundred twelve black beads are known from seven strings of the Vrijthof and Pandhof cemeteries, of which hundred seven are undecorated opaque beads and five are large opaque beads with decoration. The black beads without decoration are all small and of a short cylindrical or compressed globular shape (table 35).

Small undecorated black beads are classified by Siegmund as Per 31.1; their shapes are not considered as a relevant variable.¹⁴³³ All the small beads from the Vrijthof and Pandhof are therefore classified as S-Per 31.1. According to the Franken AG, black beads, both decorated and undecorated and of different shapes, can especially be seen in strings of combination group II and less frequent in group III. Combination group II dates to their phases 2-5, but predominantly to phases 3-4 (460/80-565).¹⁴³⁴

Black: monochrome, opaque	Vrijthof	Pandhof	Total #	Siegmund	FAG
Cylinder, short	-	10068 (93-13: 32x) 10365 (562-16: 1x)	33	31.1 C-D	II-III
Compressed, globular	12 (1673-3: 1x) 95 (1478-1: 62x) 187(1637-15: 8x) 187 (1636-9: 1x)	10856 (172-2: 2x)	74	31.1 C-D	II-III
Total	72	35	107		

Table 35. The small black opaque beads of the Vrijthof and Pandhof cemeteries.

The following tables in this section all consist of 6 or 7 columns with the following content:

- 1: The colour and shape of the beads
- 2: Vrijthof: the grave (context) number, find number and number of the beads in the Vrijthof cemetery
- 3: Pandhof: the grave (context) number, find number and number of beads in the Pandhof cemetery
- 4: Total #: the total number of beads
- 5: Siegmund: Siegmund type and combination groups (for datings consult table 34)
- 6: FAG: Franken AG combination groups (for datings consult table 34)
- 7: Koch: Koch type and *Stufen* 1-5 (Schretzheim 1977) or PL. phases A-E (Pleidelsheim 2002). Only included for beads with decoration; for datings consult table 11).

The black opaque bead with decoration (1361-1) from the Vrijthof cemetery is a stray find. It is a relatively large bead with combed threads of white and red opaque glass (table 36).

The large black bead from Vrijthof grave 313 forms a string with small green beads. The bead is decorated with yellow combed (in one direction) threads (table 36).

Pandhof bead 430-4 is a stray find. The yellow and red threads are combed in two directions (table 36).

Pandhof bead 428-1 has a polychrome decoration of white crossed waves and yellow dots. It was found together with some small beads; their find context is not known (table 36).

Large black opaque beads with decoration are in detail described by Koch for the cemetery of Schretzheim and several of such beads are identified by Siegmund for the Lower Rhine Area. The exact decorations of the Vrijthof and Pandhof beads, however, were not identified in their research areas. The beads are classified as Siegmund's general type-group 31 of which types 3 to 5 are decorated black beads.¹⁴³⁵ Some comparable decoration patterns can be found in the typology of Koch, but is questionable if the Vrijthof and Pandhof beads, which have different shapes than the Koch types, can be dated on the basis of this characteristic alone.¹⁴³⁶

Black: polychrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Crossed waves with dots, polychrome Annular		19999 (428-1: 1x)	1	Group 31 (3-5) B	II-III	21,30 Stufen 3-4

¹⁴³³ Siegmund 1998, 67.

¹⁴³⁴ Müssemeier *et al.* 2003, 37.

¹⁴³⁵ Siegmund 1998, 67-68.

¹⁴³⁶ Koch 1977, Teil 1, 204-205, 211-213; Teil 2, Farbtafel 2, 5; Koch 2001, Farbtafel 4.

Combed bands monochrome Biconical	313 (1019-4 :1x)		1	Group 31 (3-5) B	II-III	Group 49 -
Combed bands polychrome Biconical		19999 (430-4: 1x)	1	Group 31 (3-5) B	II-III	50.6 2
Combed bands polychrome Compressed globular	0 (1361-1: 1x)		1	Group 31 (3-5) B	II-III	Group 50 -
Wave and bands monochrome Biconical		11252 (365-3: 1x)	1	Group 31 (3-5) B	II-III	Group 27 500-700
Total	2	3	5			

Table 36. The black opaque beads of the Vrijthof and Pandhof cemeteries.

Blue glass beads

(Table 37-40).

The Vrijthof and Pandhof cemeteries produced 282 blue beads, of which the transparent undecorated ones form the majority with 253 beads (table 37). The twenty-five blue opaque beads without decoration were part of eight strings (table 38). The string with six specimens from Vrijthof grave 166 contained the highest number; they are of a very light blue colour and have a compressed globular shape. Three similar beads are known from two strings that were found in Vrijthof grave 187: string 1637 has two of such beads, string 1636 one. Similar beads were not identified by Siegmund, and neither were they by the Franken AG. This is also the case for the blue opaque beads with a short cylindrical shape from Vrijthof graves 85, 100 and 247, and the globular ones from Vrijthof grave 48. The globular bead from Vrijthof grave 48 is of a darker blue and smaller than the bead from Pandhof grave 11342, which is a large globular bead with some textile remains on it. This Pandhof bead has the same surface structure and colour as the Roman melon beads from the Vrijthof and Pandhof and is, although ribs are absent on this bead, for now identified as such. Apart from the melon beads and faceted beads, all the blue opaque beads are classified as Siegmund's general type-group 37 (sub-types 1-2), which consists of various blue opaque beads.¹⁴³⁷ The beads of this group belong to combination groups F-I and are dated in Rhineland phases 6-10 (570-705). The correctness of this dating, however, remains questionable. Only the three opaque blue beads with five faceted sides from Vrijthof grave 258 are of a type also known from the lower Rhine area and are accordingly classified as type Per 1.3.¹⁴³⁸

Blue: monochrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG
Roman melon bead	0 (1024-1: 1x) 178 (1516-11: 1x) 95 (1482-6: 1x)	11321 (418-19: 1x) 11342 (466-9: 1x)	5	-	-
Compressed, globular	166 (1539-8: 6x) 187 (1637-9: 2x) 187 (1636-8: 1x)	11321 (418-27: 1x)	10	Group 37 (1-2) F-I	IV-V
Cylinder, short	85 (1418-8: 1x) 100 (1434-8: 4x) 247 (1752-3: 1x)	-	6	Group 37 (1-2) F-I	IV-V
Globular	48 (1587-4: 1x)	-	1	Group 37 (1-2) F-I	IV-V
Cylinder, 5 facets	258 (1831-6: 3x)	-	3	1.3 D-I	-
Total	22	3	25		

Table 37. The blue opaque beads of the Vrijthof and Pandhof cemeteries.

A number of 253 blue transparent beads of various shapes were found in the Vrijthof and Pandhof cemeteries (table 38). The highest amount, 66, can be counted in the string from Pandhof grave 11321.

¹⁴³⁷ Siegmund 1998, 74.

¹⁴³⁸ Siegmund 1998, 65.

These are all small cylindrical beads. The other string from this grave has similar beads but in a much smaller number, that is 13 in total. Similar beads can also be found in the strings from Vrijthof graves 85, 152 and 187 and Pandhof graves 10554, 10799, 11342 and 11321. The beads are all classified as type Siegmund Per 1.2.¹⁴³⁹

One heart-shaped bead is known from Pandhof grave 10828, and 32 from Vrijthof grave 64 and two from Vrijthof grave 68. Such beads can be classified as Siegmund's type 1.1 of combination group A, which are identified as beads of the late Roman period.¹⁴⁴⁰

The four almond-shaped beads from Vrijthof grave 152 can be classified as Siegmund type 1.8 of combination group H-I.¹⁴⁴¹

The fragments of transparent blue beads from Vrijthof grave 179 and Pandhof grave 10248 and 10514 can not be classified on the basis of their shape. These beads are therefore classified as general group 47 which consist of various blue transparent beads. Blue transparent beads were deposited throughout the Merovingian period, a more precise date-assignment is not possible for these beads and fragments.

The eight blue faceted beads with six sides from Pandhof grave 10799 cannot be classified according to Siegmund's classification scheme. Only green transparent (type 46.4) or blue opaque beads with six sides (type 1.4) are known from his research area.¹⁴⁴² Both these types are characteristic for combination group A. It can be assumed that the Pandhof beads date accordingly.

Blue: monochrome, transparent	Vrijthof	Pandhof	Total	Siegmund	FAG
Ribbed	-	10828 (240-14: 5x)	5	47.8	IV
Barrel/round	-	10554 (490-5: 1x)	1	-	-
Profiled	-	10799 (128-6: 8x)	8	1.4	I
Cylinder, six facets	-	10799 (128-6: 8x)	8	A	
Unknown, fragments	179 (1504-2)	10248 (324-7) 10514 (454-8)	-	Group 47 A/F-I	I/IV-V
Heart	64 (965-1: 32x) 68 (1149-8: 2x)	10828 (240-19: 1x)	35	1.1 A	I
Cylinder long	85 (1418-9: 1x) 152 (1617-6: 1x) 187 (1637-10: 2x)	10554 (490-4: 1x) 10799 (128-7: 7x) 11321 (418-21: 2x)	14	1.2 B-C	II
Almond	152 (1617-1: 4x)		4	1.8 H-I	IV-V
Cylinder short	187 (1637-16: 9x)	11342 (466-10: 7x) 11321 (418-12: 66x) 11321 (418-25: 13x)	95	47.1 A	I
Globular		10074 (27-13: 3x) 10061 (48-9: 1x) 10068 (93-7: 2x) 10252 (333-7: 1x) 10407 (581-14: 1x) 10828 (240-25: 1x) 10923 (182-2: 40x)	49	47.1 A	I
Compressed globular	124 (1609-3: 29x) 166 (1539-6: 4x) 285 (1819-2: 4x)	10407 (581-10: 1x)	38	47.1 A	I
Barrel	95 (1484-5: 1x)	10061 (48-10: 2x) 10407 (581-8: 1x) 10365 (562-17: 1x)	5	47.1? A?	I?
Biconical, compressed		10068 (93-5: 11x) 10828 (240-20: 4x) 11342 (466-18: 2x)	17	47.2 A	I
Biconical, long	166 (1539-4: 5x)	10799 (128-5: 4x) 10407 (581-9: 1x)	10	47.5 F-G	IV
Cone		10227 (321-1: 3x) 10365 (562-8: 1x)	4	47.6 D	-
Double/Multiple	277 (1807-9: 1x)	10068 (93-11: 1x) 10635 (432-2: 1x) 19999 (449-2: 1x)	4	47.7 G-H	-
Polygonal	187 (1637-13: 1x)	10100 (59-13: 1x)	4	47.9	I

¹⁴³⁹ Siegmund 1998, 64.

¹⁴⁴⁰ Siegmund 1998, 64.

¹⁴⁴¹ Siegmund 1998, 65.

¹⁴⁴² Siegmund 1998, 65, 75.

		10828 (240-11: 2x)		A	
Total	96	197	293	A-I	I-V

Table 38. The blue transparent beads of the Vrijthof and Pandhof cemeteries.

Two decorated blue opaque beads are identified (table 39). The bead from Vrijthof grave 124 is light blue, the bead from Pandhof grave 10828 is somewhat brighter. The dots on the Vrijthof specimen are corroded, and the colour of the decoration cannot be identified. The dots on the Pandhof bead are red. Bead type-group 1 of Koch consists of beads of various colours with a single row of dots: opaque blue beads with dots, however, were not identified by Koch.

Blue: polychrome opaque	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Dots Compressed globular	124 (1609-2: 1x)	10828 (240-21: 1x)	2	Group 37 (3) B	-	Group 1 Stufen 2-3
Total	1	1	2			

Table 39. The blue opaque beads with decoration of the Vrijthof and Pandhof cemeteries.

Four decorated blue transparent beads were identified (table 40). The bead from Vrijthof grave 110 is dark blue with yellow opaque raised dots dispersed all over the surface. A similar type is described by Koch, although the yellow dots on these specimens are not raised. The two decorated beads from Vrijthof grave 166 are identical. They have a biconical shape and show two transparent white and one opaque red line at the position of the carination. The decoration is identical to the decoration of types M67 and M72 of Koch, their shape is different.¹⁴⁴³ Beads of these types date in Schretzheim *Stufen* 2-4 or 6-8.

Blue: polychrome transparent	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Raised dots, monochrome (yellow) Cylinder, 4 sides	110 (1624-26: 1x)	-	1	-	-	4,6 Stufe 4
Bands, polychrome (red, white) Biconical	95 (1482-4: 1x) 166 (1539-7: 2x)	-	3	-	-	M67/72 Stufen 2-4 / 6-8
Total	4	-	4			

Table 40. The blue transparent beads with decoration from the Vrijthof cemetery.

Green glass beads

(Tables 41-44)

A number of 505 green beads were found in the Vrijthof and Pandhof cemeteries. Green beads were frequently used in strings and were so during a considerable length of time, especially the opaque green beads of a short cylindrical shape.¹⁴⁴⁴

The compressed globular beads are with a number of 118 dominant in the group of monochrome opaque green beads (table 41). Green compressed globular beads were not identified by Siegmund. The beads are therefore classified as his type-group 36 (general group of opaque green beads); the same was done with the disc-shaped beads from Pandhof grave 10828. The other green monochrome opaque beads could be classified according to the typology of Siegmund.

Green: monochrome opaque	Vrijthof	Pandhof	Total	Siegmund	FAG
Ribbed	-	10365 (562-9: 1x)	1	-	-

¹⁴⁴³ Koch 1977, Teil 1, 217, 218; Teil 2, Farbtafel 6.

¹⁴⁴⁴ Siegmund 1998, 73-74.

Barrel	-	19999 (430-5: 1x)	1	-	-
Biconical, broad	17 (1681-2: 3x)		3		
Biconical, long	68 (1149-6: 3x) 166 (1539-5: 7x) 187 (1636-3: 4x) 314 (1172-5: 2x)	10407 (581-4: 4x)	20	1.8 H-I	IV-V
Cube	68 (1149-7: 2x)	-	2	1.6 H-I	-
Cylinder, long	110 (1624-29: 1x)	10365 (562-15: 1x)	2	-	-
Cylinder, short (small)	110 (1624-9: 1x)	10252 (333-6: 2x) 10227 (321-9: 1x)	4	36.1 C-G	II-III
Cylinder, short (large)		10227 (321-3: 2x)	2	36.2 F-I	IV-V
Cylinder, 5 facets		11252 (365-10: 1x)	1	-	-
Cylinder, 6 facets		10923 (182-1: 38x)	38	1.4 A	I
Disc		10828 (240-13: 2x)	2	-	-
Compressed globular	12 (1673-2: 12x) 85 (1418-12: 1x) 100 (1434-4: 2x) 100 (1495-3: 9x) 110 (1624-30: 3x) 178 (1516-6: 1x) 258 (1831-1: 35x) 277 (1807-8: 3x) 313 (1019-2: 9x / -3: 9x)	10252 (333-3: 1x) 11342 (466-13: 36x) 11321 (418-26: 1x)	122	-	-
Polygonal		10068 (93-8: 2x)	2	47.9 A	I
Unclear/fragments	179 (1504-1)	10796 (142-11: 1x)	1	-	-
Total	107	94	201		

Table 41. The green opaque beads of the Vrijthof and Pandhof cemeteries.

Green transparent beads were with a number of 344 examples a frequent find in both the Vrijthof and Pandhof cemeteries (table 42). They show less variety in shape than the blue transparent beads do. Of the identified shapes only the various cylindrical beads can be classified according to Siegmund's typology, the compressed globular types were not identified in his research area. They are therefore classified as Siegmund's general type-group 46, which comprises all the green transparent beads without decoration.¹⁴⁴⁵ The green transparent beads from Maastricht that fit in his typology are all identified as late Roman specimens.

Green monochrome, transparent	Vrijthof	Pandhof	Total	Siegmund	FAG
Barrel	-	10068 (93-10:2x)	2	-	-
Compressed globular	85 (1418-6: 3x) 95 (1484-7: 38x) 110 (1624-10: 5x) 178 (1516-8: 1x) 235 (1748-1: 4x) 285 (1819-5: 2x)	10094 (22-6: 1x) 10828 (240-24: 20x) 10856 (172-3: 4x) 11321 (418-9: 1x)	79	Group 46 (1-5) A / H-I	-
Biconical, short		10923 (182-3: 45x)	45	S-46.1 A	I
Cylinder, long	110 (1624-7: 1x)	-10227 (321-10: 1x)	2	S-46.2 A	I
Cylinder, short	48 (1587-3: 23x) 85 (1418-10: 1x) 187 (1637-14: 1x) 315 (1151-3: 35x)	10074 (27-7: 134x) 10227 (321-7: 1x) 10407 (581-12: 1x) 10828 (240-17: 1x)	197	-	-
Cylinder: 6-sides	235 (1748-6: 2x)	10220 (303-4: 1x) 10227 (321-5: 7x) 10799 (128-3: 3x) 10828 (240-15: 29x)	42	46.4 A	I
Heart shaped	64 (965-2: 20x) 110 (1624-11: 2x)	10636 (447-1: 1x)	23	1.1 A	I
Total	138	252	390	A	I

Table 42. The green transparent beads of the Vrijthof and Pandhof cemeteries.

¹⁴⁴⁵ Siegmund 1998, 75.

One (fragment) of the two green opaque beads with decoration is known from the Vrijthof and one from the Pandhof (table 43). The green surface of the bead from Pandhof grave 10162 is corroded, and the decoration of the red band lies as a consequence higher than the rest of the surface. The shape of this bead is not obvious, but it could have been a cylinder. It is classified as Koch type M71 (Pleidelsheim find).¹⁴⁴⁶

The remaining fragment of the bead from Vrijthof grave 277 was probably of a biconical bead, and the remainder of the decoration consists of red and yellow dots. This bead does not match with the bead-types from the research areas of Siegmund and Koch.

Green polychrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Band, monochrome (red), Cylinder?	-	10162 (453-1: 1x)	1	36.7 H-I	IV-V	M71 Pl.: C
Dots, polychrome (red, yellow) Biconical?	277 (1807-5: 1x)	-	1	-	-	K-group 7?
Total	1	1	2			

Table 43. The green opaque beads with decoration of the Vrijthof and Pandhof cemeteries.

The four green transparent beads with decoration were all found in the Vrijthof cemetery (table 44). Similar beads were not identified by Siegmund. With some restrictions they can be classified according to Koch's typology.¹⁴⁴⁷

Green polychrome, transparent	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Dots, monochrome (blue) Compressed, globular	314 (1173-3: 1x)	-	1	-	-	1.13 Stufen 2-3
Bands, monochrome (yellow) Barrel	247 (1752-8: 1x)	-	1	-	-	Group 42
Wave, monochrome (yellow) Compressed, globular	178 (1516-12: 1x)	-	1	-	-	Group 27 500-700
Wave and eyes Biconical	235 (1748-3: 1x)	-	1	-	-	M80 Pl.: B-C
Total	4	-	4			

Table 44. The green transparent beads with decoration of the Vrijthof cemetery.

Orange (ochre)

(Tables 45-46)

The identification as 'orange' or 'ochre' is for some beads questionable. They can also be weathered beads which were originally red or yellow. Some of the beads are of a shiny orange, others are difficult to describe unambiguously as orange or ochre. Orange opaque beads are according to Siegmund limited to certain combination groups or phases in contrast to the other opaque beads, which are present throughout the Merovingian period.¹⁴⁴⁸ Siegmund does not make a distinction in shapes for the group of orange beads. Opaque ochre beads are in Siegmund's research area disc- and globular shaped and can be found in combination groups D-E. The orange or ochre beads from Maastricht do not have these shapes (table 45).

Orange/ochre monochrome opaque	Vrijthof	Pandhof	Total	Siegmund	FAG
Barrel	48 (1587-5: 1x)	10054 (43-1: 1x)	3	34.1	-

¹⁴⁴⁶ Koch 2001, Farbtafel 8.

¹⁴⁴⁷ Koch 1977, Teil 2, Farbtafel 1, 2, 4; Koch 2001, Farbtafel 8.

¹⁴⁴⁸ Siegmund 1998, 70.

	95 (1484-3: 1x)			H-I	
Biconical		10252 (333-5: 1x)	1	34.1 H-I	-
Annular	178 (1516-2: 1x)		1	34.1 H-I	-
Total	3	2	5		

Table 45. The orange/ochre opaque beads of the Vrijthof and Pandhof cemeteries.

One of the two transparent orange/ochre beads from the Vrijthof cemetery is turbid orange/ochre, the other is shiny orange (table 46). Transparent orange or ochre beads are not known from Siegmund's research area and are difficult to date.

Orange/ochre monochrome transparent	Vrijthof	Pandhof	Total	Siegmund	FAG
Annular	315 (1151-2: 1x)	-	1	-	-
Compressed, globular	247 (1752-5: 1x)	-	1	-	-
Total	2	-	2		

Table 46. The orange/ochre transparent beads from the Vrijthof cemetery.

Red glass beads

(Tables 47-49)

In the group of the red opaque compressed globular beads (table 47) some variety in colour can be observed. Some of the beads are shiny dark red, some are less shiny and of a lighter red. Some of the beads could originally have formed so called double-or multiple beads (a well known shape for Merovingian beads), but none of them remained fixed to each other. Siegmund did not distinguish between compressed globular and globular beads. The globular beads from the Vrijthof and Pandhof are, however, considerably different from the group with a compressed globular shape. This division is maintained but the beads of both shape groups are classified as the same Rhineland type (Per 35.4).¹⁴⁴⁹ The biconical beads show a more or less sharp carination, they are all larger than the (compressed) globular beads and are of a shiny bright red (Siegmund Per 35.6).¹⁴⁵⁰ The short cylindrical beads from Pandhof grave 10061, 10074 and 10131 are larger than the short cylindrical beads from Pandhof grave 10365, and are identified as different groups. Only the small cylindrical beads are identified by Siegmund (Per 35.2).¹⁴⁵¹ The profiled bead from Pandhof grave 10365 is one of a kind. A bead with a similar form is used by Périn, Legoux and Vallet as an example for strings of type 1, which dates to their phases PM-MA1 (440/50-520/30).¹⁴⁵² They do not mention the range of colours of this type of bead. For the remaining beads a classification according to Siegmund was either obvious or could not be obtained.

Red monochrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG
Profiled	-	10365 (562-12: 1x)	1		
Compressed, globular	12 (1673-1: 17x) 68 (1149-9: 2x) 100 (1495-4: 3x) 110 (1624-24: 2x) 178 (1516-9: 1x) 187 (1637-19: 5x) 187 (1636-4: 11x)	10118 (42-4: 3x) 10128 (40-7: 1x) 10220 (303-6: 2x) 10365 (562-11: 3x) 10988 (261-7: 2x) 10074 (27-11: 4x) 10118 (42-7: 12x) 19999 (428-3: 1x) 10407 (581-7: 13x)	82	35.4 D-G	-
Globular	247 (1752-1: 1x)	10220 (303-2: 1x)	2	35.4 D-G	-
Biconical	100 (1434-9: 4x)	-	9	S-35.6	IV

¹⁴⁴⁹ Siegmund 1998, 71.

¹⁴⁵⁰ Siegmund 1998, 71.

¹⁴⁵¹ Siegmund 1998, 70.

¹⁴⁵² Legoux/Périn/Vallet 2004, type 374, 19, 42, 54.

	110 (1624-20: 1x) 124 (1609-1: 3x) 277 (1807-4: 1x)			H-I	
Cylindrical, long		11321 (418-13: 1x) 11321 (418-22: 1x)	2	35.1 B-F	III
Cylindrical, short (large)	95 (1484-4: 1x) 100 (1434-6: 2x) 110 (1624-19: 4x) 277 (1807-6: 1x)	10061 (48-13: 4x) 10074 (27-14: 1x) 10131 (44-3: 1x)	14	-	-
Cylindrical, short (small)		10365 (562-14: 6x)	6	35.2 D-E	III
Cylindrical, 4 sides	85 (1418-4: 1x)	10102 (23-3: 2x) 10118 (42-6: 1x) 10407 (581-15: 1x)	5	-	-
Barrel	258 (1831-10: 1x)		1	-	-
Almond	152 (1617-5: 1x)		1	1.8 H-I	IV-V
Heart	110 (1624-28: 1x)		1		
Total	63	61	124		

Table 47. The opaque red beads of the Vrijthof and Pandhof cemeteries.

Transparent red beads are rare. Only two were found, both in Pandhof graves (table 48). The bead from Pandhof grave 10042 is quite peculiar because it has the shape of a perfect disc and the string hole goes through the narrow sides of the bead. Parallels for this bead are not known to me. The bead from grave 10370 is identified as a cylinder with four sides. This bead is somewhat weathered and its remains questionable if its form is identified correctly. Siegmund only identified one type of transparent red beads in his research area (Per45.1), which belong to strings of combination group A.¹⁴⁵³ Although the Pandhof beads are different in form from the beads of bead-type group 45 (small globular or disc shaped¹⁴⁵⁴), they are for now dated accordingly.

Red monochrome, transparent	Vrijthof	Pandhof	Total	Siegmund	FAG
Cylinder, 4 sides	-	10370 (555-9: 1x)	1	Group 45 A	I
Disc	-	10042 (60-9: 1x)	1	Group 45 A	I
	-	2	2		

Table 48. The red transparent beads of the Pandhof cemetery.

Forty-two red beads with decoration were found in the Vrijthof and Pandhof cemeteries (table 49). Red beads with decoration are common finds in Merovingian cemeteries, and the beads from the Vrijthof and Pandhof can for the greater part be classified according to the typologies of Siegmund and Koch. Some beads with a decoration similar to the types of Siegmund and Koch do not always have matching shapes. This discrepancy is for now neglected.

The decoration of the red beads consists of various patterns and colours. Most of the beads are compressed globular, and in this form group various decoration patterns can be identified. The majority (fourteen) of the red Vrijthof and Pandhof beads have a decoration of opaque white crossed waves, followed by the beads (twelve) with opaque yellow crossed waves. The decoration of four beads that consist of a combination of spirally wound white bands and blue border bands is not identified by Siegmund and Koch; their type of beads with spirally wound bands (without border bands) is used to classify these beads.¹⁴⁵⁵

Red polychrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch

¹⁴⁵³ Siegmund 1998, 75.

¹⁴⁵⁴ The transparent red beads of Siegmund's research area were all found in the cemetery of Krefeld-Gellep. The by Siegmund mentioned examples do not resemble the disc shaped Pandhof bead.

¹⁴⁵⁵ Siegmund 1998, 72; Koch 1977, Farbtafel 4.

Wave, white Compressed, globular		11252 (365-7: 1x)	1	-	-	Group 27 500-700
Crossed waves, white Compressed globular	100 (1434-7: 2x) 110 (1624-13: 1x) 247 (1752-10: 1x)	10061 (48-12: 3x) 10128 (40-4: 3x) 10985 (254-3: 3x) 10988 (261-5: 1x)	14	35.8 F-H	III	Group 34 Stufen 1-4 Pl.: D-E
Crossed waves, yellow Compressed globular	100 (1434-3: 2x) 187 (1637-18: 1x) 187 (1636-7: 1x)	10061 (48-6: 1x) 10074 (27-15: 2x) 10128 (40-3: 3x) 10988 (261-3: 2x)	12	35.11 (D-H) F-G	-	Group 34 Stufen 1-4 Pl.: D-E
Crossed waves with dots, white Compressed globular	100 (1434-5: 2x) 110 (1624-5: 1x)	-	3	35.12 F-G	-	20.1 Stufen 3-4
Crossed white waves with yellow dots Compressed globular	164 (1633-1: 1x)	10100 (59-12: 1x)	2	-	-	21.9 Stufen 3-4
Crossed white waves with blue dots Compressed globular		11252 (365-11: 1x)	1	-	-	20.13-20.17 Pl.: C
Crossed white waves with white/blue eyes		11252 (365-9: 1x)	1	-	-	-
Crossed waves with band, yellow Compressed globular	100 (1434-13: 1x)		1			35.2
Border bands with dots, yellow Cylinder, long	85 (1418-7: 1x)		1	2.4 F-H	-	16.3 Stufe 3
Spirally wound bands, white Biconical/globular	124 (1609-5: 1x)		1	35.13 D-H		42.9 Stufe 3
Spirally wound bands, yellow Biconical/globular		10370 (555-8: 1x)	1	35.14 C-F	-	42.18 Stufe 3
Spirally wound white bands with blue border bands Cylinder, long	187 (1637-4: 2x)	10074 (27-12: 1x) 10985 (254-4: 1x)	4	35.13 D-H	-	Group 42 -
Total	17	25	42			

Table 49. The red beads with decoration from the Vrijthof and Pandhof cemeteries.

Yellow glass beads

(Tables 50-52)

Three hundred forty opaque yellow monochrome beads are known from the cemeteries Vrijthof and Pandhof, of which the compressed globular ones are the most common shape (table 50). The yellow opaque beads can for the majority be classified according to Siegmund's typology.¹⁴⁵⁶

Yellow monochrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG
Almond	152 (1617-4: 1x)	-	1	1.8 H-I	IV-V
Barrel	-	10061 (48-17: 1x) 10407 (581-11: 9x)	10	-	-
Biconical	277 (1807-7: 4x)	-	4	33.5 I	IV-V
Cylinder, short (large)	100 (1434-2: 4x) 110 (1624-12: 2x)	10074 (27-17: 1x) 10131 (44-2: 1x)	8	33.1 D-G	II-III
Cylinder, five sides	258 (1831-3: 1x)	-	1	1.3 D-I	-
Double/multiple	-	10074 (27-8: 3x) 10635 (432-4: 3x)	6	33.6 G-H	IV
Globular	247 (1752-2: 12x)	10407 (581-16: 1x)	13	33.3 (D-H) E-G	-
Globular, compressed	68 (1149-5: 7x) 95 (1484-6: 57x) 100 (1434-1: 7x) 110 (1624-8: 15x) 124 (1609-6: 24x) 166 (1539-3: 32x)	10061 (48-16: 1x) 10074 (27-6: 14x) 10102 (23-4: 2x) 10118 (42-5: 17x) 10122 (73-3: 1x) 10128 (40-6: 49x)	284	33.3 (D-H) E-G	-

¹⁴⁵⁶ Siegmund 1998, 65, 69-70.

	178 (1516-4: 4x) 187 (1636-10: 2x) 187 (1637-17: 1x) 250 (1795-4: 1x) 314 (1172-4: 4x) 214 (1759-2: 10x)	10131 (44-1: 1x) 10220 (303-3: 3x) 10407 (581-6: 17x) 10554 (490-3: 2x) 10635 (432-3: 1x) 10828 (240-12: 1x) 10985 (254-2: 7x) 10988 (261-4: 2x) 15013 (269-8: 2x)			
Irregular-shaped	100 (1495-5: 3x) 152 (1617-2: 2x)	-	5	33.6 G-H	IV
Total	193	139	332		

Table 50. The yellow opaque beads from the Vrijthof and Pandhof cemeteries.

Yellow transparent beads are only known from the Pandhof (table 51). The irregular shaped beads are all relatively small and do not have a clearly defined and uniform shape, except for three beads from Pandhof 11342. Siegmund only identified one type of transparent yellow (honey coloured) beads in the Rhineland (Per 43.1), which are either small globular or small biconical compressed beads.¹⁴⁵⁷ The irregular shaped Pandhof beads are for now classified as such.

Yellow monochrome, transparent	Vrijthof	Pandhof	Total	Siegmund	FAG
Biconical, compressed	-	11342 (466-17: 3x)	3	43.1 A	I
Irregular shaped	-	11342 (466-11: 27x)	27	43.1 A	I
Disc		10068 (93-6: 8x)	8	-	-
Total	0	38	38		

Table 51. The yellow transparent beads from the Vrijthof and Pandhof cemeteries.

Most of the fifteen yellow opaque beads with decoration can be identified according to the typologies of Siegmund and Koch (table 52).¹⁴⁵⁸ Recently, Koch mapped tongue-shaped beads or *Hängeperlen* such as the three found in Pandhof grave 10985. They were for the majority found along the Rhine and in Bavaria, and only occasionally in Belgium and northern France.¹⁴⁵⁹ The Maastricht examples have red lines and dots, whereas others have green dots between red lines.¹⁴⁶⁰ Koch supposes that some of these beads were made in Maastricht. However, there are no indications that these beads were made in the glass workshop, excavated in de Jodenstraat.¹⁴⁶¹ Koch's impression is that this type of bead was produced in a relatively short period. In South Germany it occurs only in combination with beads of the South-German chronology phase SD7 (c. 575-600).

Yellow polychrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Crossed waves, monochrome red Compressed globular	110 (1624-2: 2x) 187 (1637-11: 3x) 214 (1759-1: 1x) 247 (1752-9: 1x)	10061 (48-5: 2x) 10985 (254-5: 1x)	10	33.7 D-H	III	33,7 / 33,9 Stufen 1-3
Lines and dots, red Tongue-shaped		10985 (254-1: 3x)	3	-	-	Hängeperlen SD7
Waves, corroded (white) Compressed globular	178 (1516-3: 1x) 187 (1637-8: 1x)		2	-	-	Group 27 500-700
Total	9	6	15	D-H		

Table 52. The yellow opaque beads with decoration from the Vrijthof and Pandhof cemeteries.

¹⁴⁵⁷ Siegmund 1998, 75.

¹⁴⁵⁸ Siegmund 1998, 70; Koch 1977, Teil 1 206; Teil 2, Farbtafel 3.

¹⁴⁵⁹ Koch 2007, 364.

¹⁴⁶⁰ Koch 2007, 364, Abb. 60.

¹⁴⁶¹ Sablerolles/Henderson/Dijkman 1997.

White glass beads

(Tables 53-55)

Absent in the group of white beads are the transparent white beads with decoration. Within the group of white undecorated opaque beads Siegmund discerns 3 types (table 53).¹⁴⁶² Only the biconical shaped beads and the double- or multiple beads from the Vrijthof are shapes known from Siegmunds research area, together with the faceted beads with five sides that can be classified as one Siegmund type regardless the colour on the basis of the shape alone.¹⁴⁶³

White monochrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG
Barrel		10061 (48-11: 4x)	4	-	-
Cylinder, short	48 (1587-8: 1x) 95 (1482-5: 1x) 110 (1624-6: 7x) 235 (1748-4: 1x) 314 (1172-7: 1x)	10061 (48-14: 1x) 10068 (93-9: 1x) 10407 (581-17: 1x) 19999 (309-1: 1x)	15	-	-
Cylinder, short (small)		10828 (240-23: 20x) 11321 (418-14: 3x)	23	-	-
Cylinder, long	48 (1587-6: 1x)		1	-	-
Cylinder: 5sides	258 (1831-4: 3x) 277 (1807-11: 1x)		4	1.3 D-I	-
Compressed, globular	110 (1624-4: 3x) 258 (1831-5: 1x) 314 (1172-3: 3x)	10074 (27-10: 4x) 10407 (581-13: 1x) 10828 (240-18: 1x) 11252 (365-5: 3x)	16		
Biconical	100 (1434-10: 2x)		2	32.3 H-I	IV
Disc	152 (1617-3: 3x)		3	-	-
Double/Multiple	277 (1807-10: 1x)		1	32.2 H-I	IV
Irregular-shaped	68 (1149-11: 3x) 235 (1748-8: 1x)	10988 (261-6: 2x)	6	-	
Total	33	42	75		

Table 53. The white opaque beads from the Vrijthof and Pandhof cemeteries.

Seventy-three transparent white beads of different shapes are known from the Vrijthof and Pandhof (table 54). For some beads is difficult to distinguish the segmented transparent white beads from the segmented silver-in-glass beads; some errors can have occurred in their classification. Most of the Pandhof beads could be classified as a Siegmund type, for the Vrijthof this was less obvious.¹⁴⁶⁴

White monochrome, transparent	Vrijthof	Pandhof	Total	Siegmund	FAG
Melon bead	187 (1637-7: 1x)		1	-	-
Cube	235 (1748-7: 1x)		1	-	-
Double/multiple, segmented		10365 (562-13: 1x) 10799 (128-11: 2x) 11321 (418-11: 44x) 11321 (418-24: 16x)	63	42.2 A	I
Compressed globular/ Ring	235 (1748-2: 1x) 258 (1831-9: 1x)		2	-	-
Barrel		11342 (466-12: 1x)	1	-	-
Cylinder, long		10799 (128-10: 5x)	5	42.3 C-D	-
Total	4	69	73		

Table 54. The white transparent beads from the Vrijthof and Pandhof cemeteries.

Decoration is only present on opaque white beads, transparent white beads with decoration are not identified. The main decoration colours within this group of beads are red and blue (table 55). Most of

¹⁴⁶² Siegmund 1998, 68.

¹⁴⁶³ Siegmund 1998, 65.

¹⁴⁶⁴ Siegmund 1998, 74.

these beads can be classified according to Koch's typology scheme, only some could be identified as Siegmund types.¹⁴⁶⁵

White polychrome, opaque	Vrijthof	Pandhof	Total	Siegmund	FAG	Koch
Crossed waves, monochrome blue Compressed globular	110 (1624-21: 1x)	10061 (48-8: 1x) 10074 (27-16: 2x) 10128 (40-5: 2x)	6	32.7 E-H	IV	34,4 / 34,5 Stufen 3-4
Crossed waves with dots, blue Compressed globular		10074 (27-20: 1x)	1	-	-	20.8 Pl. C
Crossed blue waves with red dots Biconical, broad	48 (1587-7: 1x) 110 (1624-15: 1x)	10061 (48-15: 1x)	3	-	-	21,5 Stufen 3-4
Crossed blue waves with red dots Compressed globular		10061 (48-7: 6x) 11252 (365-4: 1x)	7	-	-	21,2 Stufen 3-4
Crossed waves with dots, red Cylindrical, long	110 (1624-23: 1x)		1	-	-	Group 20 Pl. C
Spiral bands, monochrome (dark: vague)) Cylindrical, short/barrel	110 (1624-3: 2x) 124 (1609-4: 2x)		4	-	-	Group 42 Pl. C-D
Dots, red monochrome Biconical/Globular		10252 (333-2: 1x) 10365 (562-10: 1x)	2	-	-	3,4 / 3,14 Stufen 3-4
Dots, blue transparent Globular		11252 (365-8: 1x)	1	-	-	3,3 Stufen 3-4
Dots, polychrome transparent Compressed, globular		11252 (365-6: 3x)	3	-	-	3,6 Stufen 3-4
Polychrome transparent eyes (red with blue) Compressed globular	100 (1434-11: 2x)		2	-	-	15,34 Stufe 4
Unclear, corroded Compressed globular	-	10074 (27-18: 1x)	1	-	-	-
Total	10	21	31			

Table 55. The white opaque beads with decoration from the Vrijthof and Pandhof cemeteries.

Colourless beads

Pandhof: 10227 (321-6: 1x); 10828 (240-16: 36x); 10068 (93-14: 1x).

The colourless bead from Pandhof grave 10227 has four facets and can be classified as Siegmund's type 1.5.¹⁴⁶⁶ This type belongs to Siegmund's combination group A and combination group I of the Franken AG.

The 36 small irregular shaped beads from Pandhof grave 10828 and the one from grave 10068 are classified as Siegmund's type 42.1, which is characterised by a globular or compressed biconical shapes.¹⁴⁶⁷ The Pandhof beads can be compared with the globular shaped beads. Type 42.1 can predominantly be found in Siegmund's combination group A, and I of the Franken AG.

Strings of beads

Most of the Vrijthof and Pandhof beads originally formed strings of multiple beads. These strings are generally identified as necklaces, but they could have been worn in different ways such as for example between two brooches.¹⁴⁶⁸ A considerable number of beads found more or less at the same location can also be interpreted as the decoration of certain parts of the clothing or the contents of a purse.

¹⁴⁶⁵ Siegmund 1998, 68; Koch 1977, Teil 1, 198-199, 202, 206; Teil 2, Farbtafel 1, 2; Koch 2001, Farbtafel 3, 4, 7.

¹⁴⁶⁶ Siegmund 1998, 65.

¹⁴⁶⁷ Siegmund 1998, 74.

¹⁴⁶⁸ Koch 2001, 164.

Twenty-five strings of beads are known from the Vrijthof cemetery, from the Pandhof cemetery twenty-four.¹⁴⁶⁹ The strings consist of a variable number of beads of different colour, shape and size. They were thread on wire after excavation and for some of the strings it is known that the position of the beads within the grave determined their actual position in the string. For most of the strings, however, the documentation reveals little on the excavation of the beads and how they were handled thereafter. Thus it remains uncertain whether the original position of the beads on the strings is represented. It appears that most of the strings show certain symmetry as a result of how they were thread on a wire. As mentioned, it is for most strings disputable whether this symmetry represents the original string.

The classification of strings of beads can be achieved in different ways; for example on the basis of the number of beads, the number of decorated beads, the size of the beads and the predominant colour. The number of beads per string is generally not considered as a strong chronological signifier.¹⁴⁷⁰ The predominant colour of beads in a string and the number of translucent beads are thought to be the strongest chronological indicators. Siegmund showed that the main colour of beads in a string changed during the course of the Merovingian period and that transparent beads can mainly be found in strings of the earliest combination groups.¹⁴⁷¹ The black, green and blue beads are characteristic for the earlier period, the yellow, red, white and orange beads for the later period. The Vrijthof and Pandhof strings will at first be classified on the basis of their predominant colour. This is determined by the highest amount of beads of a certain colour. However, the dominant colour of a complete string does not have to be the result of the highest number of beads of a certain colour. Several large beads may optically dominate the colour of the string but not numerically (see for example the string from Pandhof grave 10068 (fig. 47 and table 57)).¹⁴⁷² This appearance is considered ambiguous to identify, and for now the strings will be classified by highest number of beads of one colour.

The individual bead types are discussed in the section before, and their classification and dating form the basis for the dating of the complete strings (see the appendix). The following overview of the strings from the Vrijthof and Pandhof, organised by dominant colour, concerns some remarks on the dating of the complete strings and their find location in the grave. The tables of the complete strings with the bead types and the associated datings of Siegmund, Koch and the Franken AG and the final dating of the strings in Maastricht phases can be consulted in the appendix hereafter (tables 56-110).

Strings with a majority of black beads

Vrijthof: 95 (1478-1); 0 (1361-1). Pandhof: 10068 (93-4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14), 19999 (428-1); 19999 (430-4).

Appendix 1: Figure 47; 70.

Two strings with a majority of black beads are identified; one from the Vrijthof and one from the Pandhof. Three relatively large black beads (one from the Vrijthof and two from the Pandhof) are singular finds (table 58-60).

Three strings of beads are known from Vrijthof grave 95 (table 56). Sixty-two undecorated black beads are found near the left lower leg, the other two strings at the position of the belly and the breast. It can be assumed that the black beads formed a separate string. This string of black beads is dated in Maastricht phases B-E (400-580/90).

The string of beads from Pandhof grave 10068 has thirty-three black beads (table 57). The black beads are all very small, what makes the appearance of this string more bluish than black. It is not known

¹⁴⁶⁹ The beads from some graves are strung on more than one string. They are regarded as one ensemble when found at the same location in the grave. Little numbers of beads and singular beads (except for the large black beads) are portrayed, they are not discussed in this section.

¹⁴⁷⁰ Siegmund 1998, 60.

¹⁴⁷¹ Siegmund 1998, 62-63, Abb. 15-16.

¹⁴⁷² This means that not the number of beads with a certain colour determine the dominant colour of a string, but the total surface of a certain colour. Perhaps this research can be carried out in the future, using both colour and size of beads in combination. Maybe it is possible to calculate the dominant colour on the basis of a formula including colour, size and numbers.

where in the grave these beads were found. The beads show a range in dating from the fifth century to the end of the seventh century. The string is dated in Maastricht phases C-H (460/80-670/80).

The black decorated opaque bead 1361-1 from the Vrijthof cemetery is a stray find (table 58). It is a relatively large bead with combed threads of white and red opaque glass. The beads with find number 428-1 from the Pandhof cemetery are stray finds (table 59). The black opaque black bead of this set shows a decoration of white crossed waves with yellow dots. This specific decoration pattern is not identified in the research areas of Siegmund and Koch and is classified in their broader groups of black beads with decoration (see the section on single beads). The relatively large opaque decorated black bead 430-4 from the Pandhof cemetery is a stray find (table 60). It is a biconical bead and is decorated with combed opaque red and yellow threads. All the black beads with decoration are dated in Maastricht phases B-E (400-580/90).

Strings with a majority of blue beads and individual blue beads

Vrijthof: 64 (965-1, 2); 124 (1609-1, 2, 3, 4, 5, 6); 152 (1617-1, 2, 3, 4, 5, 6); 285 (1819-1, 2, 3, 4, 5). Pandhof: 11321 (418-8, 9, 10, 11, 12, 13, 14).

Appendix 1: Figure 47-49.

Of the five strings with a majority of blue beads four are known from the Vrijthof and one from the Pandhof. The blue transparent beads of the string from Vrijthof grave 64 only slightly outnumber the resembling green beads (table 61). Both the blue and green beads are, on the basis of their heart-shaped appearance, classified as Siegmund's type 1.1 (transparent blue and green heart-shaped beads), although the green beads seem to be more opaque than transparent. No other objects are known from Vrijthof grave 64. For now it is assumed that the blue and green beads are contemporary. This string may date in Maastricht phase C (460/80-510/25).

Thirty of the 60 beads from Vrijthof grave 124 are small transparent blue beads (table 62). No other finds are known from this grave. The twenty-nine blue transparent beads form the majority and date in the fifth century and beginning of the sixth century according to Siegmund and the Franken AG. The other beads date later, in the sixth and seventh century. It can be questioned whether the blue transparent beads should not be dated later. A number of 29 reused beads in a string of the sixth or seventh century seems unlikely. For now the complete string is dated in Maastricht phase D-H (510/20-670/80).

Five of the 12 beads of the string from Vrijthof grave 152 are blue (table 63). No other finds are known from this grave. The majority of the beads of this string date in the period 580/90-750, the complete string is therefore dated accordingly, in Maastricht phase F-J (580/90-750).

The beads of the string from Vrijthof grave 285 have an extended dating period (table 64). This string is dated in the Maastricht phases that approximately comprise the middle of this period, Maastricht phases D-E (510/20-580/90). No other finds are known from this grave.

Two strings of beads are known from Pandhof grave 11321. It is unknown what the exact find position of these strings in the grave was. Because both consist of numerous beads they are maintained as two separate strings, probably found at different locations in the grave. One of the strings has a majority of blue beads, namely 66 of the 149 beads (table 65). White is the second dominant colour in this string. This grave also contained two silver gilded bow brooches and two garnet disc brooches, a rock-crystal ball in a silver casing and a golden pendent, by which it is one of the 'richest' graves of the Pandhof cemetery. The complete string dates in Maastricht phase C-E (460/80-580/90).

Strings with a majority of green beads

Vrijthof: 48 (1587-1, 3, 4, 5, 6, 7, 8, 9, 10); 85 (1418-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12); 100 (1495-3, 4, 5); 235 (1748-1, 2, 3, 4, 5, 6, 7, 8, 10); 258 (1831-1, 2, 3, 4, 5, 6, 7, 8, 9, 10); 313 (1019-2, 3, 4); 315 (1151-1, 2, 3,4). Pandhof: 10074 (27-6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20); 10828 (240-11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25); 11342 (466-9, 10, 11, 12, 13, 17, 18); 10923 (182-1,2,3)

Appendix 1: Figure 50-54.

Twelve strings with a majority of green beads are identified; seven were found from the Vrijthof cemetery and four strings were found in Pandhof graves. The beads from Vrijthof grave 48 were found at different locations in the grave. The beads with find-number 1587 were found near the neck, the beads with find number 1586 near the right foot. The beads with find number 1587 produced two strings of beads. The drawings of excavation show no differentiation in location so it is assumed that these beads originally formed one string (table 66). Most of these beads cannot be classified according to Siegmund's typology, and the beads that can be classified show a wide range of dating. Dating this string in Maastricht phases E-G (565-640/50) seems plausible.

The beads from Vrijthof grave 85 are all found, together with a brooch, near the neck (table 67). The beads date in an extended period, but it seems plausible to date the complete string in Maastricht phases D-G (510/20-640/50).

Two collections of beads were found at two different locations in Vrijthof grave 100. They are identified as two separate strings. Find number 1495 was located near the right foot. However, in the original documentation, this find concerns shoe buckles and no beads are mentioned. The beads may have been part of the ensemble of beads with find number 1434 (found on the pelvis) or they may not belong to this grave (in the case a wrong find number is assigned to these beads). The string with find number 1495 consists of fifteen beads of which nine are green opaque beads (table 68). Only the red and yellow beads of the string can be dated, on the basis of which the complete string is dated in Maastricht phase E-H (565-670/80).

A collection of 16 beads, of which six are green, was found near the neck in Vrijthof grave 235 (table 69). The shape of the green transparent beads does not match with Siegmund's typology and are dated according to his complete type-group of green transparent beads. The other beads indicate that the green Vrijthof beads can be dated as the early green beads of this group. On the basis of the datable beads the string is placed in Maastricht phases C-D (460/80-565).

Of the sixty-six beads from Vrijthof grave 258 thirty-five are green (table 70). This collection of beads was found near the neck. A photograph gives an indication of the position of the individual beads in situ. It can be assumed that the string as it was created after excavation (and as shown in the photograph) reflects the original sequence of beads. This string of beads clearly shows the limitations of this approach. Although the green beads form a numerical majority, the string actually does not give a green impression. More over in this form most green beads will have been in the neck so they were hardly visible for a spectator in a face to face situation. The first impression of the colour of this string is one of reddish-white. On the basis of the majority of the datable beads the complete string is dated in Maastricht phases D-E (510/20-580/90).

Of the nineteen beads from Vrijthof grave 313 eighteen are green (table 71). The two strings on the photograph were found at the same location and are now identified as one string of beads. The green beads are difficult to date, on the basis of the black bead alone this string is for now dated in Maastricht phases B-D (400-565).

The fifty beads from Vrijthof grave 315 were found at the same location in the grave and are therefore regarded as one string (table 72). Although the number of green beads (thirty-five) exceeds the number of amethyst beads, the appearance of the string is determined by the amethyst beads. No other finds are known from this grave. Siegmund and the Franken AG propose a quite similar dating and for Maastricht it is decided to date this string accordingly in Maastricht phase E-G (565-640/50).

The two strings from Pandhof grave 10074 should be regarded as one; the 173 beads were found at the same location in the grave (table 73). The majority of the beads (134) are small green transparent beads. Their shape unfortunately does not match with Siegmund's typology and can only be dated in the date range of all the types in this bead-type group. On the basis of the other beads it is proposed to date this string in Maastricht phases F-H (580/90-670/80).

The two strings on the photograph that are assigned to Pandhof grave 10828 should be regarded as one because the beads were found at the same position (near the pelvis) in the grave. The strings are

dominated by white transparent beads, although it has a 'green appearance' by the presence of a high number of relatively large green beads (table 74). A miniature jug of dark blue glass is also known from this grave. These pendants are occasionally identified as beads and are generally dated in the late Roman period.¹⁴⁷³ It is discussed in the section on pendants. The majority of the beads date early, in the fifth century. On the basis of all the datable beads, however, the complete string is dated in Maastricht phase B-F (400-610/20).

The documentation of the excavation reveals that these beads from Pandhof grave 11342 were found in a little box of wood. Of the 77 beads 36 are green and 27 are yellow (table 75). The other finds from this grave are a bronze decorative pin and four bracelets of bronze which date in the fifth and beginning of the sixth centuries. The complete string of beads that can be dated in Maastricht phase B-E (400-580/90).

The beads from Pandhof grave 10923 can all be classified in the earliest combination group of Siegmund and the Franken AG on the basis of which this string is dated in Maastricht phase C (460/80-510/25). The string was the only find from this grave (table 76).

Strings with a majority of red glass beads

Vrijthof: 12 (1673-1, 2, 3); 187 (1636-3, 4, 5, 6, 7, 8, 9, 10). Pandhof 10118 (42-3, 4, 5, 6); 10988 (261-3, 4, 5, 6, 7).

Appendix 1: Figure 54-55.

The three-colour string from Vrijthof grave 12 is dominated by red and green opaque beads (table 77). The red outnumber the green beads just slightly. The beads are found near the pelvis. It can be assumed that they were carried in a purse or that they served as decoration for a leather purse or clothing. No other finds are known from this grave. This string is dated in Maastricht phase D-G (510/20-640/50).

Two strings of beads are known from Vrijthof grave 187. The string with find number 1636 was found near the neck/upper breast, and the string with find number 1637 near the pelvis. The string with find number 1636 shows a wide variety of beads of which the red ones outnumber the other coloured beads only slightly (table 78). On the basis of the majority of the datable beads this string is dated in Maastricht phases D-G (510/20-640/50).

The forty-five beads from Pandhof grave 10118 were found in the grave of a child at the neck and upper breast and are regarded as one original string of beads. The majority of the beads are red, although for some of the millefiori beads the base colour is identified as blue (table 79). The complete string is dated in Maastricht phase E-G (565-640/50).

The nine beads from Pandhof grave 10988 are finds from a disturbed grave near the head. It can be assumed that a number of beads are now lost, but of the remaining beads five are red and as a consequence the dominant colour (table 80). On the basis of the majority of the datable beads this ensemble of beads is dated in Maastricht phase D-H (510/20-670/80).

Strings with a majority of amber beads

Vrijthof: 274 (1792-3); 277 (1807-3, 4, 5, 6, 7, 8, 9, 10, 11). Pandhof: 10122 (73-2, 3); 10227 (321-1, 2, 3, 4, 5, 6, 7, 8, 9); 10365 (562-5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17); 10514 (454-7, 8); 11252 (365-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11); 11321 (418-18, 19, 20, 21, 22, 23, 24, 25, 26, 27).

Appendix 1: Figure 56-59.

The string of beads from Vrijthof grave 274 consists of only amber beads and was found near the neck (table 81). Amber beads are used throughout the Merovingian period, but a majority of amber beads in one string is known to be characteristic for combination groups II and III (400-580/90) of the Franken AG. This string is dated accordingly in Maastricht phases B-E (400-580/90).

¹⁴⁷³ Schulze, 1978.

Amber beads form a majority in the string from Vrijthof grave 277 too (table 83). No other datable finds are known from this grave. On the basis of the other datable beads this string is dated in Maastricht phases E-H (565-670/80).

The beads from Pandhof grave 11252 are thread in two strings. Although the find position of the strings in the grave is not known, they are considered to have originally formed one string of fifty-three beads of which forty are of amber (table 82). A considerable number (thirty-six) of amber beads stands out through their broad biconical shape; the other amber beads are disc-shaped. The glass beads have various decorations and some can be classified according to Koch's typology. On the basis of the datable beads the string is dated in Maastricht phase B-E (400-580/90).

Two strings are known from Pandhof grave 11321 (table 86). The find location in the grave is unknown. Both strings are relatively long and were found in one of the 'richest' Pandhof graves. They are therefore maintained as two separate strings, probably found at different locations in the grave. One string is dominated by carefully rounded amber beads. On the basis of the other datable beads the complete string is dated in Maastricht phases B-E (400-580/90).

The ten beads from Pandhof grave 10122 were found near the neck (table 85). On the basis of the majority of amber beads this string is dated in Maastricht phases B-E (400-580/90). The same argument applies to the string from Pandhof grave 10227 (table 87), which also dates in Maastricht phases B-E (400-580/90).

Twenty more or less disc shaped amber beads were found in Pandhof grave 10514 next to some fragments of blue beads (table 84). It is unknown how many blue beads were originally placed in this grave and whether they formed a string with the amber beads. In regard of the amount of fragments recovered it can be assumed that the amber beads formed the majority of beads in this grave on the basis of which these beads are dated in Maastricht phases B-E (400-580/90).

The string of beads from Pandhof grave 10365 counts forty-six beads, of which twenty-six are amber beads (table 88). The beads were found near the neck. On the basis of the other datable beads this string can be dated to a more restricted period than other strings with predominantly amber beads. The complete string is dated in Maastricht phases C-E (460/80-580/90).

Strings with a majority of yellow glass beads

Vrijthof: 95 (1484-2, 3, 4, 5, 6, 7; 1482-2, 3, 4, 5, 6); 100 (1434-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13); 110 (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 28, 29, 30); 166 (1539-2, 3, 4, 5, 6, 7, 8); 178 (1516-1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13); 214 (1759-1, 2); 247 (1752-1, 2, 3, 4, 5, 6, 7, 8, 9, 10); 314 (1172-2, 3, 4, 5, 6, 7; 1173-2, 3, 4). Pandhof: 10128 (40-3, 4, 5, 6, 7); 10220 (303-2, 3, 4, 5, 6); 10407 (581-3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17); 10635 (432-2, 3, 4); 10985 (254-1, 2, 3, 4, 5).

Appendix 1: Figure 60-66.

Two collections of beads were found at two different locations in Vrijthof grave 100. The beads with find number 1434 were found near the pelvis. This string has a majority of 'light' (yellow and white) coloured beads (table 89). The beads show an extended date range, but the dating of the complete string can be narrowed down to Maastricht phases E-H (565-670/80).

The string from Vrijthof grave 110 consists of a wide variety of beads but the main colour can be regarded to be yellow and white (table 90). The beads were found near the neck. The majority of the beads can be dated according to the typologies of Siegmund, the Franken AG and Koch, on the basis of which the complete string is dated in Maastricht phases D-H (510/20-670/80).

The beads of the string from Vrijthof grave 166 were found near the neck. Of the sixty-six beads thirty-two are yellow (table 91). The complete string is dated in Maastricht phases D-H (510/20-670/80).

The beads from Vrijthof grave 178 were found at the position of the neck and upper breast. It consists of seventeen beads of which five are yellow (table 92). This string also is dated in Maastricht phases D-H (510/20-670/80).

The eleven yellow beads from Vrijthof grave 214 were found at the position of the neck (table 93). They all date in Maastricht phases D-H (510/20-670/80).

The string of various beads from Vrijthof grave 247 was found at the position of the neck. Of the twenty-six beads thirteen are yellow (table 96). The complete string is dated in Maastricht phases D-H (510/20-670/80).

Two strings are recorded from Vrijthof grave 314. The beads with find number 1172 were found near the neck (table 97), those with find number 1173 (table 98) near the left lower arm. The 'bracelet' counts only four beads. Classifying this string by its dominant colour on the basis of four beads is arbitrary and it is therefore discussed in this section. The bracelet is dated in Maastricht phase E (565-580/90), the other string in Maastricht phases D-H (510/20-670/80).

The beads from Pandhof grave 10128 were found near the left side of the head in a disturbed grave. They are thread as two strings, but it is assumed that they originally formed one string (table 99). The complete ensemble of beads is dated in Maastricht phase D-H (510/20-670/80).

The beads from Pandhof context 10220 cannot be associated with a grave (table 100). The collection counts 18 beads and was found together with a gold pendant with a swastika of filigree (see the section on golden pendants). The ensemble of beads is dated in Maastricht phase C-H (460/80-670/80).

The beads and fragments of beads from Pandhof grave 10407 were found at the position of the breast and neck. Fifty-seven complete beads were recovered, together with some fragments of beads (table 101). The fragments all seem to have formed millefiori beads of which four complete ones were also found in this grave. This string is dated in Maastricht phase D-G (510/20-640/50).

The five beads from Pandhof grave 10635 were found together with a red pottery bowl but cannot be ascribed to a grave anymore (table 102). This ensemble of beads is dated in Maastricht phase F-H (580/90-670/80).

The 15 beads from Pandhof grave 10985, of which eleven are yellow, were found underneath a skull, but no further remains of the skeleton or some indication of a grave structure were observed. The majority of the beads are decorated (table 103). No other finds can be associated with these beads. This ensemble of beads is dated in Maastricht phase E-H (565-670/80).

Strings with a majority of white beads

Pandhof: 10061 (48-5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17).

Appendix 1: Figure 66.

The strings which had nearly as much white beads as yellow beads were discussed in the section on yellow beads. The only string of which the majority obviously consist of white beads was found in Pandhof grave 10061. The find location of beads from Pandhof grave 10061 is unknown. This string of 29 beads counts 13 white beads (table 104). This complete string is dated in Maastricht phase C-H (460/80-670/80).

Strings with a majority of amethyst beads

Pandhof: 10042 (60-8, 9); 10856 (1, 2, 3); 10252 (333-2, 3, 4, 5, 7).

Appendix 1: Figure 67.

Three strings with a majority of amethyst beads were found in two Pandhof graves. Amethysts beads were also found in other graves, but where in these strings outnumbered by other beads.

The amethyst beads and small red bead from Pandhof grave 10042 were found at the position of the neck (table 105). The other finds are a filigree disc brooch (585-610) and a silver decorative pin. The complete string is dated in

The beads from Pandhof grave 10856 were found near the head (table 106). Next to the six almond shaped amethyst beads four small green beads and one small black bead were found. No other finds are known from this grave. This string is dated in Maastricht phase F-H (580/90-670/80).

Seven beads were found in Pandhof grave 10252 (table 107). The documentation of the grave, however, shows that these beads were found together with five amethyst beads and three biconical blue beads,

which are now lost. The late Roman beads can therefore be regarded as reused specimens. The complete string can be dated in Maastricht phase C-E (460/80-580/90).

Strings with a majority of metal-in-glass (metal foiled glass beads)

Vrijthof: 68 (1149-2, 4, 5, 6, 7, 8, 9, 10, 11, 12); 187 (1637-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19). Pandhof: 10799 (128-3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14).

Appendix 1: Figure 68.

Strings with a majority of metal in glass beads (silver-appearance and gold-appearance) contribute to the white-colour appearance of a string. Beads of this kind are quite common finds in Merovingian graves and are dated by Siegmund in the sixth and by the Franken AG in fifth and sixth century.¹⁴⁷⁴

A string with a high number of silver-in-glass beads from Vrijthof grave 68 was found at the position of the neck (table 108). It is dated in Maastricht phase B-J (400-750).

Two strings of beads are known from Vrijthof grave 187. The string with find number 1636 is found at the position of the neck/upper breast, and the string with find number 1637 at the position of the pelvis. The string with find number 1637 shows the highest number of silver-in-glass beads and is therefore regarded as a string with a majority of beads with a 'white' colour (table 109). The other finds from this grave are two golden pendants (with find number 1636, probably attached to this string of beads), two earrings, a finger ring and a bronze buckle. These finds are dated in the period 520-640. This string of beads is dated in Maastricht phase B-H (400-670/80).

The string of beads from Pandhof grave 10799 shows a considerable amount of metal foiled beads with a golden appearance (table 110). These beads are larger than the silver-in-glass beads known from the Vrijthof and Pandhof cemeteries. Four sorts of gold-in-glass beads are discerned by their shape, the segmented beads, the singular globular compressed beads (small and large) and the club shaped beads. This string was found on the breast. This complete string is dated in Maastricht phases C-F (460/80-610/20).

The tables in which the individual types per string and the final dating of the complete strings are represented can be consulted in the following appendix.

Beads appendix: The datings of the complete strings of beads

The presentation of the strings in the tables below is organized on the basis of the predominant colour (=highest number of beads of a certain colour) of the strings. Each table refers to one string and includes the following columns:

1. Fnum: find number with sub number
2. Colour: the colour, opaque/transparent
3. Decoration: undecorated/decorated
4. Type: S= Siegmund types (1998); K= Koch types (1977; 2001); M&L= Manche & Lorraine types (Legoux/Périn/Vallet 2004).
5. Date: S= Siegmund (combination groups A to I); FAG= Franken AG (combination groups I to V); K= Koch (Stufen 1 to 6 (Schretzheim types, 1977); combination groups A to E (Pleidelsheim types, 2002)).
6. #: number of beads.

The description of the shape, decoration patterns and colour of the individual beads can be consulted in the tables in the foregoing section on the individual beads; the strings are portrayed in the same order as the tables below and can be consulted in the appendix with figures.

¹⁴⁷⁴ Siegmund 1998, 76; Müssemeier *et al.* 2003, 37.

The strings will be dated in Maastricht phases (see the introduction to the grave finds) on the basis of the dates of the individual types as follows:

- the shortest possible time span is aimed at
- preferably on the basis of the datable type with the highest number of beads
- preferably on the basis of the Franken AG dates
- the youngest beads of a string can never fall outside the established Maastricht phase(s), exceptions can be individual beads and groups of beads of which the dating is insignificant or insecure.

Strings with a majority of black beads

Vrijthof 95 (Appendix 1: Figure 47)

FNum	Colour	Decoration	Type	Date	#
1478-1	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	62
				Maastricht: B-E (400-580/90)	62

Table 56. Bead types and Maastricht date of the string from Vrijthof grave 95.

Pandhof 10068 (Appendix 1: Figure 47)

FNum	Colour	Decoration	Type	Date	#
93-13	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	32
93-5	Blue, transparent	Undecorated	S-47.2	S: A: (485-555) FAG: I (460/80-510/25)	11
93-6	Yellow, transparent	Undecorated	-	-	8
93-10	Green, transparent	Undecorated	-	-	2
93-7	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	2
93-8	Green, opaque	Undecorated	S-47.9	S: A (485-555) FAG: I (460/80-510/25)	2
93-12	Silver		-	-	1
93-14	Colourless	Polished	S-42.1	S: A (485-555) FAG: I (460/80-510/25)	1
93-9	White, opaque	Undecorated	-	-	1
93-4	Amber	Undecorated	-	-	1
93-11	Blue, transparent	Undecorated	S-47.7	S: G-H (585-670)	1
				Maastricht: B-E (400-580/90)	62

Table 57. Bead types and Maastricht date of the string from Pandhof grave 10068.

Vrijthof 0 (Appendix 1: Figure 70)

FNum	Colour	Decoration	Type	Date	#
1361-1	Black, opaque	Decorated	S: group 31 K: group 50	S: B (440-485) FAG: II (400-580/90)	1
				Maastricht: B-E (400-580/90)	1

Table 58. Bead types and Maastricht date of stray find Vrijthof 1361-1.

Pandhof 19999 (Appendix 1: Figure 70)

FNum	Colour	Decoration	Type	Date	#
428-1	Black	Decorated	S: group 31 (3-5) K-21,30	S: B (440-485) FAG: II-III (400-580/90) K: 3-4 (565-620/30)	1
				Maastricht: B-E (400-580/90)	1

Table 59. Bead types and Maastricht date of the string from Pandhof stray find 428-1.

Pandhof 19999 (Appendix 1: Figure 70)

FNum	Colour	Decoration	Type	Siegmund	#
430-4	Black	Decorated	S: group 31 (3-5) K-50,6	S: B (440-485) FAG: II-III (400-580/90) K: 2 (545/50-565/70)	1
				Maastricht: B-E (400-580/90)	1

Table 60. Bead types and Maastricht date of the string from Pandhof stray find 430-4

Strings with a majority of blue beads

Vrijthof 64 (Appendix 1: Figure 48)

Vrijthof	Colour	Decoration	Type	Date	#
965-1	Blue, transparent	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	32
965-2	Green, opaque	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	20
				Maastricht: C (460/80-510/25)	52

Table 61. Bead types and Maastricht date of the string from Vrijthof grave 64.

Vrijthof 124 (Appendix 1: Figure 48)

Vrijthof	Colour	Decoration	Type	Date	#
1609-3	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	29
1609-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	24
1609-1	Red, opaque	Undecorated	S-35.6	S: H-I (610-705) FAG: IV (580/90-670/80)	3
1609-4	White, opaque	Decorated	K: group 42	K: C-D (555-620)	2
1609-2	Blue, opaque	Decorated	S: group 37 (3) K: group1	S: B (440-485) K: 2-3 (545/50-590/600)	1
1609-5	Red, opaque	Decorated	S-35.13 K-42.9.	S: D-H (530-670) K: 3 (565-590/600)	1
				Maastricht: D-H (510/20-670/80)	60

Table 62. Bead types and Maastricht date of the string from Vrijthof grave 124.

Vrijthof 152 (Appendix 1: Figure 49)

FNum	Colour	Decoration	Type	Date	#
1617-1	Blue, transparent	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	4
1617-3	White, opaque	Undecorated	-	-	3
1617-2	Yellow, opaque	Undecorated	S-33.6	S: G-H (585-670) FAG IV: (565-670/80)	2
1617-6	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	1
1617-4	Yellow, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	1
1617-5	Red, opaque	Undecorated	S-1.8	S: H-I: 610-705 FAG: IV-V: 580/90-750	1
				Maastricht: F-J (580/90-750)	12

Table 63. Bead types and Maastricht date of the string from Vrijthof grave 152.

Vrijthof 285 (Appendix 1: Figure 49)

FNum	Colour	Decoration	Type	Date	#
1819-4	Unknown, opaque	Unknown	-	-	5
1819-2	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	4
1819-5	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	2
1819-1	Unknown, opaque	Unknown	-	-	1
1819-3	Amethyst	Undecorated	S-5.2	FAG: IV: (565-640/50)	1
				Maastricht : E (565-580/90)	13

Table 64. Bead types and Maastricht date of the string from Vrijthof grave 285

Pandhof 11321 (Appendix 1: Figure 49)

FNum	Colour	Decoration	Type	Date	#
418-12	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	66
418-11	White, transparent	Undecorated	S-42.2	S: C-E (485-585) FAG: I (460/80-510/25)	44
418-10	Amber	Undecorated	-	FAG: II-III (400-580/90)	33
418-14	White, opaque	Undecorated	-	-	3
418-13	Red, opaque	Undecorated	S-35.1	S: B-F (440-640) FAG: III (460/80-580/90)	1
418-8	Unknown, transparent	Undecorated	S-42.1	S: A (485-555) FAG: I (460/80-510/25)	1
418-9	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
				Maastricht: C-E (460/80-580/90)	149

Table 65. Bead types and Maastricht date of the string from Pandhof grave 11321.

Strings with a majority of green beads

Vrijthof 48 (Appendix 1: Figure 50)

FNum	Colour	Decoration	Type	Date	#
1587-3	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	23
1587-1	Amethyst	Polished/Cut	S-5.2	FAG: IV: (565-640/50)	9
1587-7	White, opaque	Decorated	K-21.5	K: 3-4 (565-620/30)	1
1587-9	Unknown, opaque	Undecorated	-	-	1
1587-8	White, opaque	Undecorated	-	-	1
1587-6	White, opaque	Undecorated	-	-	1
1587-4	Blue, opaque	Undecorated	S: group 37 (1-2)	S: (F-I) 570-705 FAG: (IV-V) 565-750	1
1587-5	Orange/Ochre, opaque	Undecorated	S-43.1	S: H-I (610-705)	1
1587-10	Colourless	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	1
				Maastricht: E-G (565-640/50)	39

Table 66. Bead types and Maastricht date of the string from Vrijthof grave 48.

Vrijthof 85 (Appendix 1: Figure 50)

Fnum	Colour	Decoration	Type	Date	#
1418-5	Unknown, opaque	Undecorated	-	-	3
1418-6	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	3
1418-3	Amethyst	Undecorated	S-5.2	FAG: IV (565-640/50)	2
1418-1	Unknown, opaque	Decorated	-	-	1
1418-10	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
1418-4	Red, opaque	Undecorated	-	-	1
1418-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	1
1418-12	Green, opaque	Undecorated	-	-	1
1418-2	Amber	Undecorated	-	-	1
1418-9	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	1
1418-7	Red, opaque	Decorated	S- 2.4 K: 16.3	S: F-H (570-670) K: 3 (565-690/600)	1
				Maastricht: D-G (510/20-640/50)	16

Table 67. Bead types and Maastricht date of the string from Vrijthof grave 85

Vrijthof 100 (Appendix 1: Figure 50)

Fnum	Colour	Decoration	Type	Date	#
1495-3	Green, opaque	Undecorated	-	-	8
1495-4	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	3
1495-5	Yellow, opaque	Undecorated	S-33.6	S: G-H (585-670) FAG IV: (565-670/80)	3
				Maastricht: E-H (565-670/80)	14

Table 68. Bead types and Maastricht date of the string from Vrijthof grave 100.

Vrijthof 235 (Appendix 1: Figure 50)

FNum	Colour	Decoration	Type	Date	#
1748-1	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	4
1748-5	Unknown, opaque	Unknown	-	-	3
1748-6	Green, transparent	Undecorated	S-46.4	S: A (485-530) FAG: I (460/80-510/25)	2
1748-10	Unknown, opaque	Undecorated	-	-	1
1748-3	Green, transparent	Decorated	K-M80?	K: B-C (530-600)?	1
1748-4	White, opaque	Undecorated	-	-	1
1748-7	White, transparent	Undecorated	-	-	1
1748-8	White, opaque	Undecorated	-	-	2
1748-2	White, transparent	Undecorated	-	-	1
				Maastricht: C-D (460/80-565)	16

Table 69. Bead types and Maastricht date of the string from Vrijthof grave 235

Vrijthof 258 (Appendix 1: Figure 51)

FNum	Colour	Decoration	Type	Date	#
1831-1	Green, opaque	Undecorated	-	-	35
1831-2	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	17
1831-6	Blue, opaque	Undecorated	S-1.3	S: D-I (530-705)	3
1831-4	White, opaque	Undecorated	S-1.3	S: D-I (530-705)	3
1831-7	Unknown, opaque	Undecorated	S-1.3?	S: D-I (530-705)?	3
1831-10	Red, opaque	Undecorated	-	-	1
1831-5	White, opaque	Undecorated	-	-	1
1831-9	White, transparent	Undecorated	-	-	1
1831-8	Red, opaque	Decorated	S-2.11 K-48.6	S: D (530-585) FAG: II-III (400-580/90) K: 2-3 (545/50-590/600)	1
1831-3	Yellow, opaque	Undecorated	S-1.3	S: D-I (530-705)	1
				Maastricht: D-E (510/20-580/90)	66

Table 70. Bead types and Maastricht date of the string from Vrijthof grave 258

Vrijthof 313 (Appendix 1: Figure 51)

FNum	Colour	Decoration	Type	Date	#
1019-2	Green, opaque	Undecorated	-	-	9
1019-3	Green, opaque	Undecorated	-	-	9
1019-4	Black, opaque	Decorated	S: group 31 (3-5) K: group 49	-S: B (440-485) -FAG: II (400-565)	1
				Maastricht: B-D (400-565)	19

Table 71. Bead types and Maastricht date of the string from Vrijthof 313

Vrijthof 315 (Appendix 1: Figure 51)

Fnum	Colour	Decoration	Type	Date	#
1151-3	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	35
1151-1	Amethyst	Polished/Cut	S-5.2	FAG: IV (565-640/50)	14

1151-2	Orange/Ochre, transparent	Undecorated	-	-	1
				Maastricht: E-G (565-640/50)	50

Table 72. Bead types and Maastricht date of the string from Vrijthof grave 315

Pandhof 10074 (Appendix 1: Figure 52)

Fnum	Colour	Decoration	Type	Date	#
27-7	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	134
27-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	14
27-10	White, opaque	Undecorated	-	-	4
27-11	Red, opaque	Undecorated	S-35.4	S: D-G: (530-640)	4
27-13	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	3
27-8	Yellow, opaque	Undecorated	S-33.6	S: G-H (585-670) FAG: IV (580/90-670/80)	3
27-15	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	2
27-16	White, opaque	Decorated	S-32.7 K-34.4/34.5	S: E-H (530-670) FAG: IV (580/90-670/80) K: 3-4 (565-620/30)	2
27-19	Amethyst	Undecorated	S-5.2	FAG: IV: (565-640/50)	2
27-18	White, opaque	Decorated	-	-	1
27-20	White, opaque	Decorated	K: 20.8	K: C (555-620)	1
27-14	Red, opaque	Undecorated	-	-	1
27-17	Yellow, opaque	Undecorated	S-33.1	S: D-G (530-640) FAG: II-III (400-580/90)	1
27-12	Red, opaque	Decorated	S-35.13 K: group 42	S: D-H (530-670)	1
				Maastricht: F-H (580/90-670/80)	173

Table 73. Bead types and Maastricht date of the string from Pandhof grave 10074

Pandhof 10828 (Appendix 1: Figure 53)

FNum	Colour	Decoration	Type	Date	#
240-16	Colourless	Undecorated	S-42.1	S: A (485-530) FAG: I (460/80-510/25)	36
240-15	Green, transparent	Undecorated	S-46.4	S: A (485-530) FAG: I (460/80-510/25)	29
240-23	White, opaque	Undecorated	-	-	20
240-24	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	20
240-14	Blue, transparent	Undecorated	S-47.8	S: H-I (610-705) FAG: IV (580/90-670/80)	5
240-20	Blue, transparent	Undecorated	S-47.2	S: A: (485-555) FAG: I (460/80-510/25)	4
240-13	Green, opaque	Undecorated	-	-	2
240-11	Blue,	Undecorated	S-47.9	S: A (485-555)	2

	transparent			FAG: I (460/80-510/25)	
240-21	Blue, opaque	Decorated	S: group 37 (3) K: group1	S: B (440-485) K: 2-3 (545/50-590/600)	1
240-17	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	1
240-18	White, opaque	Undecorated	-	-	1
240-19	Blue, transparent	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	1
240-25	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	1
240-12	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
240-22	-	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	1
				Maastricht: B-F (400-610/20)	125

Table 74. Bead types and Maastricht date of the string from Pandhof grave 10828

Pandhof 11342 (Appendix 1: Figure 53)

FNum	Colour	Decoration	Type	Date	#
466-13	Green, opaque	Undecorated	-	-	36
466-11	Yellow, transparent	Undecorated	S-43.1	S: A (485-555) FAG: I (460/80-510/25)	27
466-10	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	7
466-17	Yellow, transparent	Undecorated	S-43.1	S: A (485-555) FAG: I (460/80-510/25)	3
466-18	Blue, transparent	Undecorated	S-47.2	S: A (485-555) FAG: I (460/80-510/25)	2
466-9	Blue, opaque	Undecorated	-	-	1
466-12	White, transparent	Undecorated	-	-	1
				Maastricht: C-E (460/80-580/90)	77

Table 75. Bead types and Maastricht date of the string from Pandhof grave 11342

Pandhof 10923 (Appendix 1: Figure 54)

FNum	Colour	Decoration	Type	Date	#
182-3	Green, transparent	Undecorated	S-46.1	S: A (485-555) FAG: I (460/80-510/25)	45
182-1	Green, opaque	Undecorated	S-1.4	S: A (485-555) FAG: I (460/80-510/25)	38
182-2	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	40
				Maastricht: C (460/80-510/25)	123

Table 76. Bead types and Maastricht date of the string from Pandhof grave 10923

Strings with a majority of red beads

Vrijthof 12 (Appendix 1: Figure 54)

FNum	Colour	Decoration	Type	Date	#
1673-1	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	17
1673-2	Green, opaque	Undecorated	-	-	12
1673-3	Black, opaque	Undecorated	S-31.1	S: C-D 485-585 FAG: II 400-580/90	1
				Maastricht: D-G (510/20-640/50)	30

Table 77. Bead types and Maastricht date of the string from Vrijthof grave 12

Vrijthof 187 (Appendix 1: Figure 54)

FNum	Colour	Decoration	Type	Date	#
1636-4	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	11
1636-5	Colourless	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	6
1636-6	Amber	Polished/Cut	-	-	3
1636-10	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	2
1636-3	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	4
1636-7	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	1
1636-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	1
1636-9	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	1
				Maastricht: D-G (510/20-640/50)	29

Table 78. Bead types and Maastricht date of the string from Vrijthof grave 187

Pandhof 10118 (Appendix 1: Figure 55)

FNum	Colour	Decoration	Type	Date	#
42-5	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	17
42-3	Millefiori	Decorated	S-2.13 K-M1-53	K: 3-4 (565-620/30)	12
42-4	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	15
42-6	Red, opaque	Undecorated	-	-	1
				Maastricht phase E-G (565-640/50)	45

Table 79. Bead types and Maastricht date of the string from Pandhof grave 10118

Pandhof 10988 (Appendix 1: Figure 55)

FNum	Colour	Decoration	Type	Date	#
261-6	White, opaque	Undecorated	-	-	2
261-3	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	2

261-7	Red, opaque	Undecorated	S-35.4	S: D-G: (530-640)	2
261-4	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	2
261-5	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	1
				Maastricht: D-H (510/20-670/80)	9

Table 80. Bead types and Maastricht date of the string from Pandhof grave 10988

Strings with a majority of amber beads

Vrijthof 274 (Appendix 1: Figure 56)

FNum	Colour	Decoration	Type	Date	#
1792-3	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	10
				Maastricht phase B-E (400-580/90)	10

Table 81. Bead types and Maastricht date of the string from Vrijthof grave 274

Pandhof 11252 (Appendix 1: Figure 56)

FNum	Colour	Decoration	Type	Date	#
365-1	Amber	Polished	-	FAG: II-III (400-580/90)	36
365-2	Amber	Polished	-	FAG: II-III (400-580/90)	4
365-6	White, opaque	Decorated	K-3.6	K: 3-4 (565-620/30)	3
365-8	White, opaque	Decorated	K-3.4 / 3.14	K: 3-4 (565-620/30)	1
365-5	White, opaque	Undecorated	-	-	3
365-9	Red, opaque	Decorated	-	-	1
365-10	Green, opaque	Undecorated	-	-	1
365-7	Red, opaque	Decorated	K: group 27	K: (500-700)	1
365-11	Red, opaque	Decorated	K-20,13-20,17	K: C (555-620)	1
365-3	Black, opaque	Decorated	S: group 31 (3-5) K: group 27	S: B (440-485) FAG: II-III (400-580/90) K: (500-700)	1
365-4	White, opaque	Decorated	K-21.2	K: 3-4 (565-620/30)	1
				Maastricht phase B-E (400-580/90)	53

Table 82. Bead types and Maastricht date of the string from Pandhof grave 11252

Vrijthof 277 (Appendix 1: Figure 57)

FNum	Colour	Decoration	Type	Date	#
1807-3	Amber	Polished/Cut	Red	FAG: II-III (400-580/90)	15
1807-7	Yellow, opaque	Undecorated	S-33.5	S: I (640-705) FAG: IV-V (580/90-750)	4
1807-8	Green, opaque	Undecorated	-	-	3
1807-6	Red, opaque	Undecorated	-	-	1
1807-5	Green, opaque	Decorated	K: group 7	K: 4 (590/600-620/30)	1
1807-4	Red, opaque	Undecorated	S- 35,6	S: H-I (610-705) FAG: IV (580/90-670/80)	1

1807-11	White, opaque	Undecorated	S-1.3	S: C-D (485-585)	1
1807-9	Blue, transparent	Undecorated	S-47.7	S: G-H (585-670)	1
1807-10	White, opaque	Undecorated	S-32.2	S: H-I (610-705) FAG: IV (580/90-670/80)	1
				Maastricht E-H (565-670/80)	28

Table 83. Bead types and Maastricht date of the string from Vrijthof grave 277

Pandhof 10514 (Appendix 1: Figure 57)

FNum	Colour	Decoration	Type	Date	#
454-7	Amber	Undecorated	-	FAG: II-III (400-580/90)	20
454-8	Blue, transparent	Fragments	S: Group 47	S: A/F-I (485-555) / (570-705)	-
				Maastricht B-E (400-580/90)	20

Table 84. Bead types and Maastricht date of the string from Pandhof grave 10514

Pandhof 10122 (Appendix 1: Figure 57)

FNum	Colour	Decoration	Type	Date	#
73-2	Amber	Undecorated	-	FAG: II-III (400-580/90)	9
73-3	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
				Maastricht: B-E (400-580/90)	10

Table 85. Bead types and Maastricht date of the string from Pandhof grave 10122

Pandhof 11321 (Appendix 1: Figure 58)

FNum	Colour	Decoration	Type	Date	#
418-18	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	43
418-24	White, transparent	Undecorated	S-42-2	S: C-E (485-585) FAG: I (460/80-510/25)	16
418-25	Blue, transparent	Undecorated	S-47.1	S: A: (485-555) FAG: I (460/80-510/25)	13
418-20	Gold	Undecorated	-	(500-550)	2
418-21	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	2
418-23		Silver-in-glass	S-40.2	S: C-E: (485-585) FAG: II-III: (400-580/90)	2
418-19	Blue, opaque	Ribbed			1
418-22	Red, opaque	Undecorated	S-35.1	S: B-F (440-610/20)	1
418-26	Green, opaque	Undecorated	-	-	1
418-27	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	1
				Maastricht: B-E (400-580/90)	82

Table 86. Bead types and Maastricht date of the string from Pandhof grave 11321

Pandhof 10227 (Appendix 1: Figure 58)

FNum	Colour	Decoration	Type	Siegmund	#
321-2	Amber	Undecorated	-	FAG: II-III (400-580/90)	40

321-5	Green, transparent	Undecorated	S-46.4	S: A (485-530) FAG: I (460/80-510/25)	7
321-1	Blue, transparent	Undecorated	S-47.6	S: D (530-585)	3
321-6	Colourless	Undecorated	S-1.5	S: A (485-530) FAG: I (460/80-510/25)	1
321-7	Green, transparent	Undecorated	S: group 46.1-5	S: A (485-555) / H-I (610-705)	1
321-3	Green, opaque	Undecorated	S-36.2	S: F-I (570-705) FAG: IV-V (580/90-750)	1
321-9	Green, opaque	Undecorated	S-36.1	S: C-G (485-640) FAG: II-III (400-580/90)	1
321-4	Rock-crystal		S-5.1	S: C (485-555) FAG: II (400-580/90)	1
321-8	Unknown	Undecorated	-	-	3
321-10	Green, transparent	Undecorated	S: 46.2	S: A (485-555)	1
				Maastricht: B-E (400-580/90)	59

Table 87. Bead types and Maastricht date of the string from Pandhof grave 10227

Pandhof 10365 (Appendix 1: Figure 59)

Fnum	Colour	Decoration	Type	Date	#
562-7	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	26
562-14	Red, opaque	Undecorated	S-35.2	S: C-F (485-640) FAG: III (460/80-580/90)	6
562-11	Red, opaque	Undecorated	S-35.4	D-G (530-640)	3
562-5	Red, opaque	Retticella	S-2.11 K- 48,14 K-48,16	S: D (530-585) FAG: II-III (400-580/90) K: 2-3 (545/50-590/600)	2
562-9	Green, opaque	Undecorated	-	-	1
562-12	Red, opaque	Undecorated	L/P/V: 1	PM-MA1 (440/50-520/30)	1
562-15	Green, opaque	Undecorated	-	-	1
562-8	Blue, transparent	Undecorated	S-47.6	S: D (530-585)	1
562-17	Blue, transparent	Undecorated	-	-	1
562-6	Rock-crystal	Polished/Cut	S-5.1	S: C (485-555) FAG: II (400-580/90)	1
562-16	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	1
562-13	White, transparent	Undecorated	S-42.2	S: C-E (485-585) FAG: I (460/80-510/25)	1
562-10	White, opaque	Decorated	K-3,4 / 3,14	K: 3-4 (565-620/30)	1
				Maastricht: B-E (400-580/90)	46

Table 88. Bead types and Maastricht date of the string from Pandhof grave 10365

Strings with a majority of yellow (with white) glass beads

Vrijthof 100 (Appendix 1: Figure 60)

Fnum	Colour	Decoration	Type	Date	#
1434-1	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	7
1434-2	Yellow, opaque	Undecorated	S-33.1	S: D-G (530-640) FAG: II-III (400-580/90)	4
1434-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	4
1434-9	Red, opaque	Undecorated	S- 35.6	S: H-I (610-705) FAG: IV (580/90-670/80)	4
1434-10	White, opaque	Undecorated	S-32.3	S: H-I (610-705) FAG: IV (580/90-670/80)	2
1434-11	White, opaque	Decorated	K: 15,34	K: 4 (590/600-620/30)	2
1434-3	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	2
1434-4	Green, opaque	Undecorated	-	-	2
1434-5	Red, opaque	Decorated	S-35.12 K: 20.1	S: F-G (570-640) K: 3-4 (565-620/30)	2
1434-6	Red, opaque	Undecorated	-	-	2
1434-7	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	2
1434-12	Unknown, opaque	Undecorated	-	-	1
1434-13	Red, opaque	Decorated	K-35.2.	-	1
				Maastricht phase E-H (565-670/80)	35

Table 89. Bead types and Maastricht date of the string from Vrijthof grave 100

Vrijthof 110 (Appendix 1: Figure 60)

Fnum	Colour	Decoration	Type	Date	#
1624-8	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	15
1624-6	White, opaque	Undecorated	-	-	7
1624-10	Green, transparent	Undecorated	-S: group 46,1-5	S: A (485-555) / H-I (610-705)	5
1624-19	Red, opaque	Undecorated	-	-	4
1624-3	White, opaque	Decorated	-K: group 42	K: C-D (555-620)	3
1624-4	White, opaque	Undecorated	-	-	3
1624-11	Green, opaque	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	2
1624-12	Yellow, opaque	Undecorated	S-33.1	S: D-G (530-640) FAG: II-III (400-580/90)	2
1624-18	Amethyst	Polished/Cut	S-5.2	FAG: IV (565-640/50)	2
1624-2	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	2
1624-24	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	2

1624-13	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	1
1624-15	White, opaque	Decorated	K-21,5	K: 3-4 (565-620/30)	1
1624-17	Unknown, transparent	Undecorated	-	-	1
1624-20	Red, opaque	Undecorated	S-35.6	S: H-I (610-705) FAG: IV (580/90-670/80)	1
1624-21	White, opaque	Decorated	S-32.7 K-34.4/34.5	S: E-H (530-670) FAG: IV (580/90-670/80) K: 3-4 (565-620/30)	1
1624-23	White, opaque	Decorated	K: group 20	K: C (555-620)	1
1624-25	Amber	Polished/Cut	-	-	1
1624-26	Blue, transparent	Raised dots	K-4,6	K: 4 (590/600-620/30)	1
1624-5	Red, opaque	Decorated	S-35.12 K: 20,1	S: F-G (570-640) K: 3-4 (565-620/30)	1
1624-7	Green, transparent	Undecorated	S-46.2	S: A (485-555) FAG: I (460/80-510/25)	1
1624-9	Green, opaque	Undecorated	S-36.1	S: C-G (485-640) FAG: II-III (400-580/90)	1
1624-28	Red, opaque				1
1624-29	Green, opaque	Undecorated	-	-	1
1624-30	Green, opaque	Undecorated	-	-	1
				Maastricht: D-H (510/20-670/80)	61

Table 90. Bead types and Maastricht date of the string from Vrijthof grave 110

Vrijthof 166 (Appendix 1: Figure 61)

FNum	Colour	Decoration	Type	Date	#
1539-3	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	32
1539-2	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	10
1539-5	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	7
1539-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	6
1539-4	Blue, transparent	Undecorated	S-47.5	S: F-G (570-640) FAG: IV (580/90-670/80)	5
1539-6	Blue, transparent	Undecorated	S-47.1	S: F-G (570-640) FAG: IV (580/90-670/80)	4
1539-7	Blue, transparent	Decorated	K-M67/72	K: 4 (590/600-620/30)	2
				Maastricht: D-H (510/20-670/80)	66

Table 91. Bead types and Maastricht date of the string from Vrijthof grave 166

Vrijthof 178 (Appendix 1: Figure 61)

FNum	Colour	Decoration	Type	Date	#
1516-4	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	4
1516-1	Amber	Polished/Cut	-	-	2
1516-5	Colourless	Silver-in-glass	S-40.1	S: C-E (485-585)	2

				FAG: II-III (400-580/90)	
1516-7	Unknown, opaque	Unknown	-	-	1
1516-6	Green, opaque	Undecorated	-	-	1
1516-3	Yellow, opaque	Decorated	K: group 27	K: (500-700)	1
1516-8	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
1516-11	Blue, opaque	Ribbed	-	-	1
1516-12	Green, transparent	Decorated	K: group 29	K: (500-700)	1
1516-13	Amber	Polished/Cut	-	-	1
1516-2	Orange/Ochre, opaque	Undecorated	S-34.1	S: H-I (610-705)	1
1516-9	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	1
				Maastricht: D-H (510/20-670/80)	17

Table 92. Bead types and Maastricht date of the string from Vrijthof grave 178

Vrijthof 214 (Appendix 1: Figure 61)

FNum	Colour	Decoration	Type	Date	#
1759-2	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	10
1759-1	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	1
				Maastricht phase D-H (510/20-670/80).	11

Table 93. Bead types and Maastricht date of the string from Vrijthof grave 214

Vrijthof 95 (Appendix 1: Figure 62)

FNum	Colour	Decoration	Type	Date	#
1484-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	57
1484-7	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	38
1484-2	Amber	Undecorated	-	-	1
1484-3	Orange/Ochre, opaque	Undecorated	S-34.1	S: H-I (610-705)	1
1484-4	Red, opaque	Undecorated	-	-	1
1484-5	Blue, transparent	Undecorated	-	-	1
				Maastricht: D-H (510/20-670/80)	99

Table 94. Bead types and Maastricht date of the string from Vrijthof grave 95

FNum	Colour	Decoration	Type	Date	#
1482-2	Millefiori	Decorated	S-2.13 K- M25/27/52	K: 2-4 (545/50-620/30)	3
1482-3	Blue, opaque	Decorated	-	-	1
1482-4	Blue, transparent	Decorated	K-M67/72	K: 2-4 (545/50-620/30)	1
1482-5	White, opaque	Undecorated	-	-	1
1482-6	Blue, opaque	Ribbed	Melon bead	Roman	1
				Maastricht: D-G (510/20-640/50)	

Table 95. Bead types and Maastricht date of the string from Vrijthof grave 95

Vrijthof grave 247 (Appendix 1: Figure 63)

FNum	Colour	Decoration	Type	Date	#

1752-2	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	12
1752-6	Unknown, transparent	Undecorated	-	-	4
1752-4	Amber	Polished/Cut	-	-	2
1752-8	Green, transparent	Decorated	K-42	-	1
1752-5	Orange/Ochre, transparent	Undecorated	-	-	1
1752-3	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	1
1752-7	Amber	Carved	-	-	1
1752-9	Yellow, opaque	Decorated	S-33.7	S: (D-H)E-F (530-670) 530-640 FAG: III: 460/80-580/90	1
1752-1	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	1
1752-10	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	1
				Maastricht: D-H (510/20-670/80)	25

Table 96. Bead types and Maastricht date of the string from Vrijthof grave 247

Vrijthof 314 (Appendix 1: Figure 63)

FNum	Colour	Decoration	Type	Date	#
1172-4	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	4
1172-3	White, opaque	Undecorated	-	-	3
1172-2	Unknown, opaque	Undecorated	-	-	2
1172-5	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	2
1172-7	White, opaque	Undecorated	-	-	1
1172-6	Amber	Polished/Cut	-	-	1
				Maastricht: D-H (510/20-670/80)	13

Table 97. Bead types and Maastricht date of the string from Vrijthof grave 314

FNum	Colour	Decoration	Type	Date	#
1173-4	Millefiori	Decorated	S-2.13 K-M21/22	K: 3 (565-590/600)	2
1173-2	Millefiori	Decorated	S-2.13 K-M9/11	K: 3 (565-590/600)	1
1173-3	Green, transparent	Decorated	K-1.13	K: 2-3 (545/50-590/600)	1
				Maastricht: E (565-580/90)	4

Table 98. Bead types and Maastricht date of the string from Vrijthof grave 314

Pandhof 10128 (Appendix 1: Figure 64)

FNum	Colour	Decoration	Type	Date	#
40-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	49
40-3	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	3
40-4	Red, opaque	Decorated	S-35.8	S: F-H (570-670)	3

			K: group 34	FAG: III-IV (460/80-670/80) K: D-E (600-650)	
40-5	White, opaque	Decorated	S-32.7 K-34,4/34,5	S: E-H (530-670) FAG: IV (580/90-670/80) K: 3-4 (565-620/30)	2
40-7	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	1
				Maastricht D-H (510/20-670/80)	58

Table 99. Bead types and Maastricht date of the string from Pandhof grave 10128

Pandhof 10220 (Appendix 1: Figure 64)

FNum	Colour	Decoration	Type	Date	#
303-3	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	13
303-6	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	2
303-5	Unknown	Unknown	-	-	1
303-4	Green, transparent	Undecorated	S-46.4	S: A (485-530) FAG: I (460/80-510/25)	1
303-2	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	1
				Maastricht: C-G (460/80-640/50)	18

Table 100. Bead types and Maastricht date of the string from Pandhof grave 10220

Pandhof 10407 (Appendix 1: Figure 64)

FNum	Colour	Decoration	Type	Date	#
581-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	17
581-7	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	13
581-11	Yellow, opaque	Undecorated	-	-	9
581-3	Millefiori	Decorated	S-2.13 K-M22/27/36	K: 3 (565-590/600)	4
581-4	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	4
581-17	White, opaque	Undecorated	-	-	1
581-15	Red, opaque	Undecorated	-	-	1
581-13	White, opaque	Undecorated	-	-	1
581-12	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
581-10	Blue, transparent	Undecorated	S-47.1	S: A: (485-555) FAG: I (460/80-510/25)	1
581-14	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	1
581-8	Blue, transparent	Undecorated	S-47.1?	S: A (485-555) FAG: I (460/80-510/25)	1
581-16	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
581-9	Blue, transparent	Undecorated	S-47.5	S: F-G (570-640) FAG: IV(580/90-670/80)	1
581-5	Unknown, transparent	Decorated	S-2.1	S: G-I (585-705) FAG: IV-V (580/90-750)	1
581-18	Millefiori		Fragments		-
				Maastricht: D-G (510/20-640/50)	57

Table 101. Bead types and Maastricht date of the string from Pandhof grave 10407

Pandhof 10635 (Appendix 1: Figure 66)

FNum	Colour	Decoration	Type	Date	#
432-4	Yellow, opaque	Undecorated	S-33.6	S: G-H (585-670) FAG: IV (580/90-670/80)	3
432-3	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
432-2	Blue, transparent	Undecorated	S-47.7	S: G-H (585-670)	1
				Maastricht F-H (580/90-670/80)	5

Table 102. Bead types and Maastricht date of the string from Pandhof grave 10635

Pandhof 10985 (Appendix 1: Figure 66)

FNum	Colour	Decoration	Type	Date	#
254-2	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	7
254-1	Yellow, opaque	Decorated	<i>K-Hängeperlen</i>	K : (575-600)	3
254-3	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	3
254-5	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	1
254-4	Red, opaque	Decorated	S-35.13 K: group 42	S: D-H (530-670)	1
				Maastricht: E-H (565-670/80)	15

Table 103. Bead types and Maastricht date of the string from Pandhof grave 95

Strings with a majority of white beads

Pandhof 10061 (Appendix 1: Figure 66)

FNum	Colour	Decoration	Type	Date	#
48-7	White, opaque	Decorated	K: 21,2	K: 3-4 (565-620/30)	6
48-11	White, opaque	Undecorated	-	-	4
48-13	Red, opaque	Undecorated	-	-	4
48-12	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	3
48-5	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	2
48-10	Blue, transparent	Undecorated	-	-	2
48-15	White, opaque	Decorated	K-21.5	K: 3-4 (565-620/30)	1
48-14	White, opaque	Undecorated	-	-	1
48-17	Yellow, opaque	Undecorated	-	-	1
48-6	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	1

48-9	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	1
48-4	Rock-crystal	Undecorated	S-5.1	S: C (485-555) FAG: II (400-580/90)	1
48-16	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
48-8	White, opaque	Decorated	S-32.7 K-34.4/34.5	S: E-H (530-670) FAG: IV (580/90-670/80) K: 3-4 (565-620/30)	1
				Maastricht: E-G (565-640/50)	29

Table 104. Bead types and Maastricht date of the string from Pandhof grave 10061

Strings with a majority of amethyst beads

Pandhof 10042 (Appendix 1: Figure 67)

FNum	Colour	Decoration	Type	Date	#
60-8	Amethyst	Undecorated	S-5.2	FAG: IV (565-640/50)	13
60-9	Red, transparent	Undecorated	S-45.1	S: A (485-555) FAG: I (460/80-510/25)	1
				Maastricht: D-G (510/20-640/50)	14

Table 105. Bead types and Maastricht date of the string from Pandhof grave 10042

Pandhof grave 10856 (Appendix 1: Figure 67)

FNum	Colour	Decoration	Type	Date	#
172-1	Amethyst	Undecorated	S-5.2	FAG: IV (565-640/50)	6
172-3	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	4
172-2	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	2
				Maastricht: E-G (565-640/50)	12

Table 106. Bead types and Maastricht date of the string from Pandhof grave 10856

Pandhof 10252 (Appendix 1: Figure 67)

FNum	Colour	Decoration	Type	Date	#
333-3	Green, opaque	Undecorated	-	-	1
333-6	Green, opaque	Undecorated	S-36.1	S: C-G (485-640) FAG: II-III (400-580/90)	2
333-5	Orange/Ochre, opaque	Undecorated	S-34.1	S: H-I (610-705)	1
333-7	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	1
333-2	White, opaque	Decorated	K-3,4 / 3,14	K: 3-4 (565-620/30)	1
333-4	-	Gold-in-glass	S-40,2	S: C-E (485-585) FAG: II-III (400-580/90)	1
333-#	Amethyst (lost)	Polished	S-5.2	FAG: IV (565-670/80)	5
333-#	Blue (lost)	-	-	-	3
				Maastricht: C-E (460/80-580/90)	15

Table 107. Bead types and Maastricht date of the string from Pandhof grave 10252

Strings with a majority of metal-in-glass (metal foiled glass beads)

Vrijthof 68 (Appendix 1: Figure 68)

FNum	Colour	Decoration	Type	Date	#
1149-4	-	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	7
1149-5	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	7
1149-12	Unknown, opaque	Unknown			3
1149-11	White, opaque	Undecorated	-	-	3
1149-10	Amber	Polished/Cut	-	-	3
1149-6	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	3
1149-2	Millefiori	Decorated	S-2.13 K-M33	K: 3 (565-590/600)	2
1149-8	Blue, transparent	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	2
1149-9	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	2
1149-7	Green, opaque	Irrelevant	S-1.6	S: H-I (610-705)	2
				Maastricht: E-H (565-670/80)	34

Table 108. Bead types and Maastricht date of the string from Vrijthof grave 68

Vrijthof grave 187 (Appendix 1: Figure 68)

FNum	Colour	Decoration	Type	Date	#
1637-6	-	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	34
1637-5	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	14
1637-16	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	9
1637-15	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	8
1637-19	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	5
1637-11	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	3
1637-10	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	2
1637-12	Unknown, opaque	Unknown	-	-	2
1637-4	Red, opaque	Decorated	S-35.13 K: group 42	S: D-H (530-670)	2
1637-9	Blue, opaque	Undecorated	S: group 37 (1-2)	S: (F-I) 570-705 FAG: (IV-V) 565-750	2
1637-1	Amber	Polished/Cut	-	-	1
1637-13	Blue, transparent	Undecorated	S-47.9	S: A (485-555) FAG: I (460/80-510/25)	1
1637-14	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1

1637-17	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
1637-18	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	1
1637-2	Millefiori	Decorated	S-2.12 K- M56	S: C-D (485-585) K: 2 (545/50-565/70)	1
1637-3	Red, opaque	Retticella	S-2.11 K-48,14	S: D (530-585) FAG: II-III (400-580/90) K: 2-3 (545/50-590/600)	1
1637-7	White, transparent	Undecorated	-	-	1
1637-8	Yellow, opaque	Decorated	K: group 27	K: (500-700)	1
				Maastricht: B-E (400-580/90)	90

Table 109. Bead types and Maastricht date of the string from Vrijthof grave 187

Pandhof 10799 (Appendix 1: Figure 69)

FNum	Colour	Decoration	Type	Date	#
128-12	-	Gold-in-glass	S-40.2	S: C-E (485-585) FAG: II-III (400-580/90)	11
128-4	-	Gold-in-glass	S-40.2	S: C-E (485-585) FAG: II-III (400-580/90)	10
128-6	Blue, transparent	Undecorated	S-1.4	S: A (485-555) FAG: I (460/80-510/25)	8
128-7	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	7
128-13	Unknown, transparent	Undecorated	-	-	6
128-8	-	Gold-in-glass	S-40.2	S: C-E (485-585) FAG: II-III (400-580/90)	6
128-10	White, transparent	Undecorated	S-42.3	S: C-D (485-585)	5
128-9	-	Undecorated	L/P/V-I	PM-MA1 (440/50-520/30)	4
128-5	Blue, transparent	Undecorated	S-47.5	S: F-G (570-640) FAG: IV(580/90-670/80)	4
128-3	Green, transparent	Undecorated	S-46.4	S: A (485-530) FAG: I (460/80-510/25)	3
128-11	White, transparent	Undecorated	S-42.2	S: C-E (485-585) FAG: I (460/80-510/25)	2
128-14	Unknown, transparent	-	-	-	1
				Maastricht: C-F (460/80-610/20)	67

Table 110. Bead types and Maastricht date of the string from Pandhof grave 10799

Seaxes and seax scabbards

Seaxes are common grave goods, which were predominantly part of grave goods assemblages of men although the relative number of graves containing a seax can vary considerably from cemetery to cemetery. Generally just the iron blade and core of the grip are preserved and the actual grip (mostly made of wood) and leather scabbard have decayed. Of some of the seaxes from the Vrijthof and Pandhof cemeteries parts of the wooden grip and leather scabbard are preserved. Some additional metal elements of the scabbard like edge-reinforcements, bronze rivets, nails and plates can be related to some of the seaxes of the Servatius complex. These elements will be discussed below.

Twenty-nine seaxes were found in the Vrijthof cemetery, from the Pandhof cemetery 12 seaxes are more or less preserved, 5 are lost or corroded to such an extent that further classification is impossible. Four seaxes from the Vrijthof cemetery became lost after the excavation (nrs. 1603, 1605, 1684, 1763), and of the remaining twenty-five seaxes two cannot be allocated to a specific grave context (nrs. 1755-10, 1843-3). The condition of the remaining Vrijthof seaxes is reasonable, so the measurements of the blades can be established for most of them. They have a blade width varying from 2.8 to 5.6 cm and a blade length from 16.7 to 49.5 cm. The measurements of the blades of the Pandhof seaxes cannot be reconstructed for all of them. Of those that can be measured, the width of the blade varies from 3.1 to 6.2 cm. The length varies from 26 to 42 cm.

Because small seaxes can have the appearance of large knives, lower and upper limits for the measurements of seaxes and large knives are introduced for typological purposes.¹⁴⁷⁵ It should be noticed that this modern distinction between seaxes and knives may not have been perceived as a meaningful one in Merovingian times. This modern distinction is probably made because seaxes are usually associated with combat and are seen as a weapon, while the smaller specimens (knives) are associated with daily or agricultural practices. Siegmund used the 15 cm divide for the blade length to distinguish between (large) knives and (small) seaxes.¹⁴⁷⁶ This divide will also be used in the analysis of the knives and seaxes of the Maastricht cemeteries, and in doing so it appears that only three of the seaxes (from Vrijthof grave 168 with a blade length of 19.5 cm, from Vrijthof grave 194 with a blade length of 16.7 cm, from Vrijthof context unknown (find number 1659-1) with a blade length of 16.9 cm) come close to this demarcation line of 15 cm. The seax from grave 168 is accompanied by a knife with a blade length of 9.6 cm, what is a confirmation for its identification as a seax. The seax from Vrijthof grave 194 was not accompanied by a knife, only by a bronze plate buckle. For now its classification as a seax is maintained, as it is for the object with find number 1659-1. The object identified as a knife from Vrijthof grave 58 also comes close to this divide number with a length of 13.7 cm. The knife however was found together with a seax (length 34 cm), and because the presence of two seaxes is unusual in Merovingian graves, the smaller one can be considered a knife.

Seaxes are typologically differentiated on the basis of measurements of the blade and grip and some additional formal criteria concerning the blade shape in combination with the associated metal remains of the seax scabbard. Metal fittings associated with the scabbard are only known from graves of the seventh century, while seaxes were already in use as grave goods during the early sixth century.¹⁴⁷⁷ Measurements of the blade (length and width) and core of the handle of seaxes resulted in the well-known German classification of '*Schmal-, Breit- and- Langsaxe*' at one moment expanded with '*Kurzsaxe*'.¹⁴⁷⁸ The *Breitsaxen* were further divided into '*schwere*' and '*leichte Breitsaxen*' and sometimes '*kurzer Breitsaxe*'.¹⁴⁷⁹ A further classification of '*Schmalsaxe*' into '*schwere*' and '*leichte Schmalsaxe*' can also be found.¹⁴⁸⁰ It is remarkable and unpractical that researchers use the same terms, but different metrical criteria to distinguish different seax types from each other.¹⁴⁸¹ This is probably due to local

¹⁴⁷⁵ Siegmund 1998, 87.

¹⁴⁷⁶ Siegmund 1998, 87.

¹⁴⁷⁷ Siegmund 1998, 94-95.

¹⁴⁷⁸ See for instance Böhner 1958, 130-145; Neuffer-Müller 1966, 28-29; Koch 1977, 105-108.

¹⁴⁷⁹ Koch 1977, 107-108; Müsseseier *et al.* 2003, 46.

¹⁴⁸⁰ Siegmund 1998, 87-92; Pescheck 1996, 56; Koch 1977, 105-108; Giesler 1983, 528-531.

¹⁴⁸¹ Siegmund 1998, 89 tabelle 12; Wernard 1998, 747-748, 769-771.

specificities and the aim of the researches to create meaningful typological classes for the cemetery under study.¹⁴⁸² The shape of the blade is also a criterion used to classify seaxes, but as Siegmund elaborately explains, measurements and shape description did not result in unambiguous types for the Lower Rhineland. Siegmund therefore uses only metric criteria for the definition of significant typological groups.¹⁴⁸³ The Franken AG proposed a somewhat divergent subdivision based on the relation blade length/blade width and associated belt elements.¹⁴⁸⁴ Whereas Siegmund and the Franken AG identified 4 or 5 types of seaxes, Legoux, Périn and Vallet identified 10 seax types. Their classification is mainly based on the length of the blade and the shape of the back.¹⁴⁸⁵ They do not consider the index of the length and width of the blade as a relevant variable, what results in a rather scanty classification. It is therefore decided to follow the altered classification of Siegmund by the Franken AG for the analysis of the seaxes from the Maastricht cemeteries.

Schmalsaxe

Vrijthof: 115 (1614-1); 168 (1534-2); 173 (1450-2); 194 (1502-1); 205 (1653-1); 0 (1659-1). Pandhof: 10100 (59-10); 19999 (9999-15).

Appendix 1: Figure 72.

It appears that seaxes with a blade length up to 31 cm in most cases do not have a blade width of more than 4 cm.¹⁴⁸⁶ These seaxes are classified as Sax 1 (*Schmalsax*) by the Franken AG.¹⁴⁸⁷ This is also the case for the seaxes of the Vrijthof and Pandhof cemeteries, except for one. The seax from Pandhof grave 10360 has a length of 26 cm and a width of 4.2 cm and should therefore not be identified as a *Schmalsax*, but as *kurze Breitsax* (see below) according to the classification of the Franken AG. From this it follows that six seaxes of the Vrijthof cemetery and two of the Pandhof cemetery can be classified as *Schmalsaxe* (table 111). These are also *Schmalsaxe* according to Siegmund's criteria.¹⁴⁸⁸

Context	Find	L	W	Scabbard rivets	Belt
V 194	1502-1	167	28	-	'Maastricht' plate buckle
V 0	1659-1	169		-	-
V 168	1534-2	195	38	-	Iron buckle
V 115	1614-1	252	37	-	-
V 205	1653-1	258	34	-	Bronze plate buckle
V 173	1450-2	261	33	-	-
P 19999	9999-15	286	31	-	-
P 10100	59-10	302	31		Bronze belt (Gur3.2.a)

Table 111. The *Schmalsaxe* in the Vrijthof and Pandhof cemeteries.

The measurements are given in mm. Context: V = Vrijthof, P = Pandhof. Find = find number. L=length of the blade. W = width of the blade. Scabbard rivets = associated scabbard rivets. Belt: associated belt fittings.

In Siegmund's research area it appears that *Schmalsaxe* are not associated with belts, and if they are only with early belts. Scabbard rivets were hardly found with these early seaxes. These findings coincide with the grave goods assemblages where the seaxes of the Vrijthof and Pandhof cemeteries were part

¹⁴⁸² Siegmund 1998, 87; Giesler 1983, 528.

¹⁴⁸³ Siegmund 1998, 87. Reasons are local particularities and corrosion.

¹⁴⁸⁴ Müsseseimer *et al.* 2003, 44-47.

¹⁴⁸⁵ Legoux/Périn/Vallet 2004, 14-5, 27-28.

¹⁴⁸⁶ Müsseseimer *et al.* 2003, 44-47.

¹⁴⁸⁷ Müsseseimer *et al.* 2003, 45.

¹⁴⁸⁸ Siegmund 1998, 87-93.

of, none of them is associated with scabbard rivets and Vrijthof graves 115 and 173 did not contain belt fittings. Vrijthof grave 168 contained a simple iron buckle, which, however, is difficult to date. Vrijthof grave 194 contained a bronze plate buckle of the 'Maastricht' type which dates to the second half of the sixth century. A bronze plate buckle with animal-style decoration was found in Vrijthof grave 205; it dates in the *Jüngere Merowingerzeit II* (630/40-670/80) which is considered a relatively late date for a *Schmalsax*.

The seaxes from Vrijthof grave 115 and Pandhof grave 10100 show some noticeable features. As said, it is generally considered that the smaller seaxes, of the sixth century, are rarely found with accompanying scabbard elements such as rivets, nails and edge-reinforcements. The seax from Vrijthof grave 115, however, shows a bronze strip folded around the remains of the grip which can be interpreted as the remains of an edge-reinforcement which was applied to the mouth of the scabbard. No other scabbard remains are known from this grave. Generally only the iron core of the grip of the seax and sometimes some wood remains are preserved. This makes it difficult to establish the original length of the complete grip. The length of the grip of the seax from Pandhof grave 10100, however, can be reconstructed. A bronze oval plate with a silver carved ring on top was attached to the end of the grip. The grip has a length of 11 cm and, although the wood of the handle has decayed, this can be considered to be the original length of the wooden haft. It indicates that the wooden handle was completely filled with the iron core. It should however be noticed that fittings at the end of a grip such as described for the Pandhof seax are rare. Apart from these specific features, three of the seven *Schmalsaxe* have ferrules. The ferrules are all applied in the same pattern. They consist of a single incised line, except for the seax from Pandhof grave 10100 which has two double lines. Not much is known about the appearance of ferrules and their chronological significance.

From the table it appears that the *Schmalsaxe* with the shortest blades belong to the Vrijthof cemetery and the ones with the largest blades to the Pandhof cemetery (table 111). It shows that departing from the seax with a length of 19.5 cm, the width of the blades decreases with their increase in length. This means that within the group of *Schmalsaxen* there could be a chronological tendency from more thickset seaxes to more elongated ones or visa versa. Siegmund dates *Schmalsaxen* in Rhineland phases 4-7 (530-610), the Franken AG date this type in their phases 3-7 (460/80-640/50), although predominantly in phases 4-5 (510/25-580/90).¹⁴⁸⁹

Leichter Breitsaxen

Vrijthof: 15 (1670-3); 16 (1679-3,4); 58 (1634-3); 0 (1843-3). Pandhof: 11217 (341-7).

Appendix 1: Figure 73-74.

The group of *leichter Breitsaxen* contains six seaxes, five from the Vrijthof cemetery and one from the Pandhof cemetery (table 112). The length of the blades of these seaxes should, according to the Franken AG, be longer than 29 and shorter than 35 cm, with a blade width of more than 4 cm.¹⁴⁹⁰ According to Siegmund, these seaxes have a blade length between 25 cm and 36.5 cm, and a blade width between 3.3 and 5 cm.¹⁴⁹¹ Two seaxes (1843-3 and the seax from grave 58 of the Vrijthof cemetery) do not fit these dimensions and cannot be classified as *leichter Breitsax* according to Siegmund's typology.

Two of the *leichter Breitsaxe* were ascribed to Vrijthof grave 16, but this is due to mistakes in the find administration. One of them is probably one of the missing seaxes from the Vrijthof cemetery, although it is not clear to which grave it should be ascribed, as it also remains unknown which of the two seaxes actually belonged to Vrijthof grave 16.

Context	Find	L	W	Scabbard rivets	Belt
V 16	1679-3	313	48	2, hollow, animal style	-

¹⁴⁸⁹ Siegmund 1998, 92-93; Müssemeier *et al.* 2003, 45.

¹⁴⁹⁰ Müssemeier *et al.* 2003, 53-54.

¹⁴⁹¹ Siegmund 1998, 87-94.

V 16	1679-4	324	49		
V 15	1670-3	334	47	-	Iron, inlay polychrome, animal style
V 0	1843-3	337	51	-	-
V 58	1634-3	340	53	-	Iron, inlay polychrome, animal style
P 11217	341-7	320	4.8	-	Iron, inlay polychrome

Table 112. The *Leichter Breitsaxen* in the Vrijthof and Pandhof cemeteries.

The measurements are given in mm. Context: V = Vrijthof, P = Pandhof. Find = find number. L=length of the blade. W = width of the blade. Scabbard rivets = associated scabbard rivets. Belt: associated belt fittings.

The measurements of the seax from Pandhof grave 11217 are taken from an old drawing, the seax itself is too corroded to take its measurements. No rivets or other scabbard fittings can be recognized on the drawing. What can be seen is that a knife, which is lost, was found on top of the seax blade. The other finds of this grave are a comb with case, two pottery vessels, two glass vessels and a small iron plate buckle with geometric inlays with a matching plate. These belts elements are identified as Siegmund's Sna 2.4, which are considered to be components of the shoes of women.¹⁴⁹² The position of this plate buckle in the Pandhof grave is unclear, and the possibility to identify small plate buckles of this kind as component of the seax gear should be considered (see the section on the girding and deposition of seaxes).

It appears (table 112) that the width of the blade increases with the length of the blade, in contrast to the group of *Schmalsaxen* (table 111). All the *Breitsaxen* have a more or less curved back, only one seax (Vrijthof find nr. 1843-3, stray find) has an angled back. This is a chronological significant feature for knives, which is dated by the Franken AG to the end of phase 7 to phase 10 (640/50-710).¹⁴⁹³ It can be assumed that an angled back appeared first at the seaxes (*leichter Breitsaxen* date somewhat earlier) and was later for knives an applied feature. This seax has ferrules with double lines on both sides of the blade in the same pattern as those on the *Schmalsaxe*, only the connection of these incised lines towards the grip of the seax shows some geometric decoration. Seax 1679-3 from Vrijthof grave 16 also has ferrules, but these became very vague due to corrosion. A pattern consisting of two parallel incised lines can be reconstructed, like on Vrijthof seax nr.1843-3.

The seax from Vrijthof grave 58 was found with a knife attached to the blade. Knives are often found together with seaxes, and it is assumed that on the scabbard of the seax a little 'scabbard' for the knife was applied. The position of the knife on the Vrijthof seax makes this assumption plausible.

The Franken AG date the *leichter Breitsaxen* in their phases 5 to 8 (565-670/80), although predominantly in phases 6 to 7 (580/90-640/50).¹⁴⁹⁴ Siegmund dates his *leichter Breitsax* predominantly in Rhineland phases 8 and in the first half of phase 9 (610-655).¹⁴⁹⁵

Schwerer Breitsaxen

Vrijthof: 11 (1665-5); 86 (1387-7); 292 (1794-2); 297 (1703-3). Pandhof: 10129 (21-4); 10200 (299-1); 10360 (575-6); 10370 (555-7).

Appendix 1: Figure 74-75.

Eight seaxes of the Vrijthof and Pandhof cemeteries are identified as '*schwerer Breitsaxe*' (table 113). According to the Franken AG the length of the blades of these seaxes should be between 35 and 41 cm with a blade width of more than 4 cm. It is noticed by the Franken AG that these seaxes are almost never accompanied with undecorated iron belt fittings, but rather with bronze belt fittings, more

¹⁴⁹² Siegmund 1998, 40-41. See also the section on shoe related buckles and plate buckles in this thesis.

¹⁴⁹³ Müssemeier *et al.* 2003, 53-54.

¹⁴⁹⁴ Müssemeier *et al.* 2003, 45.

¹⁴⁹⁵ Siegmund 1998, 93-94.

specifically bronze triangular fittings or iron fittings with inlay.¹⁴⁹⁶ According to Siegmund's typology these seaxes have a blade length of more than 36.5 cm and a blade width of more than 5 cm.¹⁴⁹⁷ This implies that three of seaxes discussed here (*Schwerer Breitsax* according to the Franken AG, >35 cm) would be identified as Siegmund's *leichter Breitsax* (>36.5 cm).

In the Vrijthof and Pandhof cemeteries two of the eight *Schwerer Breitsaxe* were accompanied by belt elements, the seax from Vrijthof grave 86 by a belt of iron fittings with inlay of monochrome geometric and animal-style elements, and the seax from Vrijthof grave 11 by a small bronze plate buckle which is difficult to classify as fitting of a belt, although it is found at the position of the pelvis. The seax from Pandhof grave 10200 is reconstructed on the basis of an old drawing from the Pandhof-archive. No scabbard elements and accompanying belt fittings are mentioned in this archive.

Context	Find	L	W	Scabbard rivets	Belt
V 292	1794-2	353	54	-	-
P 10200	299-1	355	55	-	-
V 86	1387-7	360	40	4 x flat, perforated rim	Iron, inlay monochrome, animal-style
P 10360	575-6	363	46	-	-
V 11	1665-5	365	55	2, hollow, animal style	Small bronze belt fitting
P 10370	555-7	369	42	-	Bronze, hollow plate buckle and counter plate
V 297	1703-3	385	51	-	-
P 10129	21-4	400	62		Iron, plate buckle and counter plate, inlay polychrome

Table 113. The *Schwerer saxen* in the Vrijthof and Pandhof cemeteries.

The measurements are given in mm. Context: V = Vrijthof, P = Pandhof. Find = find number. L=length of the blade. W = width of the blade. Scabbard rivets = associated scabbard rivets. Belt: associated belt fittings.

The relation between blade length and width of the seaxes does not show any regular pattern. Only the longest of the seaxes (Pandhof grave 10129) has the greatest blade width. The classification of this seax as '*schwerer Breitsax*' is however somewhat arbitrary, it is just at the demarcation line between '*schwerer Breitsax*' and '*Langsax*' as proposed by the Franken AG. The seax from Vrijthof grave 86 and Pandhof grave 10360 have a straight back; the other seaxes all have a curved back. It is remarkable that within this group of seaxes most specimens were found with metal fittings of the scabbard as well as with its leather remains. This could imply that the use of leather scabbards with metal fittings both for decorative and fastening purposes was common with this type of seax. Leather remains were found on the seaxes from Vrijthof graves 297, 292 and metal scabbard fittings were associated with the seaxes from Vrijthof grave 297 and Pandhof graves 10370 and 10129. The seax scabbard from Pandhof grave 10129 shows metal rivets, nails and edge-reinforcements in their original position on the scabbard, but also some of the belt fittings that served to attach the seax to the belt are still attached to the seax (Appendix 1: figure 75). Scabbard and seax related belt fittings will be discussed below. The Franken AG date '*schwere Breitsaxen*' in their phases 6-9 (580/90-710), although predominantly in phases 7-8 (610/20-670/80).¹⁴⁹⁸ Siegmund dates them in Rhineland phase 9 and in the beginning of phase 10 (640-c.680).¹⁴⁹⁹

¹⁴⁹⁶ Müssemeier *et al.* 2003, 44-47.

¹⁴⁹⁷ Siegmund 1998, 87-92, 94.

¹⁴⁹⁸ Müssemeier *et al.* 2003, 46.

¹⁴⁹⁹ Siegmund 1998, 94.

Kurzer Breitsaxen

Pandhof: 10360 (575-3); 10418 (557-2).

Appendix 1: Figure 75.

Two seaxes of the Pandhof cemetery can be classified as type '*kurzer Breitsax*' such as it is identified by Franken AG (table 114).¹⁵⁰⁰ This type is not identified by Siegmund. According to Siegmund, the length of the blades of *Breitsaxen* is never smaller than 25 cm. The seax from Pandhof grave 10360 can therefore also be identified as Siegmund's *leichte Breitsax*, the seax from Pandhof grave 10418, however, does not fit within his typology.

Context	Seax	L	W	Scabbard rivets	Belt
P 10418	557-2	230	45	?	Plate buckle? (Missing)
P 10360	575-3	260	42	-	-

Table 114. The *Kurzer Breitsaxen* in the Vrijthof and Pandhof cemeteries.

The measurements are given in mm. Context: V = Vrijthof, P = Pandhof. Find = find number. L=length of the blade. W = width of the blade. Scabbard rivets = associated scabbard rivets. Belt: associated belt fittings.

The seax from Pandhof grave 10360 has ferrules on both sides of the blade; they consist of two lines which follow the outline of the blade. An associated scabbard mount and a glass vessel were also found in this grave. The seax from Pandhof grave 10418 is corroded to such an extent that the measurements can only be taken of an old drawing from the Pandhof-archive. The written remarks on the drawing indicate that the seax and scabbard were completely preserved. Some bronze rivets and nails can vaguely be recognized on the drawing, as can the contours of a plate buckle (described as iron) that was attached to the scabbard. This plate buckle, however, is lost, as are the rivets and nails. According to the field drawing the seax was found near left lower leg.

The Franken AG date these seaxes in their phase 7 (610/20-640/50), although predominantly in phase 8 (640/50-670/80).¹⁵⁰¹

Langsaxen

Vrijthof: 70 (1394-2); 125 (1600-1); 278 (1817-10).

Appendix 1: Figure 76.

Three of the seaxes from the Vrijthof cemetery can be ascribed to the group of '*Langsaxen*' (table 115). The Franken AG defined these seaxes as those with a blade longer than 41 cm, Siegmund as seaxes with a blade longer than 40 cm.¹⁵⁰² The width of the blade is not considered to be a relevant parameter for the identification of these seaxes by the Franken AG. Siegmund on the other hand claims that an index of a blade length and width which is larger than 10 is indicative for *Langsaxen*. It appears from the table that the three Vrijthof seaxes can all be classified as *Langsaxen* according to both the typologies.

Two of these Vrijthof seaxes show some remnants of the scabbard. On the tip of the seax from Vrijthof context 70 (find context unknown) some leather remains with a series of nails that served to fix the open end of the scabbard are still present. Of this seax a part of the blade and the iron grip is missing, but the remaining blade fragment is that long that it can be classified as a *Langsax* without doubt.

The other *Langsax*, from Vrijthof grave 278, still has the greater part of the scabbard folded around it on which a decorative pattern can be observed. This seax was found with four bronze decorative rivets of the scabbard and an iron plate buckle and three additional iron fittings of a belt, all decorated with an

¹⁵⁰⁰ Müssemeier *et al.* 2003, 46.

¹⁵⁰¹ Müssemeier *et al.* 2003, 46.

¹⁵⁰² Siegmund 1998, 91-92, 94; Müssemeier *et al.* 2003, 46.

animal style decoration of polychrome inlay. These belt fittings are classified as Siegmund Gür 5.4 and date in Rhineland phase 9 (640-670), what is one phase earlier than the phase the *Langsax* of this grave dates to. However, the belt elements probably date in the last part of phase 9. The seax from Vrijthof grave 125 is part of a grave goods assemblage which consists of various weapons. No remnants of a scabbard were found in this grave. Next to the seax this grave also contained an *umbo* (shield boss) and a lance head, which both date in the seventh century. The associated belt consists of various iron fittings with silver inlay of which a date in the first half of the seventh century is plausible. The belt is dated to an earlier phase than *Langsaxe* are generally assigned to.

The Franken AG date *Langsaxe* towards the end of their phase 8 to phase 10 (670/80-740).¹⁵⁰³ Siegmund dates them from the middle of Rhineland phase 10 to phase 11 (685-740). In dating the Maastricht *Langsaxen* it must be acknowledged that they are relatively short examples of this group. They may thus be early examples.

Context	Seax	L	W	Scabbard rivets	Belt
V 70	1394-2	427	48	-	-
V 125	1600-1	425	56	-	Iron, inlay silver
V 278	1817-10	495	56	4x: flat hollow, carved rim	Iron, inlay polychrome

Table 115. The distribution of *Langsaxen* in the Vrijthof and Pandhof cemeteries.

The measurements are given in mm. Context: V = Vrijthof, P = Pandhof. Find = find number. L=length of the blade. W = width of the blade. Scabbard rivets = associated scabbard rivets. Belt: associated belt fittings.

Unidentifiable seaxes

Pandhof: 2960; 19999 (523-1); 10321 (558-2).

Appendix 1: Figure 76.

The remains of an iron handle with knob of a seax (number 2960-2, unknown context) of the Pandhof cemetery are preserved. The seax itself is that much decayed that it is impossible to establish its measurements. The point of a seax (523-1), known from the Pandhof cemetery as a stray find, is too small to classify. The seax from Pandhof context 10321 was difficult to classify due to severe corrosion. From the archive drawing and remarks regarding this seax it follows that it was already broken at an earlier stage after the excavation. Three bronze rivets and a bronze plate buckle with hollow plate were found with this seax. The three rivets are described below, and the plate buckle in the section on belts. The old drawing from the Pandhof-archive shows that the plate buckle was attached to the seax when found. The plate buckle can be classified as Siegmund's type Gür 3.3 which dates in the first half of the seventh century.¹⁵⁰⁴ This also seems a plausible date for this seax, based on the associated rivets of a scabbard.

A considerable number of seaxes of the Vrijthof cemetery is lost (see the introduction of this section). No supplementary information is available for these seaxes, and further classification is therefore impossible.

Seax scabbards

The metal elements of seax scabbards are mainly associated with seventh century seaxes, the so called '*Breitsaxe*' and '*Langsaxe*'. They have both a decorative and practical function in that they served to fix

¹⁵⁰³ Mússemeier *et al.* 2003, 46-47.

¹⁵⁰⁴ Siegmund 1998, 27; Giesler 1983, 531-534.

the leather of the scabbard. The 'decorative rivets' can be considered the most prominent (remaining) metal elements of these scabbards. These rivets are predominantly of bronze, but can occasionally be of silver or gold. It is claimed that the scabbard rivets show a clear chronological development from flat, disc shaped rivets to hollow dome headed rivets of which the examples with a pearl or carved rim are the youngest.¹⁵⁰⁵ The leather for the scabbard was folded and the large rivets, together with an extensive amount of , mostly bronze, nails, were used to close and fix the leather. Metal fittings at the back of the scabbard, which served to attach the scabbard to the belt, were also secured with these rivets (see section below).¹⁵⁰⁶ Moreover, the rivets served a decorative function and can be distinguished on the basis of their shape and decoration. The number of these rivets on a seax scabbard is known to vary up till six. Edge-reinforcements at the mouth, point and closed side of the scabbard, generally of bronze, were used for further strengthening. It can be assumed that these metal elements are evidence for the former presence of a seax scabbard in the grave. The presence of the seax itself, however, does not fully prove the former presence of a scabbard, nor does the presence of scabbard elements necessarily indicate that a seax was deposited in the grave. The scabbard and seax, but also the belt to which they were attached, can be seen as one, but also as three separate entities, which could have had variable meanings and uses in funerary rites.¹⁵⁰⁷ It is therefore interesting to determine the associations between seaxes, scabbards and belt fittings. The data of the Vrijthof and Pandhof cemeteries show that a seax of the seventh century was not necessarily associated with a scabbard, that is to say: metal fittings were not always found, but that a scabbard was nearly always associated with a seax (see the section below on the deposition variation of seaxes).

Some leather remains of scabbards were preserved on seaxes of the Vrijthof and Pandhof cemeteries, in one case the decoration that was applied on the surface can still be recognized (Vrijthof grave 278). The shape of the scabbards can be reconstructed on the basis of the pattern of the nails. It shows, in the case of Pandhof grave 10129, that the scabbard covered the grip of the seax for a considerable part (Appendix 1: figure 75), as it was also observed in other cemeteries.¹⁵⁰⁸ The nail pattern of the scabbard from Pandhof grave 10129 shows that the scabbard was narrower below the bronze rivets, a well known feature of seax scabbards in Merovingian times.¹⁵⁰⁹ The metal elements and leather remains of the scabbards of the Vrijthof and Pandhof cemeteries will be discussed in the following.

Scabbard rivets: undecorated

Vrijthof: 173 (1450-1); 0 (1687-2); 0 (1739-4). Pandhof: 10796 (142-9); 19999 (9999-8).

Appendix 1: Figure 77.

A number of undecorated rivets, with flat and domed heads, are known as single specimens from some of the graves of the Vrijthof and Pandhof cemeteries. They were not accompanied by identical rivets or scabbard nails. It is uncertain whether these single finds were associated with a seax scabbard. Because other functions are difficult to find and graves Vrijthof grave 173 and Pandhof 10796 contained seaxes, they are identified as rivets of seax scabbards.

Scabbard rivets: flat, perforated rim

Vrijthof: 30 (1630-3, 4, 5, 6); 86 (1387-2, 3, 4, 5); 92 (1403-5, 6, 7, 8, 9); 0 (1843-2).

Appendix 1: Figure 77.

Flat bronze rivets with three perforations along the edge are only known from the Vrijthof cemetery. They were found in numbers of four in Vrijthof graves 30 and 86 and a total of five rivets were found in Vrijthof grave 92. One rivet of this kind (1843-2) was found together with a seax which cannot be allocated to a grave anymore. It can be assumed that the total amount of scabbard rivets related to this

¹⁵⁰⁵ Neumayer 1993, 66; Koch 1977, 108; Pescheck 1996, 57; Haas-Gebhard 1998, 26.

¹⁵⁰⁶ Dannheimer 1974, 133 Abb. 2, 136 Abb. 3.

¹⁵⁰⁷ Theuvs/Alkemade 2000, 419-435.

¹⁵⁰⁸ Haas-Gebhard 1998, 25.

¹⁵⁰⁹ Wernard 1998, 764.

seax was originally more than one. All the rivets from the Vrijthof cemetery have a diameter of 1.3 to 1.7 cm. Only those from Vrijthof grave 86 show a decoration of two rows of stamped in points along the edge. Although the rivets were attached to the scabbard with the pins at the back, it can be assumed that the perforations also served to fix the rivets. Only from Vrijthof grave 86 the associated seax is present (the other two are '*in restauratie*').¹⁵¹⁰ It is typologically defined as Sax 2.2, a so-called '*Schwerer Breitsax*'. The rivets as described are generally associated with these seaxes.¹⁵¹¹ The rivets are classified by Siegmund as type Sax 4.1, which dates in Rhineland phases 8-9 (610-670).¹⁵¹² The Franken AG maintained this type and date these rivets in their phases 7-8 (610/20-670/80).¹⁵¹³

Scabbard rivets: flat, cast decoration

Pandhof: 10321 (558-1, 4, 5)

Appendix 1: Figure 77.

Three bronze rivets with a flat top and cast animal-style decoration were found in Pandhof grave 10321. The rivets have a diameter of approximately 1.8 cm. They were associated with a seax (558-2) which, however, is that much corroded that it cannot be classified anymore.

Flat decorated scabbard rivets date more or less in the same period as the ones with perforations (see above), but start to be deposited in graves somewhat later. The rivets are classified by Siegmund as Sax. 4.2 and date in Rhineland phase 8B-9 (625-670).¹⁵¹⁴ The Franken AG maintained this type and date these rivets in their phases 7 and 8 (610/20-670/80).¹⁵¹⁵

Scabbard rivets: flat, hollow head with cast animal style decoration

Vrijthof: 11 (1665-1, 2); 16 (1679-1, 2); 39 (1603-1, 2).

Appendix 1: Figure 77.

Six bronze rivets with a flat hollow head and cast animal style decoration are known from the Vrijthof cemetery. They were all found in pairs of two. The two rivets from Vrijthof grave 11 have a diameter of 2.2 cm and have identical decorations. These rivets were found together with a *schwerer Breitsax* (Franken AG, Sax 2.2 phase 6-9 (580/90-670/80), predominantly 7-8 (610/20-670/80)) and bronze scabbard elements.

The two rivets from Vrijthof grave 16 have a diameter of 1.9 cm. The cast decoration on both rivets can be identified as animal style decoration, but are not identical. These rivets were associated with a Sax 2.1 (two seaxes are associated with this grave by mistake, but both are classified as Sax 2.1.) This is a so-called *leichter Breitsax* and is dated in Franken AG phases 3-7, but predominantly in phases 6-7 (580/90-610/20).

The rivets from Vrijthof grave 39 have a diameter of 2 cm and were according to the documentation associated with a seax which, however, is now lost. The decorations on these two rivets are not identical.

For both the pairs with non-identical decorations it can be assumed that one of the rivets became missing and that in choosing a rivet to replace it one sought the most fitting decoration. It was probably difficult to find another identical specimen. For both pairs it can be said that, although the decorations are not identical, they are more or less alike. The question remains whether these rivets were used in numbers of two or that the Vrijthof grave goods assemblages are incomplete. It hardly seems a coincidence that in all the graves only two rivets were found.

Siegmund identified rivets of this kind as type Sax 4.3 which dates to Rhineland phase 9 (640-670).¹⁵¹⁶ The Franken AG sub-divided Siegmund's typological group, which comprises all the hollow rivets except

¹⁵¹⁰ 'In restauratie' means in the process of being restored or conserved. It cannot be discovered by us anymore in which laboratory this process has been executed and where these seaxes are at present.

¹⁵¹¹ Müssemeier *et al.* 2003, 46.

¹⁵¹² Siegmund 1998, 94.

¹⁵¹³ Müssemeier *et al.* 2003, 46.

¹⁵¹⁴ Siegmund 1998, 94.

¹⁵¹⁵ Müssemeier *et al.* 2003, 46.

¹⁵¹⁶ Siegmund 1998, 95.

those with a pearl or carved rim, into a group 4.3a (those with three perforations) and a group 4.3b (those with animal style decoration).¹⁵¹⁷ The rivets with animal style decoration are dated in their phases 7 and 8 (610/20-670/80). This coincides with the dating of the associated seaxes of the Vrijthof graves, except for the one from Vrijthof grave 16, which dates to an earlier phase.

Scabbard rivets: hollow, flat head and carved rim.

Vrijthof: 278 (1817-5, 6, 7, 8); 284 (1815-2, 3, 4, 5). Pandhof: 10129 (21-10, 11, 12, 13, 14, 15).

Appendix 1: Figure 78.

Fourteen hollow bronze scabbard rivets with carved rim are known from the Vrijthof and Pandhof cemeteries. In both Vrijthof grave 278 and 284 four rivets were found, in grave 278 together with a seax and in grave 284 without a seax.

The seax from Pandhof grave 10129 was found with six rivets in their original position (Appendix 1: figure 75). The narrow section of the scabbard leaves no space for large rivets and there are also no traces of the former presence of more rivets so it can therefore be assumed that the number of six rivets was the original number attached to the scabbard of this seax. This number is more unusual than the number of four rivets, as were found in both the Vrijthof graves.¹⁵¹⁸

Because the rivets of Vrijthof grave 278 were found in the same position as the seax and belt elements, although the rivets are not in association with the seax anymore, it can be assumed that the number of four was the original number of rivets attached to the scabbard. From Vrijthof grave 284 the seax is missing, so it is uncertain whether the amount of four rivets is the complete number.¹⁵¹⁹

The bronze rivets from both the Vrijthof and Pandhof graves are all nearly identical with their hollow flat head, a carved lower rim and a diameter of approximately 2 cm. The rivets from Pandhof grave 10129, however, seem to have been made with more care.

Scabbards with several relatively large rivets were generally also associated with edge-reinforcements and a high number of bronze nails and are generally related to the seaxes of the seventh century. The rivets belong to a seax classified as Sax 3 (Vrijthof grave 278) and a seax classified as a Sax 2.2 (Pandhof 10129). Hollow rivets with a flat head and pearl or carved rim are classified as Siegmund Sax 4.4 and date in Rhineland phase 9 (640-670).¹⁵²⁰ This type is maintained by the Franken AG and dates to the end of their phase 7 to phase 8 (640/50-670/80).¹⁵²¹ This date coincides well with the dating of the seax from Pandhof grave 10129 but the rivets from Vrijthof grave 278 date to an earlier phase than the associated seax.

Scabbard rivets: domed head and carved rim

Vrijthof: 0 (1755-2, 3, 4, 5, 6, 8). Pandhof: 19999 (9999-17 (4x)).

Appendix 1: Figure 78.

The rivets with a domed head and a pearl or carved rim from the Vrijthof and Pandhof cemeteries can not be allocated to a grave anymore. For the Vrijthof rivets some components of the associated grave goods assemblage are known. They are a knife and a biconical pot. The heads of the rivets have an average diameter of 1 cm. This is remarkably smaller than the other rivets described above with an average diameter of approximate 2 cm. These rivets may have been used to fasten the edge-reinforcement, which was folded around the mouth of a seax scabbard. This is for example illustrated by the reconstruction of the seax of *St. Jakob bei Polling*, where the edge-reinforcement was fixed with six rivets identical to those of the Vrijthof cemetery.¹⁵²² The bronze fragments that are associated with these

¹⁵¹⁷ Müssemeier *et al.* 2003, 47.

¹⁵¹⁸ Koch 1977, 108. A number of three or four rivets are common in the cemetery of Schretzheim.

¹⁵¹⁹ The outline of what seems to be a seax was drawn near the right foot on the excavations drawing. Considering the finds from this grave (rivets, nails and an edge-reinforcement of a seax scabbard) it can be assumed that a seax was once part of this grave goods assemblage.

¹⁵²⁰ Siegmund 1998, 95.

¹⁵²¹ Müssemeier *et al.* 2003, 47.

¹⁵²² Dannheimer 1974, Tafel 33-2a/b.

rivets may be the remains of the strip that was folded around the mouth of the scabbard. The seax from *St. Jakob bei Polling* is dated in the seventh century.

However, the rivets may also have been used in an ornamental way as is demonstrated by the remains of a seax scabbard in the cemetery of Lommel-Lutlommel. There small dome headed rivets of 1 cm in diameter were fixed in groups of three between large flat rivets with a pearl-rim (diameter 2 cm) and between the small nails along the edge of the scabbard.¹⁵²³ It can be concluded that medium sized dome headed rivets may have been used in different ways on seax scabbards.

It can be assumed that the four rivets from the Pandhof cemetery, which are nearly similar to those of the Vrijthof, served the same functions. The seax and grave they belonged to cannot be identified anymore, so it is impossible to say whether this set of rivets is a complete one or whether they belonged to a larger set. Flat headed rivets with a carved rim are common, but these smaller, domed rivets are found less frequent. It seems if they were part of the scabbards of the heavier and thus younger seaxes of the seventh century. Rivets of this kind are not identified as elements of scabbards by Siegmund and the Franken AG.

Nails

Vrijthof: 11 (1665-7); 70 (1394-3); 278 (1817-11); 284 (1815-7); 297 (1703-6). Pandhof: 10129 (21-16); 10370 (555-14); 10332 (556-8).

Appendix 1: Figure 79.

Bronze nails that are associated with seax scabbards served, together with the decorative rivets, to fasten the outer sides of the folded leather of the scabbard. The bronze nails and rivets are often the only indication for the former presence of a scabbard, even if the seax is missing from the grave. The original total number of bronze nails on a single scabbard is hard to estimate, but the seax in Pandhof grave 10129 can give a good indication because the nails of the associated scabbard (decayed) are still in their original position (attached to the seax) and the positions of the nails missing can be reconstructed (Appendix 1: figure 75). A total of 120 nails were counted and, when considering the ones missing in between, it can be assumed that an approximate number of 140 bronze nails were originally present on the scabbard. The nails were applied in such a way that they form a distinctive pattern, probably for decorative purposes. A small number of bronze nails from Vrijthof grave 70 and 297 were also found in their original position (but now attached to the seaxes). In both cases the nails are still positioned at the point or near the point. The nails associated with the other seaxes were probably part of a scabbard, but were not found or not recorded as such in that position. Bronze scabbard nails are often found together with decorative rivets and usually belong to *Breitsaxe* and *Langsaxe*. The scabbards of these seaxes can be considered to be the most elaborately decorated ones. Bronze nails can be dated in the same way as the *Breitsaxe* and *Langsaxe*.

Edge-reinforcements

Vrijthof: 11 (1665-3, 4, 6); 15 (1669-1, 1670-4); 30 (1630-8); 39 (1603-3); 86 (1387-6); 284 (1815-6); 292 (1703-4); 297 (1703-4, 5). Pandhof: 10129 (21-17); 10360 (575-5); 10370 (555-15).

Appendix 1: Figure 79-80.

Next to decorative rivets and nails other metal scabbard elements are identified in the Vrijthof and Pandhof cemeteries. These are the so-called edge-reinforcements, which are mounts to strengthen the scabbard-mouth, side and point of the leather scabbard, and some less obvious identifiable elements. Some bronze remains related to the seax of Vrijthof grave 297 can be identified near the point and can be interpreted as part of the scabbard which served to protect or strengthen it. Some other bronze elements were found in this grave at the same position as the seax, which are also identified as parts of the scabbard. Two of these elements, both with a concave shape and one remaining nail, belong together and form an L-shaped reinforcement of the scabbard mouth. The other elements are fragments

¹⁵²³ Bostraeten 1965, 21-23, afb. 3, nr. 15.

of thin bronze plates and were presumably applied to some part of the scabbard and probably served to reinforce it as well.¹⁵²⁴ The mouth reinforcement can be seen in its original position on the seax from Pandhof grave 10129 (Appendix 1: figure 75). The remains of this scabbard element consist of three concave L-shaped parts, which cover a part of the mouth and upper side of the scabbard. The parts are attached to the scabbard with bronze nails. Other concave bronze elements are known from Vrijthof graves 11, 39 and 86 and Pandhof grave 10370. These can also be interpreted as parts of L-shaped scabbard mouth reinforcements. All these mouth-reinforcements consist of multiple parts. The only mouth reinforcement in one piece is known from Vrijthof grave 284. This is a concave L-shaped specimen of bronze with the remains of one nail and one nail hole. The bronze thin plates from Vrijthof grave 15 are all flat with some small bronze nails attached to them. The shape of the plate (L-shaped) with find number 1670-4, and the presence of a seax in this grave, hints to an identification of this plate as a reinforcement of the scabbard mouth. It can be assumed that the other plates were also associated with the scabbard of this grave. The plate from Vrijthof grave 30 can very well have been folded around the scabbard for strengthening purposes. The concave element of bronze from Pandhof grave 10360 is relatively long and can therefore be identified as a reinforcement of the edge of the scabbard.

Mouth-reinforcements are classified by Siegmund as Sax 4.5 and are considered to be part of the scabbards of *Breitsaxe* and are dated accordingly to Rhineland phase 9 (640-670).¹⁵²⁵ This type is maintained by the Franken AG and dates in their phase 7-8 (610/20-670/80).¹⁵²⁶ Legoux, Périn and Vallet identified three types of mouth reinforcements. The L-shaped reinforcements date to their phases MR2 (630/40-660/70).¹⁵²⁷

The scabbard point-reinforcement as described for the seax from Vrijthof grave 297 is only identified as a typological group by Legoux, Périn and Vallet although it is classified (type 74) as part of the scabbard of a knife. It can be assumed it applies to seax scabbards as well. This specific scabbard element dates in their phases PM-MA3 (440/50-600/10), but predominantly in phases MA1-MA2 (470/80-560/70) what is early considering that seaxes with associated scabbard elements are generally dated later. No classifications are known for the reinforcements of the edges of a seax scabbard, but it can be assumed that these date, as will the point reinforcements do, to the same phases as the mouth reinforcements of seaxes.

Leather scabbard remains

Vrijthof: 278 (1817); 297 (1703); 292 (1794). Pandhof: 10129 (21).

Leather remains can be observed on three of the Vrijthof and one of the Pandhof seaxes. The most remarkable remains of a scabbard are those of Vrijthof grave 278. The remains consist of a piece of leather attached to the blade with a decoration pattern in geometric style on the surface. The rate of conservation of leather scabbards is rare and decoration patterns are rarely observed.¹⁵²⁸ It can be imagined that the application of some kind of decoration on the leather scabbard was a normal phenomenon, especially on scabbards, which are also decorated with bronze rivets, nails and various mounts. For modern archaeologists the seax is the predominant feature although it can be assumed that in the Merovingian period the scabbard was, in view of its visibility and decoration and thus the bearer of meanings, the most important element of the seax/scabbard set (a composite artefact) in the context of burial and every day life.

Some small pieces of leather remains with decoration are visible on the seax from Vrijthof grave 297, as it is on the seax from Vrijthof grave 292. The seax from Pandhof grave 10129 has some bronze plates

¹⁵²⁴ Dannheimer 1974, 133, Abb. 2. The described elements can be part of the strips that are folded horizontally around the scabbard.

¹⁵²⁵ Siegmund, 1998, 95.

¹⁵²⁶ Müssemeier *et al.* 2003, 46.

¹⁵²⁷ Legoux/Périn/Vallet 2004, 15, 28, 52 (type 67).

¹⁵²⁸ Some examples of decorations on scabbards (remains) can be found in Ypey, 1980. See also Wernard (1998, 768-769) for some good examples of preserved decorated leather scabbards and decoration techniques.

attached to the seax on which some leather scabbard remains can be observed. Not much can be said about a decoration pattern based on these small remains of the scabbards.

To protect and carry the seax, it can be assumed that scabbards were used throughout the Merovingian period. The earliest seaxes were probably carried in a wooden scabbard without any metal mounts, which explains the absence of any scabbard elements with these seaxes.¹⁵²⁹ Because of the bad preservation of the leather not much is known about the differences in appearance, decoration patterns and therefore the chronological development of the morphological features of the scabbards. The dating therefore depends on the actual seax and the accompanying bronze scabbard elements.

The girding and deposition of the seax

It is generally accepted that seaxes were attached to the belt when worn in daily practices. An interesting but still unsolved discussion concerns the way they were attached to the belt and which elements were involved in this. Several publications deal with reconstructions of the way seaxes were worn in a more or less detailed degree, but a clear overview of the possibilities is not available.¹⁵³⁰ A distinction should be made between the way the seax was supposedly worn and the way it was deposited in the grave. It can be assumed that the seax was attached to a girded belt at the moment of interment. Therefore seaxes are regularly found to the right or left area of the pelvis or upper legs.¹⁵³¹ It seems, however, that in Maastricht seaxes were, together with the belt, also often deposited near the feet at one side of the body and were thus not girded at the time of the burial. It is possible to identify the choices made by considering the position of the seax in the grave in relation to the body and by considering the position of seax related belt fittings in relation to the seax. A recent reconstruction of the way seaxes were worn is offered by Vogel on the basis of the two nearly complete excavated seaxes with scabbard and associated metal elements in Andernach.¹⁵³² The seax and scabbard related elements of the Vrijthof and Pandhof cemeteries that can offer insights in the way seaxes were 'worn' will be discussed below.

The position in the grave

Conclusions about the deposition of seaxes and belts and their relation to the body require a careful excavation and administration. Such information is for example available for the cemeteries of Schretzheim and Dittenheim.¹⁵³³ A detailed study of the seax deposition in the southern Meuse valley is available for Cutry (France).¹⁵³⁴ A further analysis of the seax deposition in Schretzheim and Dittenheim learns us that a high degree of variation regarding the seax deposition in relation to the body (left, right, on the body, near the feet or near the pelvis), the position of the seax tip (pointing upwards or downwards) and the connection with the waist belt (deposited together or separated from the belt) can be observed, and that the correlations change in the course of time. What kind of deposition pattern can be found in the Vrijthof and Pandhof cemeteries?

The positions where seaxes were found in relation to the body show some variation. The seaxes from Pandhof graves 10129 and 10370 provide some indications as to the way the seax was worn and attached to the belt. It is also interesting to see how and where the seaxes were deposited in the graves. For the Vrijthof cemetery the position of the seax in relation to the body can more or less be identified for 13 seaxes, for the Pandhof cemetery for seven seaxes.

In the Vrijthof cemetery the majority of the seaxes was found to the left side of the body, and the majority of these were found near the lower legs. A deposition near the arm or on the pelvis or breast of the buried person was less frequent (table 116).

¹⁵²⁹ Wernard 1998, 761-764.

¹⁵³⁰ Dannheimer 1974, 73-77, Abb. 1,8.

¹⁵³¹ See for instance the location of seaxes in the graves of Cutry, France (Legoux 2005, 166, figure 129), where they lie to the left of and on the body, whereas swords are usually found to the right. Axes and lances were in Cutry almost exclusively deposited near the right side of the body,

¹⁵³² Vogel 2006, 126, Taf. 73,1 and 73,3.

¹⁵³³ Koch 1977, 105; Haas-Gebhard 1998, 26-27.

¹⁵³⁴ Legoux 2005.

Context	Seax	FAG type	Relation to body	Position	Association with belt
115	1614-1	Sax 1	Left	Arm	No
168	1534-2	Sax 1	Left	Lower leg	No
173	1450-2	Sax 1	-	Lower leg	No
194	1502-1	Sax 1	Middle	Pelvis	Yes: deposited as ensemble?
205	1653-1	Sax 1	Left	Arm	Yes: deposited as ensemble?
0	1843-3	Sax 2.1	-	-	Yes: deposited as ensemble
16	1679-3	Sax 2.1	Right		No
16	1679-4	Sax 2.1			
58	1634-3	Sax 2.1	Left	Lower leg	Yes: deposited as ensemble
15	1670-3	Sax 2.1.	Right/Middle?	Lower leg	Yes: deposited as ensemble
86	1387-7	Sax 2.2	Right	Lower leg	Yes: deposited as ensemble
292	1794-2	Sax 2.2			No
11	1665-5	Sax 2.2.	Left	Lower leg	No ¹⁵³⁵
297	1703-3	Sax 2.2.	Middle?	Breast?	No
70	1394-2	Sax 3	-	-	No
278	1817-10	Sax 3	Left	Upper leg?	Yes: deposited as ensemble

Table 116. Vrijthof cemetery: the position of the seaxes in relation to the body and their association with belt fittings.

Context = grave/context number. Find = find number. FAG type = Franken Arbeitsgruppe type. Relation to the body= right or left of the body, or on the middle of the body. Position: position of the seax in relation to body parts. Association with belt = associated with belt fittings in the grave/ deposited as one ensemble with the seax.

Not much can be concluded about the position of the tip of the seaxes because the excavators did not record this information. Eight of the Vrijthof seaxes are associated with a waist belt (table 116). For six of these associations it could be observed that the seax and belt were deposited together. In graves 15, 58, 86 the ensemble of seax and belt was found near the lower leg, and for these graves it can be concluded that the belt was deposited without being girded on. The belt was also associated with the seax in graves 125 and 278. Because the ensemble was found at the position of the upper leg, the belt, with the seax attached to it, could have been girded on at the moment of burial. The seax without context (1843-3) was found together with waist belt fittings, and it can be assumed that they were deposited together. For the other two graves (194, 205) it remains uncertain if the seax was attached to the belt at the moment of deposition. The seax could have been laid on the body during burial without being attached to the waist belt.

For the seaxes from the Pandhof cemetery, of which the required information is available, no clear pattern regarding the position in the grave in relation to the body can be detected, probably because the dataset is too small (table 117). The documentation for this cemetery, however, provides sufficient information to allocate the position of the tip for five seaxes.

Context	Seax	FAG	Relation to body	Position	Association with belt
10200	299-1	Sax 2.2	Left	Lower leg	No
10321	558-2	Indet	Left/M	Lower leg	Deposited as ensemble
10418	557-2	Sax 2.3?	Left	Upper leg	Deposited as ensemble

¹⁵³⁵ A small bronze plate buckle was found with this seax. It is too small for a waist belt and is as a consequence identified as a fitting of a strap related to the seax (see the section below).

11217	341-7	Sax 2.1	?	?	No ¹⁵³⁶
19999	523-1	Indet	-	-	-
19999	9999-6		-	-	-
10100	59-10	Sax 1	Middle	Pelvis	Deposited as ensemble?
19999	9999-15	Sax 1	-	-	-
10370	555-7	Sax 2.2	Right	Lower leg	Deposited as ensemble?
10360	575-6	Sax 2.3/1	-	Lower leg	No
10129	21-4	Sax 3	Left	Upper leg/pelvis	Deposited as ensemble?

Table 117. Pandhof: position of the seaxes in relation to the body and their association with belt fittings. Context = grave/context number. Find = find number. FAG type = Franken Arbeitsgruppe type. Relation to the body= right or left of the body, or on the middle of the body. Position: position of the seax in relation to body parts. Association with belt = associated with belt fittings in the grave / deposited as one ensemble with the seax.

For the seax from Pandhof grave 10100 it was recorded that it was found lying oblique at the position of the pelvis with the grip at the right side of the body and the tip pointing downwards to the left side of the body. Fittings of a waist belt were also found in this grave, but whether the seax was connected to the waist belt at the moment of deposition is unknown. In Pandhof grave 10129 the seax was found near the left side of the body, with the grip near the left side of the pelvis and the tip pointing down. It can be assumed that the waist belt, to which the seax was attached, was girded on at the moment of burial. For Pandhof grave 10370 it seems that the seax was found together with the belt near the lower right leg of the buried person and that the tip was pointing downwards, although this information remains vague. The belt fittings consist of a bronze hollow undecorated plate buckle with counter plate, a plate with similar characteristics is found attached to the scabbard. It is probably an element of the waist belt, which corroded onto the scabbard in the period after the burial, but the option for another position within the ensemble belt/seax should also be considered. The seax from Pandhof grave 10418 was found near the left upper leg. Waist belt fittings were also known from this grave, but their position in the grave is uncertain. If the waist belt was girded on at the moment of burial, and whether the seax was connected to it cannot be determined with certainty. The seax from Pandhof grave 10321 is corroded to such an extent that further classification is impossible. A hollow bronze plate buckle was also found in this grave, and according to some drawings in the Pandhof-archive it was still attached to the seax, together with a knife, at the time it was found. Seax, knife and plate buckle were probably found as an ensemble near the left lower leg, what is evidence for a deposition of the waist belt separated from the body. The seaxes from Pandhof graves 10200 and 10360 were found without fittings of a waist belt. In both graves the seaxes were deposited near the lower legs of the deceased. The position of the remaining four seaxes cannot be established anymore (three of them are stray finds). No waist belt fittings were found with these seaxes.

Seax related metal belt fittings

Several metal fittings served to attach the seax to the belt. Because these fittings are much alike various parts of belts it is difficult to ascribe them to the correct part of the garment of the deceased. It is also difficult to identify various mounts correctly because the seax is often deposited in the grave together with the waist belt, so the position of the elements in the grave are not always conclusive for their identification as mounts either of the belt, the scabbard, or of the straps that attached the seax to the belt. Several attempts have been made to reconstruct the way the seax was fixed to the belt and to

¹⁵³⁶ A small iron plate buckle with inlay was found with this seax. It is too small for a waist belt and is as a consequence identified as a fitting of a strap which attached the seax to the waist belt (see the section below).

classify the elements involved.¹⁵³⁷ For the Vrijthof and Pandhof cemeteries some seax related belt elements can be identified, but only the elements associated with two Pandhof seaxes provide some insights in their original position in relation to the seax and scabbard and thus the way the seaxes were attached to the belt. Seax related belt elements consist of plate buckles and a variety of plates. From the Vrijthof some seax related plate buckles are known, from the Pandhof only various plates.

Loops

Vrijthof: 278 (1817-12).

Appendix 1: Figure 81.

In Vrijthof grave 278 a loop (German: *Tragbügel*) was found. Such loops were applied at the back of the scabbard with two rivets.¹⁵³⁸ In Vrijthof grave 278 four rivets that resemble the rivets in the reconstruction of Dannheimer (in which we can observe a resembling *Tragbügel*) were found. It can be assumed that the loop from Vrijthof grave 278 was originally applied to the back of the scabbard with two of these rivets. When attached to the scabbard such loops created an opening through which a strap could be placed. These straps probably served to attach the seax to the belt. The seax where these loops belong to is classified as type Sax 3 of Siegmund and the Franken AG and dates in Rhineland phases 10 and 11 (670-740) and in the end of phase 8 to phase 10 (640/50-750) of the Franken AG.

Seax related plate buckles.

Vrijthof: 11 (1664-1). Pandhof: 11217 (341-1, 2).

Appendix 1: Figure 81.

The small bronze plate buckle from Vrijthof grave 11 was found on the pelvis, the seax and with the scabbard associated decorative rivets near the left foot. This plate buckle was attached to a strap with a width of approximately 2 cm, which can be considered to be too small for a waist belt that carried a seax with scabbard.¹⁵³⁹ The plate terminal is not rounded but profiled. The plate buckle from grave 277 of the cemetery of Schretzheim has an identical plate shape and is part of a grave goods assemblage, which also contained a seax.¹⁵⁴⁰ This plate, however, does not have loops on the back. Perforated decorative scabbard rivets accompany the seax from this grave, whereas the rivets from the Vrijthof are decorated and date later than the perforated ones. The rivets on the Schretzheim plate buckle, however, resemble these of the Vrijthof plate buckle. These rivets are small, in contrast to the rivets that can be observed on the bronze plate buckles of waist belts, which are relatively large. Because the only finds from Vrijthof grave 11 are a seax and seax related objects (besides the biconical pot), the plate buckle is identified as part of the seax gear. It is assumed that it was attached to a strap that served to attach the seax to the waist belt.

The plate buckle from Pandhof grave 11217 is found together with an additional belt fitting which is that much corroded that the original shape is difficult to describe. The belt width is approximately 2.5 cm and the same argument as for the plate buckle above is used to identify this plate buckle as part of a strap that attached the seax to the waist belt. A seax with knife attached to it was found in this grave but this ensemble is now lost. The decoration of silver inlay on the plate buckle can best be described as a geometric pattern applied to the middle field of the plate expanding into two animal heads towards the broader edge of the plate. The frame of the plate and the buckle itself consists of silver inlay in a geometric pattern.

From these two graves it can be concluded that the reconstruction of the relation between belt and seax and other metal associated elements needs some further exploration.

¹⁵³⁷ See the section above on the way the seaxes were girded.

¹⁵³⁸ Dannheimer 1974, 133 abb. 1.2; 136 abb. 3; Ament 1993, 79-81, 80 abb. 68.8; Pescheck 1996, 57, Taf. 20, 1.2.

¹⁵³⁹ Seaxes with scabbards are especially associated with the broad belts of the seventh century which consisted of multiple iron fittings with inlay (see the section on these belts above).

¹⁵⁴⁰ Koch 1977, 125, grave 277, Taf. 72.

Seax related plates: iron with inlay

Pandhof: 10129 (21-2, 8, 9).

Appendix 1: Figure 81.

Two of the three iron plates with bichrome inlay from Pandhof grave 10129 (Appendix 1: figure 75) were found attached to the seax which was found, separate from the belt, near the left side of the upper leg. This is a strong indication that particular belt plates were part of straps that attached the seax to the belt. The two plates are found attached to the cutting edge of the seax (the scabbard and leather strap to which they were originally attached decayed), the third plate is found unattached. It remains unclear in which way these plates exactly functioned and if there were more plates of this kind which are now missing. The resembling plate buckle that served as the closure of the waist belt shows the same decoration pattern as the three plates described, a so-called bichrome degenerated animal style with a silver plated background in the middle field (see the section on waist belts for a more detailed description). The plate buckle can be placed in Rhineland phase 9 (640-670), as can the three small associated plates. It should be noticed that the three plates described are often interpreted as additional waist belt fittings. Several belt reconstructions are presented with these little plates being placed at various locations on the belt and interpreted as having served to attach small straps to it.¹⁵⁴¹ Because of the unambiguous position of these plates near the tip of the scabbard of Pandhof grave 10129, separated from the waist belt, belt reconstructions like these should be examined more closely.

In Vrijthof grave 125 three little plates and a larger plate buckle and counter plate are found. Three little plates with a plate buckle are also known from Vrijthof grave 287. Normally these little plates are reconstructed as fittings of the waist belt, but regarding the above-described situation and the knowledge that Vrijthof graves 125 and 287 contained also a seax, a different picture can also be thought of. In both graves the belt was deposited not girded. The small metal fittings from Pandhof grave 10129 could also of course have been belt parts that became attached to the seax due to corrosion. Their position on the seax would then be purely coincidental. In view of the next find to be discussed this, however, is unlikely.

Seax related plates: bronze

Pandhof: 10370 (555-4, 10, 11, 12).

Appendix 1: Figure 75.

The seax from Pandhof grave 10370 shows three bronze plates still attached to it, which indicates that originally they were attached to the now totally decayed scabbard. Two of these plates are thin rectangular bronze plates with three openings and a stamped-in dot-in-circle decoration. Apart from these two, another similar plate is known from this grave, although detached from the seax. The other plate attached to the seax is a cast triangular hollow plate with three bronze rivets. The described plates are usually identified as parts of the belt (see the remarks above). The position of these plates on the seax (i.e. the former scabbard), however, means that another interpretation is possible. They were probably used to fasten the leather strap that carried the seax scabbard to the waist belt.

Fransiscas and axes

Siegmund maintained the general categorization of '*Franziskan, Beile* and *Äxte*' and refers for the typological discussion to Dahmlos and Hübener who address typological questions concerning axe-like objects.¹⁵⁴² The article of Dahmlos is useful because clear metric criteria are introduced (which are not

¹⁵⁴¹ Siegmund 1996, 698-699, Abb. 570.

¹⁵⁴² Siegmund 1998, 106. The common morphological feature which distinguishes franciscas from axes and broadaxes is the obtuse angle between the horizontal middle axis of the blade and the axis of the shaft opening. Other features of franciscas are the S-shaped upper edge of the blade and the simple curve of the lower side of the blade. These and

used by Siegmund) to discriminate franciscas from axes (and broad axes).¹⁵⁴³ Hübener aimed at the definition of an extended range of types.¹⁵⁴⁴ The chronological significance of this typology, however, can be questioned because the periods of deposition established for each type show a considerable overlap.¹⁵⁴⁵ The weight of the franciscas and axes and the discovered correlation between type and geographical distribution are another important aspect in Hübener's article. The weight of the franciscas and axes of the Vrijthof and Pandhof cemeteries is not established because the condition of the objects (from very fragmented and corroded to completely restored) does not represent the original weight. Legoux, Périn and Vallet identified 13 types in the group of '*Haches*', of which one (*hache 2: hache profilée, francisque*) is considered to correspond with the group of so-called franciscas.¹⁵⁴⁶ Type *hache 3 (Hache semi-profilée)* can however, according to the terminology of Dahmlos and Siegmund, also be defined as a francisca. It is remarkable that Legoux, Périn and Vallet made use of precise metric criteria (for types 2, 3 and 4), but that these are very different of those used by Dahmlos. The imaginary horizontal axis is drawn from the upper point of the back in an angle of 90 degrees (with the extended line of the back) towards the cutting edge, whereas Dahmlos draw this line from the middle of the back to the middle of the cutting edge. It seems that a range of different criteria are used to classify franciscas, as Siegmund already mentions in his reference to the typologies of Böhner and Hübener.¹⁵⁴⁷ The Franken AG maintained all the types as identified by Siegmund.¹⁵⁴⁸ For the Vrijthof and Pandhof franciscas and axes the classifications of Siegmund and the Franken AG will be used and compared to the classification of Legoux, Périn and Vallet. Where relevant references will be made to other research.

Franciscas

Vrijthof: 288 (1786-1); 305 (1823-1; 1823-2); 310 (1783-2); 271 (1825-1*). Pandhof: 10506 (458-1). Appendix 1: Figure 82.

On the basis of Dahmlos' metric criteria four franciscas can be identified in the Vrijthof cemetery and one in the Pandhof cemetery.¹⁵⁴⁹ The top of the lower edge of the blade is located above the imaginary horizontal middle axis of the blade for all these franciscas. Moreover the angle between this imaginary horizontal middle axis and the axis of the shaft opening is more than 90°, which indicates an obtuse angle.

Two franciscas were ascribed to Vrijthof grave 305. The field drawings and excavation documentation do not mention the find of two franciscas in this grave so a mistake must have occurred in the find administration. It is not clear which of the two franciscas actually belonged to Vrijthof grave 305.¹⁵⁵⁰ Only parts of the long bones of the legs of the deceased person are preserved and the francisca that belongs to this grave was found to the right of the legs. No other finds are known from this grave. Francisca 1823-1 from grave 305 has a blade length of 14.8 cm (the length of the horizontal middle axe) and has a clear s-shaped upper edge with a pronounced upper side of the cutting edge. These features can also be observed on the franciscas from Vrijthof grave 310 and Pandhof grave 10506. The francisca from Vrijthof grave 310 has a blade length of 17.2 cm. Although this grave is partly disturbed, the francisca, together with a lance and bronze plate buckle, was recorded to have been found near the right lower leg. The francisca from Pandhof context 10506 has a blade length of 13.0 cm, and cannot be ascribed to a specific grave. The blades of the two other franciscas from the Vrijthof cemetery have a less pronounced s-shaped upper edge and cutting edge. The specimen from grave 288 has a blade

other features on the basis of which franciscas are classified are much more descriptive and therefore quite ambiguous. See Moosbrugger-Leu, Abb. 32.

¹⁵⁴³ Dahmlos 1977.

¹⁵⁴⁴ Hübener 1980.

¹⁵⁴⁵ Hübener 1980, 81, Abb. 8. The typological differentiation may, however, be important in other than typochronological research.

¹⁵⁴⁶ Legoux/Périn/Vallet, 2004, 14, 23-24.

¹⁵⁴⁷ Siegmund 1998, 107.

¹⁵⁴⁸ Müssemeier *et al.* 2003, 50-52.

¹⁵⁴⁹ Dahmlos 1977, 144.

¹⁵⁵⁰ A francisca is missing from Vrijthof grave 271. The find number of this francisca is 1825, which resembles find number 1823. It is very well possible that one of the franciscas ascribed to grave 305 originally belonged to grave 271. It can however not be reconstructed which of the two franciscas belongs to either grave 271 or 305.

length of 19.0 cm. This francisca was found with a seax to the right side of the lower body. The other finds from this grave are a biconical pot (found next to the left foot) and a fire-steel and flint (found at the position of the pelvis). The second francisca ascribed to grave 305 (1823-2) has a length of 17.4 cm, and if it belongs to this grave it was found next to the right leg.

Dahmlos considered the S-shaped upper edge of the blade and the clearly pointed ends at both sides of the cutting edge of the blade as significant morphological criteria to distinguish franciscas from other axe-like objects. Siegmund distinguished three different types of franciscas on the basis of these morphological features.¹⁵⁵¹ The morphological criteria for the first group (FBA 1.1.) are clearly defined, in contrast to the criteria selected for the two other groups (FBA 1.2 and 1.3).¹⁵⁵² The absence of metric criteria and the occasionally small differences between the examples of these groups make an unambiguous identification of the franciscas of Vrijthof and Pandhof as Siegmund types difficult. None of the franciscas of the Vrijthof or Pandhof cemeteries can be identified as Siegmund's typological group FBA 1.1. It seems that they all belong to group FBA 1.3, but, as mentioned, the criteria for this identification are ambiguous. It is therefore suggested that the chronological time span for the franciscas from the Vrijthof and Pandhof cemeteries cover the period established for both the typological groups FBA 1.2 and FBA 1.3 on the basis of which they can be dated in Rhineland phases 3-5 (485-570). The Franken AG date FBA 1.2 and FBA 1.3 in their phases 2-5 (400-580/90).¹⁵⁵³ The franciscas from the Vrijthof and Pandhof cemeteries can be identified as Hache 2 and 3 in the typology of Legoux, Périn and Vallet, which date in their phases MA1-MA2 (470/80-560/70).¹⁵⁵⁴

Axes

Vrijthof: 15 (1670-2).

Appendix 1: Figure 83.

The axe from Vrijthof grave 15 has a nearly straight upper side and an asymmetric shaped cutting edge. The blade has a length of 23.6 cm. The top of the lower side of the blade lies below the imaginary horizontal middle axis of the blade and is therefore, according to Dahmlos' criteria, not a francisca but an axe.¹⁵⁵⁵ Of the skeleton belonging to this grave only the skull and the left arm and leg are preserved. The axe was found together with a seax and an iron plate buckle and counter plate with silver inlay near the right side of these skeletal remains, next to the lower left leg. Because of the obvious distortion of the right half of the skeleton it is not clear whether the axe was originally placed next to the right lower leg, as is the case for nearly all the franciscas from the Maastricht cemeteries.

According to Siegmund's typology this axe can be assigned to group FBA 2.1, which dates in Rhineland phases 6-7 (570-610).¹⁵⁵⁶ The Franken AG maintained this type and date it to their phases 5-6 (565-610/20).¹⁵⁵⁷ This axe can be identified as type 4 in the typology of Legoux, Périn and Vallet and dates in their phases MA2-MA3 (520/30-600/10).¹⁵⁵⁸

Broad axes

Pandhof: 10012 (49-3); 10619 (532-1); 10792 (89-1) 10796 (142-3); 10797 (147-2); 10889 (143-1*).

Appendix 1: Figure 83.

Within the category of axes the broad axes can be distinguished from the other axes by their symmetric blade and extended cutting edge.¹⁵⁵⁹ All three broad axes were found in the Pandhof cemetery and they are, like all the axe-like objects of the Pandhof, in a bad condition. The broad axe from Pandhof context 10792 is the most complete specimen. It has a blade length (horizontal middle axis) of 13.0 cm. It was

¹⁵⁵¹ Siegmund 1998, 106.

¹⁵⁵² Siegmund 1998, 106-107.

¹⁵⁵³ Müssemeier *et al.* 2003, 50-51.

¹⁵⁵⁴ Legoux/Périn/Vallet 2004, 13, 23, 52 (type 2 and 3).

¹⁵⁵⁵ Dahmlos 1977, 142-144

¹⁵⁵⁶ Siegmund 1998, 107.

¹⁵⁵⁷ Müssemeier *et al.* 2003, 51.

¹⁵⁵⁸ Legoux/Périn/Vallet 2004, 14, 23, 52 (type 4).

¹⁵⁵⁹ Siegmund 1998, 106.

a stray find, found together with some metal fragments. The broad axe from Pandhof grave 10012 has a blade length of 12.0 cm and a broad back. Some wood remains of the handle can be detected in the shaft opening. The broad axe from Pandhof context 10619 has partly perished as a result of which the original measurements cannot be established. The remaining length of the blade is 8.6 cm. The find context of this axe remains unclear. The original location of this axe in the grave is unknown and no other objects can be associated with it. The axes from Pandhof grave 10796 and 10797 are corroded to such an extent that their shape cannot be established anymore. They were, however, drawn in the Pandhof archive on the basis of which they can be identified as broad axes. The axe from Pandhof grave 10797 had, according to the available old drawing, a horizontal axis of approximately 12.5 cm and the length of the cutting edge was approximately 11.5 cm. It was found in a grave which furthermore consisted of a fragment of a knife (lost), a piece of iron (lost) and a fragment of a pin of bronze. The horizontal middle axis of the axe from Pandhof grave 10796 can be set at approximately 11 cm, the length of the cutting edge was 9.5 cm. This grave goods assemblage consisted furthermore of a bronze pin, a knife, some beads, the bronze tongue of a buckle and a rivet. The axe from Pandhof context 10889 was a stray find and is now lost, but the available drawing in the Pandhof-archive offers enough information for its identification as a broad axe. The horizontal axis is approximately 12 cm, the length of the cutting edge 10 cm.

The group of broadaxes is further classified in two sub-types on the basis of the shape of their opening for the wooden handle, it can be simple or it can be profiled.¹⁵⁶⁰ The broad axes from Pandhof graves 10012, 10792, 10796, 10797 and context 10889 can be classified as Siegmund's type FBA 3.1 (with a simple shaft opening) and date in Rhineland phase 5 (555-570).¹⁵⁶¹ The Franken AG maintained this type and date it to their phases 4-5 (510/25-580/90).¹⁵⁶² Because a part of the back is missing of the axe from Pandhof grave 10619 it cannot be classified more specifically than as a broadaxe. Broad axes in general are dated to Rhineland phases 5-7/8A (555-625) and phases 4-6 (510/25-610/20) of the Franken AG.¹⁵⁶³ Legoux, Périn and Vallet identified six groups of broad axes on the basis of the shape of the cutting edge and the shaft opening. All the axes of the Pandhof have simple haft openings and the extremities of the cutting edges are for most of the Pandhof axes flattened. According to these features they can be classified as type 6 in the typology of Legoux, Périn and Vallet and dated to their phases MA1-MA2 (470/80-560/70).¹⁵⁶⁴ Only the axe from context 10889 seems to have a cutting edge with pointed extremities, although this remains uncertain because the actual axe is not present. Based on these pointed extremities this axe can be classified as type 5 in the typology of Legoux, Périn and Vallet and dated to their phase PM-MA1 (440/450-520/30), what is rather early compared to the other broad axes of the Pandhof cemetery.¹⁵⁶⁵

Bartaxt

Pandhof: 10168 (520-16*).

Appendix 1: Figure 83.

The axe from Pandhof grave 10168 is lost, but can be classified on the basis of an old drawing in the Pandhof-archive. It is characterised by an asymmetric blade with a horizontal axis of approximately 15 cm. This axe was part of a grave goods assemblage of a man which consisted furthermore of a seax (lost), an elaborate bronze belt, a knife, a piece of flint and an amber bead.

Siegmund and the Franken AG classify axes of this kind as Bartaxt (beard axe) and in both classification schemes two sub types are identified.¹⁵⁶⁶ The axe from the Pandhof cemetery is, on the basis of the right angle of the lower side (*mit zur Schneide hin senkrecht oder leicht einwärts gebogen verlaufender*

¹⁵⁶⁰ Siegmund 1998, 107.

¹⁵⁶¹ Siegmund 1998, 107.

¹⁵⁶² Müssesmeier *et al.* 2003, 51.

¹⁵⁶³ Müssesmeier *et al.* 2003, 51.

¹⁵⁶⁴ Legoux/Périn/Vallet 2004, 14, 23, 52 (type 6).

¹⁵⁶⁵ Legoux/Périn/Vallet 2004, 14, 23, 52 (type 5).

¹⁵⁶⁶ Siegmund 1998, 107-108; Müssesmeier *et al.* 2003, 51-52.

Unterkante) classified as type FBA 4.2 in these classification scheme's. Siegmund dates this type in his phase 7 (585-610) and the Franken AG in their phases 5 and 6 (565-640/50). On the basis of the shape of the lower side of the axe it can be classified as type 12 in the typology of Legoux, Périn and Vallet, although they defined it by the shape of the back. The depicted examples of this type, however, resemble the Pandhof axe best. This type dates in their phases MA2 to MR1 (520/30-630/40), although predominantly in phase MA3 (560/70-600/10).¹⁵⁶⁷

Franciscas / Axes (not identifiable / lost)

Vrijthof: 104 (1582-1); 139 (1552-1); 271 (1825-1); 0(1846-1).

For a number of graves from both the Vrijthof and Pandhof cemeteries it is known that they contained franciscas or axes. These are now lost or corroded to such an extent that further identification is impossible. For the Pandhof axes concerned this problem was solved by the available old drawings (see above), for the Vrijthof cemetery such documentation is not available.

Four franciscas or axes of the Vrijthof cemetery are known from the excavation administration but are lost at the moment. Further classification of these specimens cannot be obtained from the available documentation.¹⁵⁶⁸ All these Vrijthof axes/franciscas were found in graves and were identified as the only finds from these graves. Except for the object with find number 1846-1, which is a stray find (its formerly presence is known from some available lists). The axe/francisca from Vrijthof grave 104 was found near the right side of the body, the one from grave 139 just below the pelvis and the one from the disturbed grave 271 was found near the right leg. It is generally accepted that axes and franciscas do not date after approximately 600 AD, and it can be assumed that this also applies in general to these Vrijthof axes/franciscas.

Umbo

Vrijthof: 125 (1598-1).

Appendix 1: Figure 84.

The umbo (shield boss) from Vrijthof grave 125 has a flat and relative broad base on which no rivets or rivets holes can be observed.¹⁵⁶⁹ The collar is oblique and the head curved. The umbo was part of the grave goods assemblage of a man consisting furthermore of iron belt fittings and a seax.¹⁵⁷⁰

Umbos are generally dated from the late fifth century to the first half of the eighth century, and their morphological features are used as chronological indicators by several researchers in order to arrive at a more precise dating of this category of objects. The first typology of umbos by Werner was refined by Hinz (on the basis of the finds from the cemetery of Eick), which was afterwards used and tested by Pirling (using the evidence from the cemetery of Schretzheim) which serves as a starting point for the typology as presented by Siegmund.¹⁵⁷¹ The umbo from the Vrijthof cemetery can be classified as Siegmund type Sbu 6 on the basis of the shape of the collar (high and oblique) and the head (substantially curved). The Franken AG maintained this type. Siegmund dates this type in Rhineland phases 9-10 (640-705), the Franken AG in their phases 7-9 (610/20-710).¹⁵⁷² It is mentioned by Siegmund that Pirling makes a distinction between the umbos with broad and flat rivets (Sbu 6a; older shape), and those with higher and less broad rivets (Sbu 6b; younger type). The appearance of the rivets of the Vrijthof umbo remains unknown. It is likely that, in view of the observation that umbos tend

¹⁵⁶⁷ Legoux/Périn/Vallet 2004, 14, 24, 52 (type 12).

¹⁵⁶⁸ In the written documentation of the Vrijthof cemetery axes and franciscas are generally described as *bijl* (axe). This description cannot be trusted as to actually identify the missing objects as axe.

¹⁵⁶⁹ This is probably due to the choices made in the process of restoration, because it can be assumed that the only way to attach the umbo to the shield was by rivets through the umbo base.

¹⁵⁷⁰ The belt is dated in the seventh century (see the section iron belt fittings with silver inlays).

¹⁵⁷¹ Siegmund 1998, 108.

¹⁵⁷² Müssemeier *et al.* 2003, 53.

to become higher in the course of the seventh and early eighth century, the Vrijthof specimen dates rather to the second half of the seventh century or even to the later part of it. Legoux, Périn and Vallet identified four types of umbos; the specimen from the Vrijthof can be classified as type 80 according to their typology and dated in their phases MR1-MR2 (600/10-660/70).¹⁵⁷³

Lances

Vrijthof: 125 (1601-1); 300 (1820-1*); 310 (1783-4); 0 (1843-4). Pandhof: 10370 (552-1).

Appendix 1: Figure 84.

Only four lances were found in the Vrijthof cemetery, of which one is lost (grave 300). The only known lance from the Pandhof cemetery is corroded to such an extent that further classification on the basis of the actual object is impossible. The old drawing in the Pandhof-archive does, however, offer some descriptive information. Besides the remarks in the find administration, no further documentation is available for the lost lance from Vrijthof grave 300. This grave contained also a jug of pottery.

The lance from Vrijthof grave 310 has a closed shaft (but this can also be the result of rigorous restoration practices) with a round section and has a length of 28.4 cm. The blade is rhomboid shaped, and has a rhomboid section. It was found together with a francisca and a bronze plate buckle.

The context of lance 1843-4 is unknown, but it was found with a seax, an iron plate buckle and a flat perforated bronze rivet. These rivets are generally associated with seax scabbards. The lance has a split shaft with a round section, and a total length of 25.6 cm. The blade is oval and has a rhomboid section.

The lance from Vrijthof grave 125 was found with a seax, umbo and an elaborate belt of iron fittings with silver inlay (partly lost). It has a closed shaft with a round section. The shape of the blade is oval, the section of the blade is rhomboid. The lance has a length of 35.6 cm.

The lance from Pandhof grave 10370/2 was found without the tip. On the basis of the drawing and additional information, it is reconstructed that the remainder of the lance measures approximately 37 cm and that the complete blade would have been more or less two thirds of the complete lance head. On the drawing it seems as if it had a closed shaft and that some wood remains were still present in the shaft opening. The blade had a rhomboid section. No other details can be seen on the drawing. This lance was found in a grave which exists furthermore of a seax with fittings of a scabbard, a pottery vessel, a piece of flint and an elaborate belt which consists of various bronze fittings.

All five lances have a distinct appearance. The relative length of the blade and the shape of the shaft are according to Siegmund the most important typological and chronological features of lances, on the basis of which he developed an extended classification scheme.¹⁵⁷⁴ This classification is for the greatest part followed by the Franken AG.¹⁵⁷⁵ A considerable number of lance-types, of which the defining typological criteria mainly relate to the length of the total lance point and the relative length of the blade and to the shape of the shaft, are also identified by Legoux, Périn and Vallet.¹⁵⁷⁶

The lance with split shaft (1843-4) of the Vrijthof cemetery is a relative short lance with a relative short blade and can, in line with Siegmund's scheme, be classified as type Lan 1.1a.¹⁵⁷⁷ This type dates in Rhineland phases 4-6 (530-585). The Franken AG maintained this type which dates in their phases 4-5 (510/25-580/90).¹⁵⁷⁸ On the basis of these characteristics this lance can be classified as type 31 in the typology of Legoux, Périn and Vallet. This type dates to their phases PM-MA3 (440/50-600/10).¹⁵⁷⁹

¹⁵⁷³ Legoux/Périn/Vallet 2004, 15, 29, 52 (type 80).

¹⁵⁷⁴ Siegmund 1998, 100-101, Abb. 35.1, 35.2.

¹⁵⁷⁵ Müssemeier *et al.* 2003, 47-50.

¹⁵⁷⁶ Legoux/Périn/Vallet 2004, 14, 25-26.

¹⁵⁷⁷ Siegmund 1998, 99.

¹⁵⁷⁸ Müssemeier *et al.* 2003, 47.

¹⁵⁷⁹ Legoux/Périn/Vallet 2004, 14, 25, 52 (type 31).

The lance with closed shaft from Vrijthof grave 125 can be classified as Siegmund's Lan 2.4 on the basis of the shape of the blade (oval) and the relative long blade length, although with a total length of 35.6 cm it is considered a short example. This type dates in Rhineland phase 8B-10 (610-705).¹⁵⁸⁰ The Franken AG changed the maximum length of this lance from 38.5 cm to 38 cm., which, however, has no consequences for the type assignment of the lance from this grave. This type dates in their phases 4-9 (510/25-710).¹⁵⁸¹ The lance from Vrijthof grave 125 can be classified as type 36 in the typology of Legoux, Périn and Vallet which dates in their phases MA3-MR2 (560/70-660/70), although predominantly in phase MR2 (630/40-660/70).¹⁵⁸² The lance from Vrijthof grave 310 is classified as Lan 2.5 on the basis of the shape of the blade (rhomboid). This type dates in Rhineland phases 8B to 9 (610-670).¹⁵⁸³ The Franken AG date this type in their phases 7 to 9 (610/20-710).¹⁵⁸⁴ On the basis of the closed shaft, the length of the total lance point and the relative length of the blade this lance is classified as type 34 in the typology of Legoux, Périn and Vallet which dates in their phases MA3-MR3 (560/70-700/10), although predominantly in phase MA3-MR1 (560/70-630/40).¹⁵⁸⁵

The only significant typological feature known of the lance from Pandhof grave 10372 is the closed shaft with round section. The blade of the lance seems oval on the drawing, but this is uncertain. The relative length of the blade seems to be more than 0.52, but this is also uncertain. The length of the total lance point will have been more than 38.5 cm (see above). On the basis of this information a classification of this lance as type Siegmund's Lan 2.3 is proposed, although some restraints need to be taken into account. This type dates to Rhineland phase 7 (585-610).¹⁵⁸⁶ The Franken AG introduced a minor alteration in the type description; the minimum length is fixed at 38 cm replacing the minimum length of 38.5 cm in the Rhineland typology. The longer duration period of this type in their chronological research results is explained by this alteration on the basis of which other specimens were added to their chronological analysis. This type dates to Franken AG phases 5-10 (565-750).¹⁵⁸⁷ On the basis of the available information this lance fits type 36 of Legoux, Périn and Vallet the best. Type 36 dates to the phases MA3-MR2 (560/70-660/70) of Legoux, Périn and Vallet, although predominantly in phase MR2 (630/40-660/70).¹⁵⁸⁸

In view of the high amount of seaxes in the Vrijthof and Pandhof cemeteries (especially the Vrijthof cemetery) a total number of only five lances in these cemeteries is remarkable. It appears that three of the five lances are part of grave goods assemblages that also contain a seax, of which two graves also contained an elaborate belt set and one an umbo. It can be assumed that lances in Maastricht were deposited with other weaponry, in contrast to the graves with axes or franciscas (although these are not necessarily weapons, although often incorporated as such in the analysis of weaponry in Merovingian cemeteries) which were more frequently the single interred object with the dead.¹⁵⁸⁹

Arrowheads

Vrijthof: 13 (1680-3); 201 (1501-3).

Appendix 1: Figure 85.

¹⁵⁸⁰ Siegmund 1998, 102-103.

¹⁵⁸¹ Müssemeier *et al.* 2003, 49.

¹⁵⁸² Legoux/Périn/Vallet 2004, 14, 26, 52 (type 36).

¹⁵⁸³ Siegmund 1998, 103.

¹⁵⁸⁴ Müssemeier *et al.* 2003, 49-50.

¹⁵⁸⁵ Legoux/Périn/Vallet 2004, 14, 26, 52 (type 34).

¹⁵⁸⁶ Siegmund 1998, 102.

¹⁵⁸⁷ Müssemeier *et al.* 2003, 49.

¹⁵⁸⁸ Legoux/Périn/Vallet 2004, 14, 26, 52 (type 36).

¹⁵⁸⁹ An analysis of the combination of weaponry in graves from the fourth tot the fifth century can be found in Theuws 2009.

Two arrowheads were found in the Vrijthof cemetery. The arrowhead from Vrijthof grave 13 has a length of 15.2 cm and a closed shaft with a diameter of 1.8 cm.¹⁵⁹⁰ The blade has an oval shape and measures approximately half of the total head. Two iron rods of which the function cannot be identified were found attached to this arrowhead. The grave goods assemblage it belongs to consisted furthermore of a knife, a fire steel and a pottery vessel (lost). The iron objects were all found near the left side of the left arm, the pottery vessel in between the feet.

The arrowhead from Vrijthof grave 201 was corroded (now restored) to such an extent that not much is left of it after the restoration. Part of the shaft is missing, and the remainder of the blade is thin. The length of the remainder of the shaft with blade is 10.6 cm. The blade can be identified as more or less rhomboid. This arrowhead was part of a grave goods assemblage which consists furthermore of a bronze buckle (of a purse), a knife and a piece of flint. These objects were all found on the pelvis of the buried person.

Siegmund refrained from a classification of arrowheads for the Lower Rhine region, as did the Franken AG for their research area.¹⁵⁹¹ Legoux, Périn and Vallet identified various types of arrow-heads and the main criteria for their classification of arrowheads are basically the shape of the blade and shaft. The arrowhead from Vrijthof grave 13 can be classified as type 26 on the basis of the closed shaft and oval blade. This type dates to their phases MA1-MA3 (470/80-600/10), although some reservations are made regarding the precision of this dating.¹⁵⁹² The arrowhead from Vrijthof grave 201 is difficult to classify, but an identification of this specimen as type 23 or 24 according the typology of Legoux, Périn and Vallet seems plausible. These types both date (with the some reservations made on the precision) to their phases PM-MA3 (440/50-600/10).¹⁵⁹³

Sword: simple

Vrijthof: 263 (1838-263).

Appendix 1: Figure 85.

A simple iron sword (completely restored) was found in Vrijthof grave 263. It has a blade length of 80.4 cm and a blade width of 5.4 cm. This sword was found in a grave from which no other finds are known. It was found on the right side of the body. No further specifics can be given for this grave and sword. Siegmund and the Franken AG especially classify the remnants of the sword scabbard and elements such as the hilt knob. These classifications are of no much use to classify what appears now to us as a simple iron sword. Legoux, Périn and Vallet identified simple iron swords without any additional elements as type 95.¹⁵⁹⁴ They were not able to date this type of sword to a specific phase or phases of the Merovingian period; it is neither dated more precisely in the classification of swords by Menghin.

Plate: bronze

Pandhof: 10370 (555-3).

Appendix 1: Figure 85.

A rectangular bronze plate with an engraved degenerated animal style decoration was found in Pandhof grave 10370. This plate was found with a seax and scabbard related fittings, bronze fittings of a waist

¹⁵⁹⁰ On the basis of Siegmund's criteria (length more than 15 cm, shaft diameter more than 1.6 cm) this object should be identified as a small lance-head (Siegmund 1998, 95-96). Because it is much smaller than the actual lances of the Maastricht cemeteries, and the dimensions come close to the demarcation criteria as established by Siegmund, this specimen is identified as an arrowhead.

¹⁵⁹¹ It is not clear why Siegmund refrained from a further classification of arrowheads. Arrowheads are found in the lower Rhine Area as can be observed in the tables and diagrams in which the differences between lances and arrowheads are depicted (Siegmund 1998, 96-97, Abb. 30, 31 and 32, Tabelle 14). The typological difficulties regarding arrowheads and their absence in the typology are not discussed in the work of the Franken AG.

¹⁵⁹² Legoux/Périn/Vallet 2004, 14, 24, 52 (type 26).

¹⁵⁹³ Legoux/Périn/Vallet 2004, 14, 24, 52 (type 23, 24).

¹⁵⁹⁴ Legoux/Périn/Vallet 2004, 15, 29, 52 (type 95).

belt, a piece of flint and a pottery vessel. Plates of this kind are generally identified as components of sword gears, but should in this case be considered to be part of a leather strap that connected the seax to the waist belt. Plates of this kind were classified by Legoux, Périn and Vallet as type 96 which dates in their phases MA3 (560/70-600/10) although some reservations about the exactness of this dating were made.¹⁵⁹⁵

Shoes and leg wear: buckles, plate buckles and strap ends

The metal fittings of foot- and leg wear can be identified as such by their size, paired appearance and location in the grave in relation to the body. They may be simple bronze or iron buckles or simple or more elaborate plate buckles with occasionally additional elements such as strap ends and other fittings. Strap ends can also be the only metal elements of the leg wear, in German literature referred to as *Wadenbindengarnitur*.¹⁵⁹⁶ Metal shoe- and leg wear fittings can have the same appearance as metal belt fittings or purse fittings. The position of the objects in the grave is therefore essential for their functional identification. Plate buckles of shoes or leg wear and purses are the only ones where a fixed plate is common. For the metal shoe and leg wear fittings of the Vrijthof and Pandhof cemeteries a distinction is made between the categories 'buckles' and 'plate buckles'.

Shoes: simple buckles (with & without strap ends)

Vrijthof: with strap end: 97 (1496-1*,2*; 1497-1,2); without strap end: Vrijthof: 101 (1493-3); 250 (1795-1). Pandhof: 10012 (49-1); 10927 (185-1).

Appendix 1: Figure 86.

One bronze shoe buckle with strap end is known from Vrijthof grave 97. From the documentation it is known that this ensemble was originally part of a pair.¹⁵⁹⁷ The other half of this pair was lost after the excavation, but the drawings of Ypey show that the buckles were exactly alike. The strap ends, however, show some differences. The bronze buckles are oval with a ribbed surface and have a punched in dot-in-circle decoration. They were part of a strap with an approximate width of 1.4 cm. The tongue of the remaining buckle is a simple bronze tongue, it can be assumed that the tongue of the missing buckle was also of bronze. The remaining strap end is made of bronze, is tongue shaped and also has a punched in dot-in-circle decoration. It can be assumed that the missing strap end was also of bronze. The available drawings show that the shape and measurements of this strap end is quite similar to the existent one, but that the decoration is different. The drawing shows a punched in decoration of steps along the outer edge of the strap end. Presumably dot-in-circle decorated strap ends were originally part of this set of foot-wear (because of the similar decoration on the buckle). One of them was replaced when it became missing or was broken. Both buckles and strap ends were found near the feet. The rest of the grave goods assemblage consists of a fragment of a comb, a boar tooth, a '*Herkuleskeule*', two iron rings and a bronze plate buckle (also lost).

Legoux, Périn and Vallet identified buckles with a ribbed surface as type 120 and date them in their phase MA3 (560/70-600/10).¹⁵⁹⁸ The examples of this type of buckle, however, are not exactly similar to the ones of the Vrijthof cemetery. They lack the dot-in-circle decoration, and the ribbed surface of the Vrijthof buckles is not as pronounced as the ones defining type 120. It is not clear whether these buckles were found together with strap ends in the research area of Legoux, Périn and Vallet, and whether they interpret them as parts of shoes. Shoe buckles and strap ends of this kind can be classified as

¹⁵⁹⁵ Legoux/Périn/Vallet 2004, 15, 29, 52 (type 96).

¹⁵⁹⁶ *Wadenbindengarnitur* have different appearances and can also consist of multiple fittings, not only strap ends. See for example Clauss 1976 for the leg wear of women in the sixth and seventh century.

¹⁵⁹⁷ It is marked on the field drawing, mentioned in the excavation documentation and indicated on drawings in the 'Ypey-archive'.

¹⁵⁹⁸ Legoux/Périn/Vallet 2004, 15, 30, 52 (type 120).

Siegmunds typological group Sna 1.2 and can be assigned to Rhineland phase 6 (570-585). This group, however, is very broadly defined as bronze oval buckles without plate which are generally found next to the feet.¹⁵⁹⁹ The ribbed feature as observed on the Vrijthof buckles is not considered, although a buckle with ribbed surface is known from the cemetery of Müngersdorf.¹⁶⁰⁰ No exact parallels are yet known for these Maastricht buckles with strap ends. The majority of the other finds from this grave date in the sixth century what coincides with the above mentioned dates. The Franken AG did not identify this type. Another bronze buckle that can be identified as component of the footwear is found in Vrijthof grave 250. This small bronze rectangular buckle with simple bronze tongue belonged to a strap with a width of 0.8 cm. Small bronze rectangular buckles are known from several graves of the Vrijthof cemetery but these are all identified as elements of purses.¹⁶⁰¹ The buckle from Vrijthof grave 250 is identified as a shoe buckle because it was found near the right foot (together with a glass bottle). The left counterpart is, according to the available documentation, not found. Similar buckles are quite common in Merovingian graves in the Rhineland and are classified by Siegmund as Sna 1.1, defined as small rectangular buckles with a trapezium shaped cross-section. Siegmund also refers to these buckles as elements of purses or additional straps that are attached to the waist belt. The upper part of the Vrijthof grave (from the pelvis to the head), however, is disturbed, so it is possible that the buckle was moved from a position at the pelvis (as fitting of a purse) to one next to the right foot. Small bronze rectangular buckles (Siegmund Sna 1.1) predominantly date to Rhineland phase 5 (555-570).¹⁶⁰² The Franken AG date these buckles more broadly from phases 4b to 7 (510/25-610/20), although predominantly in phase 5 (565-580/90).¹⁶⁰³ Legoux, Périn and Vallet also identified small bronze rectangular buckles and date them to their phases MA1-MR1 (470/80-630/40).¹⁶⁰⁴ From this publication it cannot be deduced whether these buckles are interpreted as fittings of shoes or purses.

The simple bronze buckle from Vrijthof grave 101 belongs to a strap with a width of approximately 1 cm. It was found together with tweezers, a knife, two bronze belt studs and a bronze buckle (lost, found near the right arm). The shoe buckle was found near the right foot, the counterpart was not found.

The small oval buckle with a simple bronze tongue from Pandhof grave 10012 was attached to a strap with a width of approximately 1 cm. It is part of the grave goods assemblage of a man which furthermore consists of an axe and a knife. The find of a (large) belt fitting on the pelvis is mentioned on the grave drawing, but it remains uncertain to which object this remark refers. The little buckle is mentioned in the documentation of the grave, but not explicitly on the drawing. No other belt elements, however, are known from this grave (is the large belt fitting missing?). The small silver buckle can also be part of a purse or leg wear, this remains unknown as to the fact that its position in the grave is uncertain. It can be classified as Siegmund's type Sna 1.2 (shoe buckles) and is therefore identified, for now, as a shoe buckle.

A simple oval 'ring' which could have had the function of a buckle (the tongue is absent) was found in Pandhof grave 10927. No other finds are known from this grave. For now it is identified as a shoe buckle, although the evidence for this conclusion is lacking. Simple oval bronze buckles date in Rhineland phase 6 (570-585).¹⁶⁰⁵

Shoes: bronze plate buckles (with & without strap ends)

Vrijthof: 116 (1568-1*, 1569-1); 0 (1739-1, 2, 3).

Appendix 1: Figure 86.

The majority of the shoe buckles are plate buckles with a fixed plate. Two pairs of shoe related plate buckles from the Vrijthof cemetery, however, have the plate attached to the buckle with a wrapped and

¹⁵⁹⁹ Siegmund 1998, 40.

¹⁶⁰⁰ Fremersdorf 1955, Tafel 21, Grab 118-5.

¹⁶⁰¹ See the section on purses in this chapter.

¹⁶⁰² Siegmund 1998, 40.

¹⁶⁰³ Müssemeier *et al.* 2003, 105. Only in the graphical depiction of the types per phase, this type is not described.

¹⁶⁰⁴ Legoux/Périn/Vallet, 15, 30, 52 (type 124).

¹⁶⁰⁵ Siegmund 1998, 40 (type Sna 2.1).

slotted construction. One bronze plate buckle of the pair from Vrijthof context 116 was lost after excavation, and its existence is only known from the available old drawings of Ypey. This documentation is sufficient to conclude that both plate buckles were identical. The plates are triangular and slightly hollow. The three bronze rivets applied on both plates show a pearl-rim decoration. These rivets had only a decorative function because the three loops at the back of both plates (which do not consist of one piece with the rivets, they are located differently) served to attach the plate buckles to a leather strap. The triangular hollow plate and the presence of loops and so called 'fake rivets' are typical for the plate buckles of belts which are classified by Siegmund as Gür 3.3, although the typical hinged construction of this type is not present on the Vrijthof specimens. They are also much smaller than the plate buckles identified as type Gür 3.3.¹⁶⁰⁶ The position in the grave is indicated at the pencil drawing by Ypey. Nr. 1569 was found near the left foot and nr. 1568 near the right foot. The two buckles were found together with two glass vessels, which are usually found near the feet. Siegmund's type Gür 3.3 dates to Rhineland phase 8 (610-640).¹⁶⁰⁷ Legoux, Périn and Vallet identified these plate buckles as type 172 and date them to their phases MR1-MR2 (600/10-660/70).¹⁶⁰⁸ Parallels for similar small plate buckles are not known up to now, but it seems plausible, because of the common features, to date them according to the similar, although larger, fittings known of the waist belts.

The context of the pair of small plate buckles with strap ends (nr. 1739) of the Vrijthof cemetery is unknown. They are identified as part of the foot- or leg wear because of their small size and paired occurrence. The plate buckles belonged to a strap with a width of 1.4 cm, are oval shaped and have a simple bronze tongue. Because of the similarity of the buckles it is assumed that they were a pair although the plate of one of them is missing. The remaining plate of the other plate buckle is small and rounded. Only one bronze strap end remains. It has a length of 4.4 cm and a geometric punched in decoration. Parallels for these plate buckles are not known so far, and without context and other accompanying grave goods they remain difficult to date.

Shoe buckles: bronze plate buckle, fixed plate (with strap ends)

Vrijthof: with strap end: 100 (1495-1, 2, -6*, -7*); without strap end: 140 (1547-1*). Pandhof: with strap end: 10074 (27-1, 2, 3, 4); without strap end: 10248 (324-1, 2); 10100 (59-3, 4); 10307 (571-2).

Appendix 1: Figure

Five pairs of bronze shoe buckles with a fixed plate are known from the Vrijthof and Pandhof cemeteries. Both the pairs from Vrijthof grave 100 and Pandhof grave 10074 have a rounded plate. The plate buckles from Pandhof grave 10074 were attached to straps with a width of 1.4 cm and have loops on the backside of the plates. Both plate buckles have a punched in decoration consisting of a pattern of lines. Two bronze strap ends of a different size and decoration were found with the plate buckles. Grave 10074 was partly disturbed and apart from the skull no skeletal remains were found. The plate buckles were found at the position where approximately the feet can be expected. Besides the foot wear, three glass vessels, one pottery vessel (near the head) and a string of beads (at the presumed position of the pelvis) are known from this grave. These finds date in the fifth and sixth century.

Of the pair of rounded plate buckles with strap ends from Vrijthof grave 100 only one plate buckle and strap end remains. The other ensemble is only known from the documentation of excavation, in which it is mentioned that they were found near the feet. The plates of both the plate buckles have a punched in decoration of two rows of circles along the edge. The strap ends have a punched in decoration of one row of small rectangles along the edge. This pair of shoe fittings was found together with a string of beads that was found at the position of the pelvis. A similar pair of shoe buckles with round plate was

¹⁶⁰⁶ Siegmund 1998, 27.

¹⁶⁰⁷ Siegmund 1998, 27.

¹⁶⁰⁸ Legoux/ Périn/ Vallet 2004, 16, 32, 53 (type 172).

found in Rosmeer grave 43 which is considered as one of the oldest graves of the cemetery and is dated to the second half of the sixth century.¹⁶⁰⁹

The plate buckles of the pair from Pandhof grave 10248 (without strap ends) have undecorated profiled triangular plates. They were attached to a strap of approximately 1 cm wide with the loops on the back of the plates. The grave is partly disturbed and the position of the plate buckles, at the right side near the assumed position of the pelvis, remains to be uncertain. The plate buckles were found together with some fragmented beads, two small rectangular bronze plates of which the function is unknown, and two simple bronze rings which could be an indication for the former presence of a purse.¹⁶¹⁰ The pair of plate buckles from this grave is identified as fittings of the foot-or leg wear because of their paired occurrence. A pair of plate buckles, also with triangular plates, but much more profiled, were found in Pandhof grave 10100. This is a grave in which also an elaborate bronze belt was found, which was dated to the end of the sixth and beginning of the seventh century. It is identified as the grave of a man on the basis of the associated seax and flint.

In Pandhof grave 10307, another profiled buckle, although without counterpart, was found. Belt fittings, although less elaborate, and a glass bottle were also found in this grave, on the basis of which it is difficult to assign the grave either to a man or a woman.

A small bronze plate buckle which is lost can be ascribed to Vrijthof grave 140 on the basis of the information in the excavation documentation. According to the Ypey-drawings the plate is tongue shaped with a profiled outline and some punched in or incised geometric decoration can be observed on the centre of the plate. This plate buckle was found near the right foot and is therefore identified as fitting of the footwear. The left counterpart however was not found. No other finds are known from this grave.

In Siegmunds typology of small plate buckles no distinction is made between the shapes of the plates; all the small bronze plate buckles, identified as fittings of shoes or leg wear, are classified as type Sna 2.2.¹⁶¹¹ These plate buckles are, in the Rhineland, characteristic for grave goods assemblages of women, what is in accordance with all of the described plate buckles with fixed plates from the Vrijthof and Pandhof cemeteries of which the grave context and associated finds are known. The plate buckles date in Rhineland phases 5 to 8 (555-640) but occur predominantly in phase 7 and 8 (585-640). The Franken AG altered Siegmund's classification because of the already mentioned variability in this group. They identified plate buckles with triangular plates as separate type, but did not identify those with rounded plates.¹⁶¹² The plate buckles with triangular plates date to their phases 5-8 (565-670/80). Legoux, Périn and Vallet also consider some differences in the shapes of the plates. According to them, the plate buckles with triangular plates date earlier than those with rounded plates. Triangular shaped plates of small plate buckles with a fixed plate are classified as type 130 and date in the phases MA2-MR1 (520/30-630/40).¹⁶¹³ The plate buckles with rounded plates are classified as type 131 and date in phase MA3-MR2 (560/70-660/70).¹⁶¹⁴

Shoes: iron plate buckles with inlays

Vrijthof: 126 (1572-1*, -2*); 105 (1470-1, 2).

Appendix 1: Figure 87.

The appearance of the iron plate buckle and strap end with inlay from Vrijthof grave 126 is only known from photographs and drawings in the Ypey-archive. They were found, together with a glass bell beaker and a knife, next to the left foot and are, because of this position and the small size of the plate buckles, identified as fittings of the footwear. The strap end is relatively large (length: 8.6 cm) compared to the size of the plate buckle (length: 5.8 cm) and considering its function as fitting of a shoe, unless these mounts were part of leg wear and were fixed to a vertical strip between upper and lower strap of the leg

¹⁶⁰⁹ Roosens/De Boe/De Meulemeester 1976, 18, plaat, XI, 43, 3-6.

¹⁶¹⁰ See the section on purses in this chapter.

¹⁶¹¹ Siegmund 1998, 40.

¹⁶¹² Müssemeier *et al.* 2003, 41.

¹⁶¹³ Legoux/Périn/Vallet 2004, 16, 30, 53 (type 130).

¹⁶¹⁴ Legoux/Périn/Vallet 2004, 16, 30, 53 (type 131).

wear. The counterparts of both the plate buckle and strap end of the right foot/leg wear were not found. The plate buckle has an oval loop with shield-tongue and a triangular plate. The loop and tongue have a monochrome or bichrome (this cannot be established on the basis of the photograph and the drawings) line pattern decoration. The plate also has monochrome or bichrome inlays which consist of a (silver?) plated middle field with interlacing s-shaped lines intersecting this field. The outer edge of the plate shows some animal style elements (animal heads). The strap end is tongue shaped and curved inwards in the middle. It also has a silver plated middle field, intersected with a decoration of brass inlay in animal style.

A pair of nearly similar iron plate buckles (although without strap ends) with bichrome inlay is known from Vrijthof grave 105. These plate buckles show a silver plated middle field, intersected with brass inlay. Both buckle loops are decorated with lines of silver inlay, and the shields of both shield tongues show a geometric pattern of silver threads.

It seems plausible to date the plate buckles from both Vrijthof graves in the same period in which Siegmund dates similar small plate buckles. These, however, are identified as fittings of female footwear. The plate buckles from Vrijthof grave 105 were found on the location of the pelvis, what does not match with their identification as components of shoes. The position in the grave at the right side of the pelvis could indicate that the plate buckles were part of a waist belt, but the paired occurrence seems to contrast with this interpretation. And, larger belt mounts were also found in this grave. These belt fittings, however, were found together with a seax, fire steel and flint just outside the outline of this grave. It should therefore be questioned whether these finds actually belonged to this grave. If not, the rest of the grave contents do not contradict the identification of this grave as that of a woman. The grave is disturbed, so the two 'shoes' could have been moved from their original position. For now they will be identified as fittings of shoes or leg wear.

Paired iron plate buckles with triangular shaped plates with inlay and accompanying strap ends are considered to be part of the female foot wear and are classified by Siegmund as Sna 2.4 or 2.5, depending of the decoration applied.¹⁶¹⁵ The two Vrijthof pairs are classified as Sna. 2.5 on the basis of the bichrome inlay. These pairs date to Rhineland phase 9 (640-670). The Franken AG maintained this type and date the associated plate buckles to their phases 7-8 (610/20-670/80).¹⁶¹⁶ Legoux, Périn and Vallet make no distinction regarding the decoration and created one typological group (135) for iron shoe buckles with a triangular plate and a wrapped and slotted construction to attach the plate to the buckle. This type dates to their phase MR1 (600/10-630/40).¹⁶¹⁷ This date corresponds with Siegmunds typological group Sna 2.4 which dates in Rhineland phase 8 (610-640).

Shoes: silver plate buckles (with strap end)

Pandhof: 10435 (549-1); 10634 (433-1, 2).

Appendix 1: Figure 87.

The two small silver plate buckles from the Pandhof cemetery are both identified as fittings of the shoe- or leg wear, although they were not found in pairs and can not be ascribed to a (undisturbed) grave context anymore. Both the plate buckles have a hollow undecorated triangular plate and have a wrapped and slotted construction which fixed the plate to the buckle.

The plate buckle from Pandhof context 10634 has relatively large rivets with a pearl rim and is accompanied with a strap end. It was found together with three pottery vessels. The feet were the only remains of the associated skeleton. This, next to the size of the plate buckle, is the main evidence for an identification of this plate buckle as component of the footwear.

The small silver plate buckle from Pandhof grave 10435 is, next to a pottery vessel, the only find from this context. It has less prominent rivets than the buckle from context 10643, and it has loops on the back side of the plate. The plate buckle and pottery vessel are finds from a very disturbed grave, of

¹⁶¹⁵ Siegmund 1998, 40-41.

¹⁶¹⁶ Müssemeier *et al.* 2003, 42.

¹⁶¹⁷ Legoux/Périn/Vallet 2004, 16, 30, 53 (type 135).

which it is mentioned in the old excavation report that the feet were the only skeletal remains. It is therefore suggested to identify this plate buckle as part of a former pair of shoe buckles.

According to Siegmunds typology, wrapped and slotted plate attachments are not a characteristic of the plate buckles of typological group Gür 3.3.¹⁶¹⁸ However, this is the typological group of which some features can be observed on the plate buckles from the Pandhof cemetery (especially the hollow plate). It is therefore reasonable to suggest that these buckles date more or less in the same period, but should be interpreted differently. Type Gür 3.3 dates to Rhineland phase 8 (610-640).

Utilitarian objects

Some objects are here referred to as utilitarian objects because of their close resemblance to such objects used in present times, or their obvious identification as an every day object. These objects are combs, tweezers, shears, knives, fire steels and flints, spindle whorls, toilet utensils etc. The associations that people of Merovingian times had with these items, especially in the context of the funerary rite, however, need not be exclusively a functional one.

Combs

In both the Vrijthof and Pandhof cemeteries a number of graves contain combs or parts of combs which are published by Dijkman and Ervynck as a separate category of objects from excavated sites in Maastricht.¹⁶¹⁹ Combs from the Merovingian period are known from a limited number of bone/antler workshops and from settlements, but are more numerous in grave contexts. In the middle Meuse region workshops are known from Huy, Namur, Mouzon and Maastricht.¹⁶²⁰ Combs are predominantly made of antler and less frequently of bone.¹⁶²¹ The combs from the Vrijthof and Pandhof are all made of antler. It is difficult to state whether combs were common or rather exclusive grave goods in Northern Gaul because their preservation depends on specific soil conditions. The number of recovered combs varies substantial from cemetery to cemetery, which is both due to the conditions of the soil as to the prevalent ritual choices.¹⁶²²

Though combs are generally referred to as being part of grave goods assemblages of both women and men, certain types of combs seem to have an association with either men or women.¹⁶²³ Undisturbed graves show that combs were predominantly found in the area of the pelvis and upper legs of the buried person. From this position and their association with other 'functional objects' like knives, tweezers, fire-steels etc., it is concluded that combs were part of an assemblage carried in a purse or bag attached to the waist belt, or that they were attached to rings or leather straps hanging down from the belt. The material of the combs, antler, is considered to have a symbolic reference to fertility, strength and growth because of the yearly renewal of antlers.¹⁶²⁴

Combs vary from simple specimen made of one piece of antler or bone to composite pieces carried in comb cases. The construction of these combs and the form of the parts of the antler that are used for specific elements of the combs are already quite extensively studied, as is the typology of combs.¹⁶²⁵ Siegmund offers the most recent typo-chronology although it does not differ much from the already existing typo-chronology of Dijkman and Ervynck.¹⁶²⁶ The main typological distinction is made between

¹⁶¹⁸ Siegmund 1998, 27.

¹⁶¹⁹ Dijkman/Ervynck 1998. All the worked skeletal remains of animals from Roman and early medieval Maastricht are discussed in this publication.

¹⁶²⁰ Plumier *et al.* 1999, 54-55.

¹⁶²¹ Aufleger 1996, 642; Koch/Welck/Wieczorek 1996, 989.

¹⁶²² Siegmund 1998, 114.

¹⁶²³ Aufleger 1996, 642.

¹⁶²⁴ Aufleger 1996, 642.

¹⁶²⁵ Dijkman/Ervynck 1998; Aufleger 1996; Theune-Großkopf 1994; Ambrosiani 1981.

¹⁶²⁶ Siegmund 1998, 114-116.

single or composite combs and between one- or two sided combs. From the Servatius complex only composite combs are known. These are made of a number of plates that are attached to each other with iron or bronze nails. One of Siegmunds goals was the search for the chronological significance of the average number of comb teeth per centimetre. Because of Siegmunds conclusion that combs are known throughout the whole Merovingian period, and that chronological indicators are scarce, counting comb teeth is refrained from for the combs of the Servatius cemeteries.

Combs: single sided composite

Vrijthof: 313 (1019-1).

Appendix 1: Figure 88.

Just one specimen of this type is known from the Servatius complex.¹⁶²⁷ This rare occurrence, though part of a small sample, is in accordance with the general picture of the presence of single-sided combs in Merovingian graves.¹⁶²⁸ Besides being single-sided and composite, the main characteristics of this comb are the curved back, the slightly convex section of the connection plates and the decoration pattern, although it is vague. This pattern is an engraved semi-circular pattern.¹⁶²⁹ The comb from Vrijthof grave 313 is, because of the ambiguous typological distinction made by Siegmund, difficult to classify as either Ger. 3.11 or Ger 3.12. The back of the combs and the section of their connecting plates that belong to group Ger 3.12 are more strongly curved than those of group 3.11. Exact criteria for the type-assignment are not available and this comb can therefore be ascribed to both groups. The Franken AG maintained the distinction between the two groups and follow the same descriptive criteria considering the curve of the back, but state that the shape of the section of the connection plates is an irrelevant chronological criterion.¹⁶³⁰ The combs that are classified as type Siegmund Ger 3.11 are mainly associated with the interments of men and are difficult to date.¹⁶³¹ The comb from Vrijthof grave 313 is part of the grave goods assemblage of a woman (based on the presence of beads) and it is therefore more plausible to classify this comb as Siegmund Ger 3.12 or Franken AG-Ger 3.1B. It consequently dates in Rhineland phase 10 (670-705) or Franken AG phases 7-9 (610/20-710), which corresponds with the dating of Dijkman and Ervynck for such combs (seventh century).¹⁶³² Whereas Siegmund and the Franken AG created four types for the group of one-sided combs with a more or less curved back, Legoux, Périn and Vallet created just one typological group for all single sided combs with a curved back (type 325) and date them in phase MA1-MA3 (470/80-600/10).¹⁶³³ They date the first appearance of such combs considerably earlier than Siegmund, the Franken AG and Dijkman and Ervynck. The beads of Vrijthof grave 313 cannot solve this dating problem. I am inclined to follow the dating of Siegmund and the Franken AG and therefore a date of this comb in the seventh century is considered more likely.

Combs: double-sided composite

Vrijthof: 76 (1530-1); 95 (1479-1)¹⁶³⁴; 178 (1406-1(fragment)); 230 (1767-3). Pandhof: 10094 (22-3,-4); 10128 (40-1); 11217 (341-3,-4); 11342 (466-1).

Appendix 1: Figure 88.

Four double-sided composite combs are known from the Vrijthof cemetery and four from the Pandhof cemetery.¹⁶³⁵ Because of the absence of peculiarities in shape, all these combs are placed in the broad group of double-sided combs as defined by Siegmund (Ger 3.2).¹⁶³⁶ All these combs consist of one side

¹⁶²⁷ Dijkman/Ervynck 1998, 36-37, fig. 24 and 52, 70.

¹⁶²⁸ Siegmund 1998, 115.

¹⁶²⁹ Dijkman/Ervynck 1998, 37.

¹⁶³⁰ Müssenseier *et al.* 2003, 55.

¹⁶³¹ Siegmund 1998, 115.

¹⁶³² Dijkman/Ervynck 1998, 70.

¹⁶³³ Legoux/Périn/Vallet 2004, 19, 39, 54.

¹⁶³⁴ Missing (but published in Dijkman/Ervynck 1998, 32 (fig 22- 29A+B).

¹⁶³⁵ Dijkman/Ervynck 1998, 30-37 (nrs: 19, 21, 25, 27A+B, 28A+B, 29A+B, 31A+B, 32A +B, 41, 51), 68-70.

¹⁶³⁶ Siegmund 1998, 116.

with coarse and one with fine teeth. Two of the Vrijthof combs (graves 95 and 230) are associated with a comb-case of antler (Siegmund Ger 3.23).

A small fragment of a teeth segment plate from Vrijthof grave 178 shows some remains of rivets and teeth at both sides and is therefore interpreted as part of a double-sided composite comb. This fragment is part of the grave goods assemblage of a woman (based on the presence of a necklace of beads) and is found near the right lower leg.

The combs from Vrijthof grave 76 and 230 are almost complete, they are lacking decoration on the connecting plates.¹⁶³⁷ The comb from Vrijthof grave 76 shows a perforation in one of the short sides. This indicates that it was probably hanging down from the belt on a leather strap or ring. The position in the grave is difficult to establish because only some skeletal remains of the legs are found, but it seems that the comb was positioned on the middle or lower part of the legs. This is the only find known from this disturbed grave.

The comb with matching case from Vrijthof grave 95 is missing from the finds that are actually present, but is none the less published by Dijkman and Ervynck, so details can be recorded. It is found on the middle or lower part of the left leg, which is in general location of a comb with a case.¹⁶³⁸ The set is found together with artefacts that can be associated with a woman (earrings, a necklace of beads and a garnet disc brooch).

The comb with case from Vrijthof grave 230 is found near the left knee in association with other items (keys, a shear, a decorative disc of antler and two pieces of flint) that are generally known to have been hanging down from the waist belt or have been the contents of a purse. The contents of this grave points towards the burial of a female (beads, although missing), although the flint pieces suggest otherwise.

Two of the four double-sided combs of the Pandhof are associated with a case (grave 10094 and 11217). These sets are nearly complete and show different patterns of a geometric decoration.¹⁶³⁹ The comb from grave 10094 is found together with a bronze brooch and beads. The comb from grave 11217 is associated with a seax and iron belt elements with silver inlays. This set of comb with case is thus the only one of the Servatius complex that is deposited in the grave of a man. The comb from Pandhof grave 11342 is very well preserved with only one tooth missing. The comb turned green in the course of time, which indicates that it was associated with a bronze object in the grave. The grave goods assemblage consists furthermore of four bronze bracelets, a bronze decorative pin and a number of beads.

Of the comb from grave 10128 only the connection plates and a little fragment of a tooth segment plate is preserved. The connection plates show some decoration of engraved lines. The comb was found together with a series of beads and a large amber pendant.

This group of combs is less exceptional than single-sided combs. These combs are, according to Siegmund, in use as grave goods throughout more or less the entire Merovingian period and are thus difficult to date more precisely. Siegmund only discussed some specific types within this broad group of double-sided combs, which are mainly distinguished on the basis of the particular shape of their plates or the presence of a comb case.¹⁶⁴⁰ Combs with cases are quite rare in the Rhineland and are dated by Siegmund in phases 4-7 (530-610). From the Vrijthof and Pandhof cemeteries four examples are known. The remaining double-sided combs without case (not distinguished as a type by the Franken AG) are not precisely dated by Siegmund.

Dijkman and Ervynck, however, state that some chronological tendencies are observable regarding the double-sided combs. These tendencies concern the length and length-width ratio of the combs and the shape of the section of the connection plates.¹⁶⁴¹ The shape of the section is, however, discarded as

¹⁶³⁷ Dijkman/Ervynck 1998, fig. 22-29B; 37

¹⁶³⁸ Siegmund 1998, 116. Siegmund claims that combs with cases were worn as '*Gürtelgehänge*' and therefore found around the area of the left knee.

¹⁶³⁹ See Dijkman/Ervynck for a more detailed description.

¹⁶⁴⁰ Siegmund 1998, 116.

¹⁶⁴¹ Dijkman/Ervynck 1998, 70. According to Dijkman and Ervynck the width of double-sided combs becomes smaller (de length of the teeth diminishes), the length becomes less in relation to the width, and the connecting plates more plano-convex during the Merovingian period.

chronological significant by the Franken AG.¹⁶⁴² The lack of decoration is not chronologically indicative, although there seems to be a chronological development from simple to more complicated decoration patterns.¹⁶⁴³ The two undecorated combs of the Vrijthof and Pandhof are dated very differently by Dijkman and Ervynck; the comb from Pandhof grave 11342 is dated in the fifth century and the comb from Vrijthof grave 76 in the seventh century. The comb from the Pandhof is indeed much wider than the one from the Vrijthof, and the section of the connection plate of the Vrijthof comb is convex whereas the section of the connection plate of the Pandhof comb is flat. Their association with a case can date the other double-sided combs. Dijkman and Ervynck state that double-sided combs were introduced in the second half of the fourth century and can be identified on the basis of their profiled ends (see section below).

Legoux, Périn and Vallet identified two categories for all double-sided composite combs found in northern France; those with simple sides and those with worked, (section below) and therefore more profiled and unusual, sides.¹⁶⁴⁴ The combs with simple sides can be classified as their type 324 (*peigne simple*) and are date in more or less in the whole Merovingian period, in phases MA1-MR1 and even later (470/80-700/10).

Combs: double sided composite with profiled sides/ends

Pandhof: 11228 (380-1); 10536 (502-1).¹⁶⁴⁵

Appendix 1: Figure 89.

The two combs with profiled ends were both found in Pandhof graves.¹⁶⁴⁶ The comb from grave 11228 is nearly complete and shows a circle and dot decoration. The connection plates are flat. This comb is found near the right side of the skull and is the only find known from this grave. The comb from grave 10536 shows a decoration of zigzag lines and a convex section of the connecting plates. This specimen is found near the skull and is also the only find known from this grave.

Siegmund identifies such combs as type Ger. 3.21 and observed that this type is typical for burials from the fifth century in Southern Germany.¹⁶⁴⁷ The Franken AG maintained Siegmund's type and date the combs in their phase 3 (460/80- 510/25). Legoux, Périn and Vallet classified double-sided combs with profiled ends as type 323 and date them early in phase PM (440/50-470/80).¹⁶⁴⁸ Dijkman and Ervynck also mention this early dating. A consensus can thus be seen considering the early date of these kinds of combs as gave goods. The absence of other finds in the graves can be explained by this early date because the Merovingian burial ritual was by then just starting to develop.

Combs: cases

Vrijthof: 0 (8888-1); 95 (1479-1); 97 (fragment: 1498-1); 230 (1767-4). Pandhof: 10094 (22-4); 11217 (341-4).

Appendix 1: Figure 88-89.

The Vrijthof excavation revealed a total of four comb cases (or their remains) of which two are associated with a comb (see section on double-sided combs above: graves 95 and 230). From the Pandhof cemetery two cases are known, both associated with a comb. Comb cases for double-sided combs are rectangular and consist of four connecting plates and two end plates. The cases often show more complicated decoration patterns than their associated combs. Comb cases are according to Siegmund only found in the graves of women.¹⁶⁴⁹ All the combs with cases from the Servatius complex are associated with the burials of women, with the exception of the one from Pandhof grave 11217 as discussed above (section on double-sided combs).

¹⁶⁴² Müsseseimer *et al.* 2003, 55.

¹⁶⁴³ Dijkman/Ervynck 1998, 69.

¹⁶⁴⁴ Legoux/Périn/Vallet 2004, 39.

¹⁶⁴⁵ This find is find number 50 in the publication of Dijkman and Ervynck.

¹⁶⁴⁶ Dijkman/Ervynck 1998, 30-31 (fig. 21-19, fig. 21-21), 68-70.

¹⁶⁴⁷ Siegmund 1998, 116.

¹⁶⁴⁸ Legoux/Périn/Vallet 2004, 19, 39, 54 (type 323).

¹⁶⁴⁹ Siegmund 1998, 116.

From two graves only a fragment of a case remains. The case fragment from Vrijthof grave 97 is a piece of a connecting plate; it is fully decorated with quarter-circles and a dot-in-circle pattern. This fragment was found near the left upper leg, which is accordance with the general observation on the position of combs with cases in undisturbed graves. It is part of a grave from which also the metal components (plate buckle and strap end) of the footwear, a '*Herkuleskeule*', a boar tooth and two iron rings are known (which is a strong indication for the burial of a woman). A comb with case can very well have been part of this ensemble. The connecting plate of the Vrijthof cemetery without find-number (and therefore unknown context) is decorated with vertical and oblique lines and a dot-in-circle pattern. The bronze nail in one of the extremities indicates that this was a connection plate of a comb case. The two nearly complete cases from Vrijthof graves 95 and 320 are both rectangular and fully decorated, although the patterns are quite different. The case from grave 230 shows a circle and dot-in circle pattern, while the one from grave 95 shows sections defined by vertical lines filled with a cross and a dot-in-circle pattern. As already mentioned, both cases are found at locations in the graves where these objects are generally found, and both are associated with a comb. The two cases from the Pandhof cemetery are both complete and fully decorated with geometric patterns. The case from grave 10094 is rectangular; the case from grave 11271 has end-plates with a semi-circular shape.

Siegmund classified combs with cases as type Ger 3.23 and dates them in phase 4-7 (530-610). The Franken AG maintained this classification but mention that they cannot be dated that precisely.¹⁶⁵⁰ Legoux, Périn and Vallet do not make a distinction between double-sided combs with or without case and classify both as type 324, which dates in phases MA1-MR1 (470/80-700/10) and even later.¹⁶⁵¹

Dijkman and Ervynck rather concentrate on the decoration patterns as chronological indicators. They indicate that the cases always show more decoration than the combs themselves, and argue that more complicated decoration patterns can be seen more frequently in the sixth century, an observation that applies to all the comb cases from the Servatius complex. It can therefore be argued that all the double-sided combs with cases should preferably be dated in the sixth century but that they could also be of a later date.

Knives

Vrijthof: 13 (1680-1); 29(1629-1*); 30 (1630-7); 58 (1634-4); 70 (1394-1); 73 (1584-5); 75 (1381-4); 79 (1397-1); 95 (1480-1*); 96 (1529-3*); 101 (1491-1); 105 (1473-3); 110 (1553-3); 126 (1572-1); 168 (1534-1); 178 (1515-1); 201 (1501-2); 210 (1744-6); 230 (1767-6); 259 (1833-1); 264 (1837-1); 278 (1817-9); 279 (1797-2); 292 (1794-1); 293 (1701-1); 297 (1703-2); 0 (1755-7); 0 (1487-4); 0 (1322-1). Pandhof: 10012 (49-2); 10042 (60-6); 10100 (59-7,-8); 10168 (520-8,-12); 10256 (330-1); 10332 (556-5); 10344 (569-5); 10360 (575-3); 10527 (489-5); 10796 (142-4); 10885 (139-6); 10988 (255-2); 19999 (9999-14);

Appendix 1: Figure 90-92.

From the Vrijthof cemetery twenty-nine knives are known, from the Pandhof cemetery thirteen. Three knives from the Vrijthof (graves 29, 95 and 96) are lost. It is generally acknowledged that knives were used over an extended period and are difficult to date. The only exceptions are knives with a clear angled back, *Hackmesser* (cleaver/kitchen knives) and *Klappmesser* (clasp knives).¹⁶⁵² Legoux, Périn and Vallet consider knives with a curved back and straight cutting edge as a characteristic form of the seventh century.¹⁶⁵³ Five knives with an angled back were found in the Vrijthof cemetery, the other knives of both the Vrijthof and Pandhof cemeteries do not show any of the above mentioned chronological features.

¹⁶⁵⁰ Müssemeier *et al.* 2003, 55.

¹⁶⁵¹ Legoux/Périn/Vallet 2004, 19, 39, 54 (type 324).

¹⁶⁵² Siegmund 1998, 112.

¹⁶⁵³ Legoux/Périn/Vallet 2004, type 37, 15, 28, 52.

The knife from Vrijthof grave 105 has a total length of 13.4 cm and some wood remains of the handle are still present. The back of this knife does not run parallel with the cutting edge. Starting at the handle, the back slightly bends upwards. The pronounced angle is more or less positioned at the middle of the back of the blade. This knife is part of an grave goods assemblage of a man, which consists furthermore of a seax, a fire steel and three flints, a spindle whorl of baked clay, a globular glass beaker and belt fittings of iron with silver and brass inlay. This assemblage dates mainly to the seventh century. The blade of the knife from Vrijthof grave 292 also has an obvious angle, more or less at the middle of the back. The knife has a total length of nearly 17 cm (the blade is 12.4 cm). It was found with a seax and a biconical pot, which date to the first half of the seventh century.

The knife from Vrijthof grave 293 is covered by some leather scabbard remains and a bronze band that is folded around these remains and the blade of the knife, more or less at the middle of the blade. This band probably served as a reinforcement of the scabbard. Despite these scabbard remains an angled back at the middle of the blade can be assumed on the basis of the visible parts of the iron blade. It is a relatively small knife with a length of 9.2 cm. The only other find from this grave is a small bronze buckle with fixed plate, probably a fastener of a shoe.

In Vrijthof grave 178 a knife was found on which a slight angle at the middle of the back of the blade can be observed. This knife was found with an unguent bottle, a fragment of a comb and various beads, on the basis of which this grave is ascribed to that of a woman. The glass bottle from this grave dates to the sixth century.

The Vrijthof knife with find number 1487 (find context unknown) also shows an angle at the middle of the back. Two decorated rivets of a seax scabbard, a silver buckle with garnet inlay and a belt stud are associated with this knife. It is not certain, however, if they originally belonged to the same grave goods assemblage.

Knives with angled backs are classified as Siegmund's type Ger 1.2 and date to Rhineland phases 10-11 (670-740).¹⁶⁵⁴ The Franken AG maintained this type, yet proposed a stricter definition. Only knives with a back that runs parallel with the cutting edge and with the angle positioned just before the point of the knife can be classified as this type and can be dated, more precisely than other knives with angled backs, from the end of their phase 7 to phase 10 (640/50- 710).¹⁶⁵⁵ This implies that the knife from Vrijthof grave 105, with a back that does not run parallel with the cutting edge, cannot be classified according to the definition of the Franken AG. Neither can the other knives with an angled back from the Vrijthof cemetery; the position of their angles lies more or less in the middle of the back of their blades. The other knives from the cemeteries Vrijthof and Pandhof can be described on the basis of the shape of their back (curved or straight) and cutting edge (curved or straight), although these features cannot always be established due to their condition (severe corrosion and absent parts). Legoux, Périn and Vallet only classified knives with a curved back and straight cutting edge. This type dates to their phases MR2-MR3 (630/40-700/10).¹⁶⁵⁶ Such knives are not identified among the collection of knives from the Vrijthof and Pandhof. Although the rest of the knives from both cemeteries cannot be dated to a specific phase, some details are of interest to discuss.

The knife from Vrijthof grave 75 has a relatively large handle, which is nearly as long as the blade of this knife. Perhaps this is due to the present wood remains of the handle. This could indicate that the original handles were much longer than the iron core of the handle, which is often the only remnant that can be observed. The condition of the Pandhof knives is poor, only some wood remains of the handle can be observed on the knives from graves 10042, 10527, 10796 and 10988.

The knife from Vrijthof grave 58 was found attached to a seax. This knife was probably carried in a small scabbard that was fixed to the scabbard of the seax. The scabbards of both the knife and the seax have completely decayed. Knives were frequently deposited in a purse or as a girdle hanger (find location

¹⁶⁵⁴ Siegmund 1998, 112.

¹⁶⁵⁵ Müssemeier *et al.* 2003, 53.

¹⁶⁵⁶ Legoux/Périn/Vallet 2004, 15, 28, 52 (type 73).

around the left upper leg or on the pelvis). The find location in the grave is essential for its determination as element of a seax or girdle hanger/purse.

Fire-steel & flint

Vrijthof: Fire steel: 13 (1680-2); 73 (1584-3); 79 (1397-2); 96 (1529-2); 105 (1473-4); 205 (1652-1); 259 (1834-3); 288 (1788-1). Vrijthof: Flint: 73 (1584-4); 79 (1397-3); 96 (1529-4); 105 (1473-5,-6,-7); 201 (1501-4); 210 (1744-3); 230 (1767-10;-11); 259 (1835-1); 288 (1788-2). Pandhof: Fire steel: 19999 (9999-4,-5). Pandhof : Flint: 10100 (59-11,-18); 10168 (520-10); 10370 (555-5); 10723 (87-2); 19999 (9999-9).

Appendix 1: Figure 93-94.

Six of the eight fire-steels from graves of the Vrijthof cemetery are accompanied by one or more pieces of flint (graves 73, 79, 96, 105, 259, and 288). The find context of both the fire-steels from the Pandhof cemetery is not known, as is their former association with pieces of flint. In most graves only one flint was found, but in Vrijthof grave 105 a number of 3 flints, and in both Vrijthof grave 230 and Pandhof grave 10100 two flints were found. Most fire-steels have a widened to triangular middle part and more or less curved extremities, which is a long-lasting form in the Merovingian period.¹⁶⁵⁷

The fire steel from Vrijthof grave 96 is complete and restored. The extremities are curved upwards and curled what results in rounded extremities with an opening in the middle. The flint became fixed to this fire-steel due to corrosion. They were found at the right side of the pelvis together with a shear and a gold coin. It can be assumed that these objects were deposited in a purse (originally hanging down from the shoulder or placed at this position on the body at the time of the funeral).

The extremities of the fire-steels from Vrijthof graves 13, 205 and 259 are rounded and curved upward. The fire-steel from Vrijthof grave 13 was found with a knife and an arrow head near the left side of the left arm. The fire-steel and knife were probably deposited together as the contents of a purse. The other find from this grave is a biconical pot (now lost) which was found in between the feet.

The fire-steel from Vrijthof grave 205 was found with a small bronze buckle (identified as the fastener of a purse) near the left side of the breast. It can be assumed that the fire-steel was carried in a purse.

The fire-steel from Vrijthof grave 259 was found with a flint, a pair of tweezers and a small bronze purse buckle to the left side of the pelvis what makes an identification of these objects as purse contents at the time of funeral plausible. A knife (now lost) was also found in this grave, but on the right side of the pelvis. Some fragments of a bronze and of a gold coin are attached to the flint. It can be assumed that the coins were carried with the flint in the same purse.

The sides of the fire-steel from Vrijthof grave 79 are also curved upward, although with a much more angled corner than the ones described above. This fire-steel was found with a flint, a knife and a fish hook to the left side of the upper body. In view of this ensemble it can be suggested that they formed the contents of a purse. Due to some disruption of the grave (the skeletal remains are not in their original position) the 'purse' probably moved from its original position (near the pelvis) in the grave. The other finds from this grave are a pottery bowl on a foot (a unique specimen for which no exact parallels are known), which was found near the knees, and a bronze plate buckle with strap end (found near the skull). None of the finds were found at their supposed original position.

The only fire-steel without a triangular middle part is known from Vrijthof 73. It has a straight middle part with upward bending extremities with straight ends. It was found on the pelvis, together with a flint, a knife and a bronze plate buckle. The plate buckle is identified as the fastener of a waist belt. It can be assumed that the other objects were placed in a purse which was attached to the waist belt.

The fire-steels from Vrijthof graves 105 and 288 are corroded and broken, their shape is difficult to determine. The fire-steel from grave 105 was found with a flint, a knife, an iron plate buckle, a seax (now lost) and a counter plate with inlay to the right side of the body. It can be assumed that they were

¹⁶⁵⁷ Pescheck 1996, 68.

deposited as ensemble (waist belt, purse with contents and seax). This ensemble, however, lies just outside the outline of the grave and it is not certain whether it actually belonged to grave 105.

The fire-steel from Vrijthof grave 288 was found with a flint at the right side of the pelvis, they were probably carried in a purse.

The extremities of the two Pandhof fire-steels are slightly curved upward. Both the fire-steels are stray finds, their association with other objects is unknown.

Siegmund only pays brief attention to the fire steels and does not make any typological or chronological comments, the Franken AG do not mention fire-steels at all, and neither do Legoux, Périn and Vallet. Pescheck, on the other hand, proposed a typological development for fire-steels (numbered 1-7) on the basis of the finds from the cemetery of Kleinlangheim, for which, as he claims, the chronological significance needs to be tested against the finds from other cemeteries.¹⁶⁵⁸ The typological development is mainly based on the form of the extremities of fire-steels with a widened to triangular middle field (which is a long-living form throughout the Merovingian period). These fire-steels develop from specimens with slightly curved to more inward curved and curled extremities. Can the Vrijthof and Pandhof fire-steels be placed in this typology, and has it any chronological significance?

The fire-steel with rounded ends from Vrijthof grave 96 resembles number 4 of Pescheck's typology.¹⁶⁵⁹ The example for fire-steel type 4 was found in grave 106 of Kleinlangheim, which dates to JM III (670/80-720). Another parallel for this fire steel was found in the cemetery of Barga (although the rounded sides of the Vrijthof specimen are larger).¹⁶⁶⁰ This grave dates early in the seventh century. The oldest object from Vrijthof grave 96 is a small rectangular bronze buckle (of a purse), which dates around 600, the other objects from this grave are difficult to date more precisely. It seems plausible to date this grave in the first half of the seventh century. This, however, contradicts with the date ascribed to Pescheck's type 4.

The fire-steel from Vrijthof grave 79 and the two Pandhof specimens (with less curved extremities) can be compared with type 2 of Pescheck's typology.¹⁶⁶¹ The example for type 2 was found in Kleinlangheim grave 127, which dates in JMI-JMII (600-670/80). For the two Pandhof fire-steels, which are stray finds, no additional information is available. The grave goods assemblage of the Vrijthof grave dates to the end of the sixth century, based on the associated belt fittings. On the basis of this Vrijthof grave alone it is difficult to state whether type 2 of Pescheck's typology should be rejected as a characteristic for the first three quarters of the seventh century.

The other fire-steels from the Vrijthof cemetery (except for the specimen from grave 105 of which the original shape is difficult to identify due to corrosion) are comparable with type 3 of Pescheck's typology.¹⁶⁶² The grave from Kleinlangheim (grave 238) with a fire-steel of this type dates in AM III (560/70-600). The Vrijthof graves with this type of fire-steel date to various phases.

The conclusion for now is that Pescheck's proposed typo-chronology of fire-steels is difficult to subscribe on the basis of the Vrijthof and Pandhof finds, but that further research to substantiate or reject the chronological significance of the proposed classification is required.

Tweezers

Vrijthof: 259 (1834-2); 101 (8888-2*)¹⁶⁶³; 210 (1744-2).

Appendix 1: Figure 94.

The pair of tweezers from Vrijthof grave 259 is made of iron, the pair from Vrijthof grave 210 of bronze. The pair of tweezers from Vrijthof grave 101 was lost after excavation but can be described on the basis of the remaining drawings (although it cannot be determined of which material it was made). The iron

¹⁶⁵⁸ Pescheck 1996, 68-69, Abb. 20.

¹⁶⁵⁹ Pescheck 1996, 68, Abb. 20.4.

¹⁶⁶⁰ Koch 1982,

¹⁶⁶¹ Pescheck 1996, 68, Abb. 20.2.

¹⁶⁶² Pescheck 1996, 68, Abb. 20.3.

¹⁶⁶³ Lost; information available from drawings and descriptions in the Ypey-archive.

pair of tweezers from grave 259 consists of a fused head of which the top is missing. The remaining length of the tweezers is 9.3 cm. It consists of straight blades with incurved jaws and an extra blade in the middle. This pair of tweezers was found together with a fire-steel, a flint and a small rectangular bronze buckle near the left side of the pelvis, which seems to indicate that these objects formed the contents of a purse. It was probably the grave of a man. A pair of tweezers with an additional blade in the middle was also found in the cemetery of Lavoye, although this specimen is of bronze and has a different shape than the Vrijthof pair.¹⁶⁶⁴ Joffroy describes this extra blade as a peculiarity of which the function is not clear. At the time of publication Joffroy knew only two other pairs with a blade in the middle (from cemeteries in France). Such pairs are now also known from several cemeteries in Germany, but no specifications on the function of the middle blade are at this moment known to me.¹⁶⁶⁵ The pair of bronze tweezers from grave 210 has a rounded top, slightly extending blades and incurved jaws. It has a length of 7 cm. The blades are decorated with incised lines. This pair of tweezers was probably part of the grave goods assemblage of a man (determined only on the basis of the flint) and was found at the position of the belly, together with a small rectangular bronze buckle, which indicates that the tweezers were deposited as the contents of a purse.

The find location of the missing pair of tweezers from Vrijthof grave 101 was recorded near the left foot. It was found together with a small oval bronze buckle. The grave does not seem to be disturbed, so it can be assumed that this position is, although unusual, the original one. This pair of tweezers resembles the pair from grave 210, although it is smaller with a length of 5.6 cm. A ring is attached to the head of the tweezers.

As Siegmund mentions, tweezers are specifically associated with the burials of men, which matches with the grave goods assemblages to which the Vrijthof tweezers belong.¹⁶⁶⁶ Joffroy also mentions this nearly exclusive association with men for the cemetery of Lavoye, where a relatively high amount of tweezers were found. On the basis of their find position in the graves (near the pelvis) of the cemetery of Lavoye it was concluded that pairs of tweezers were nearly always carried (or deposited) in a purse.¹⁶⁶⁷

Despite the acknowledged difficulties to ascribe pairs of tweezers to limited chronological phases, eight types are identified on the basis of the finds from the lower Rhine area.¹⁶⁶⁸ The Franken AG maintained this classification and concluded too that some of the types are chronologically indifferent.¹⁶⁶⁹ Siegmund only identified one type of iron tweezers. The examples for this type are morphologically different from the one from Vrijthof grave 259. Moreover, the third blade in the middle and the fused top are not known as discriminating elements in the classification of Rhineland finds, either iron or bronze. Legoux, Périn and Vallet identified tweezers with a third blade (although the fused top such as the one of the Vrijthof specimen is not identified) as type 322 and date them in their phases MA2-MA3 (520/30-600/10).¹⁶⁷⁰ In their scanty description of this type it is mentioned that tweezers of this kind are predominantly of iron, yet can also be of bronze.

The decoration pattern on the pair of tweezers from grave 210 could point towards a classification as Siegmund's type Ger 2.5 (Rhineland phase 2-3: 440-530). The described 'substantial' decoration, however, does not apply to the Vrijthof pair.¹⁶⁷¹ The bronze tweezers from Vrijthof graves 101 and 210 are therefore both classified as Siegmund's type Ger. 2.6 which dates to Rhineland phases 8-9 (610-670).¹⁶⁷² A date for the bronze tweezers from Maastricht in the first half of the seventh century seems plausible.

¹⁶⁶⁴ Joffroy 1974, 34-35, grave 110, fig. 15.

¹⁶⁶⁵ See for example the pair of tweezers from grave 61 of the cemetery 'Unteren Wied, Neuwieder Becken' (Grunewald 2001, Taf. 78).

¹⁶⁶⁶ Siegmund 1998, 113.

¹⁶⁶⁷ Joffroy 1974, 34.

¹⁶⁶⁸ Siegmund 1998, 113.

¹⁶⁶⁹ Müssemeier *et al.* 2003, 54-55.

¹⁶⁷⁰ Legoux/Périn/Vallet 2004, 19, 39, 54 (type 322).

¹⁶⁷¹ Siegmund 1998, 114.

¹⁶⁷² Siegmund 1998, 114.

Shears

Vrijthof: 96 (1529-1); 230 (1767-5); 283 (1811-1).

Appendix 1: Figure 94.

The three iron shears from the Vrijthof cemetery are much alike. Shears were deposited as grave goods throughout nearly the entire Merovingian period, and it is difficult to find morphological criteria that are chronologically significant. The pair of shears from Vrijthof grave 96 (length: 16.8 cm) is part of the grave goods assemblage of a man and was found together with a fire-steel, flint and a gold coin to the left side of the belly. These items were probably the contents of a purse that was, according to the position in the grave, probably carried around the shoulder.¹⁶⁷³

The pair of shears from Vrijthof grave 230 (length: 16.4 cm) is part of a relatively elaborate grave goods assemblage. It was found with a bronze key, an iron latch lifter key, a knife, two flints, a decorative disc of antler, a comb with case and a small bronze plate buckle with additional belt plate (*Riemenöse*) near the left upper leg. The administration of a necklace of beads on the field drawing (the beads are lost) and the decorative disc of antler indicate that these finds formed, despite the presence of flints, the grave goods assemblage of a woman.

It is not clear whether the pair of shears from Vrijthof grave 283 (length: 17.3 cm) belongs to a grave goods assemblage of a man or a woman. This pair of shears is the only identifiable find from this grave, although a string of beads at the position of the neck as well as the contours of a seax near the left upper leg were recorded on the field drawing. Both objects are lost, as is the pottery vessel that was found near the right foot. The pair of shears is found, together with the 'seax', near the left side of the upper left leg. However, no other documentation points towards the find of a seax, whereas the presence of beads is mentioned in the excavation diary. It is probably the safest option to consider the objects as elements of the grave goods assemblage of a woman.

Siegmund mentions that for the Rhineland no clear correlation can be found between shears and the gender of the deceased, although the number of shears that are associated with men is somewhat higher than those associated with women.¹⁶⁷⁴ Shears with a length of more than 20 cm, however, were in the Rhineland only found in the graves of men, smaller shears are found in the graves of both men and women. Siegmund does not date shears to a specific phase. The Franken AG did not identify this category of grave goods for their research area. Legoux, Périn and Vallet classified shears as type 355 and date them in their phases MA1-MR3 (470/80-700/10).¹⁶⁷⁵

Utensils

Pandhof: 10988 (261-2); 19999 (2-1).

Appendix 1: Figure 95.

Two bronze objects with a shank of twisted wire were found in the Pandhof cemetery. They are for now broadly identified as utensils that probably served different purposes. The object from Pandhof grave 10988 has a flat pointed extremity and a top with a suspension hole. It has a length of 9 cm. This grave contained also a garnet disc brooch, various beads, a knife and a bronze buckle on the basis of which it is identified as that of a woman. The majority of the assemblage dates to the first half of the sixth century.

The find context of the other utensil is not known. It has a pointed extremity and the top is a flat triangular expansion of which the upper side is slightly bend. This is probably an example of the Roman period.

In the typology of Legoux, Périn and Vallet a resembling object to the one from Pandhof grave 10988 is used as example for their type 352. It is described as *miniature pendant utensil*.¹⁶⁷⁶ Objects of this kind

¹⁶⁷³ See the section on purses.

¹⁶⁷⁴ Siegmund 1998, 117.

¹⁶⁷⁵ Legoux/Périn/Vallet 2004, 19, 41, 54 (type 355).

¹⁶⁷⁶ Legoux/Périn/Vallet 2004, 19, 41 (type 352).

date sporadically in their phase MA2 (520/30-560/70), but predominantly in phase MA3 (560/70-600/10). Two similar bronze objects were found in the cemetery of Cutry.¹⁶⁷⁷ They are described as *Pendentifs en forme lancette* and are associated with women. No descriptions on their function are available. These specific objects are not identified by Siegmund, nor are they by the Franken AG.

Toilet implements: scoops

Pandhof: 19999 (3-1); 19999 (430-1).

Appendix 1: Figure 95.

A difference can be made between decorative pins with a spoon shaped head and other objects with a spoon shaped extremity, which are more difficult to identify as dress accessories.¹⁶⁷⁸ The two bronze, nearly identical, objects with a flat shank and spoon-shaped head from the Pandhof cemetery are identified as toilet implements and could have served several purposes such as for example the blending of cosmetic powders as it is for example known for the Roman period. The implement number 3-1 has a stamped in mark that consist of a cross in a circle underneath the triangular opening at the top of the shank. For both scoops the find context is unknown. Similar objects are not known from Merovingian contexts to me, they are probably Roman in date.

Bobbin

Pandhof: 10161 (452-3).

Appendix 1: Figure 95.

A cylindrical object of bone was found in the Pandhof cemetery. This carved object shows two bulges, the extremities are rounded. The carving resulted in a relief of three lines on the bulges and the extremities. This object was found in a sarcophagus together with a spindle whorl of baked clay and a bronze buckle.

Dijkman and Ervynck described this object as a pilgrim's badge from the sixteenth to seventeenth century.¹⁶⁷⁹ This, however, is not in accordance with the find context as it is established for this find.¹⁶⁸⁰ McGregor described resembling specimens in his study on bone, ivory, antler and horn objects and identified them as bobbins.¹⁶⁸¹ These are not identified as early medieval objects, but dated from the twelfth to the fourteenth centuries. Their function is related to sewing activities. A bronze object from Junkersdorf grave 572 can be compared to the Pandhof find.¹⁶⁸² The Junkersdorf grave contained the grave goods assemblage of a man what is mainly indicated by the presence of two arrows. For now the identification of this object is uncertain.

Pins: bone and bronze.

Vrijthof: 110 (1565-1); 0 (1221-1). Pandhof: 19999 (547-1).

Appendix 1: Figure 95.

A bone pin with a length of 12.9 cm, which is completely decorated with incised horizontal and diagonal lines and a dot in circle pattern, was found in the grave of a woman (based on the various associated beads and garnet disc brooch). The head of the bone pin is flattened and two holes with remains of iron nails to fix the pin can be observed. It is unknown to what it was fixed and what the function of this pin was.

¹⁶⁷⁷ Legoux, 2005, 121, grave 868/69, Planche 96, grave 947, Planche 140.

¹⁶⁷⁸ The decorative pins with a spoon-shaped head from the Vrijthof and Pandhof are discussed in the section 'Decorative pins' and are identified as decorative objects that were used to close the cloak.

¹⁶⁷⁹ Dijkman/Ervynck 1998, 47, Fig. 31.2.

¹⁶⁸⁰ No references are mentioned, so it remains unclear on which parallels this identification is based.

¹⁶⁸¹ McGregor 1985, 183-185.

¹⁶⁸² La Baume 1967, grave 572, Tafel 35

A resembling object of bone, although with less decoration, was found in grave 5 of the cemetery of Basel-Bernerring (dates around 540/50).¹⁶⁸³ This pin, however, was found in the grave of a man and is associated with horse man accessories (it is described as a reinforcement of the saddle, although the author placed some question marks to this identification). Because the Vrijthof pin was found in the grave of a woman, and no horse man associated objects are known from this grave, its identification as an element of a saddle seems unlikely.

The bronze pin with find number 1221-1 (stray find) is discussed in this group because it also has a flattened head and remains of a nail which served to fix it. No parallels are known to me, and the bronze pin can also be an object from the Roman period (find context not known). No other finds can be associated with this pin.

Another bronze pin (547-1, context unknown) with a flat round head with opening was found during the excavation of the Pandhof cemetery. In the opening some remnants of an iron nail are present. An incised zigzag line can be observed along the edges of the pin. It can be assumed that it falls in the same category of functional objects as described above. It can be also Roman in date.

Touchstone

Vrijthof 92 (1403-10).

Appendix 1: Figure 95.

A black stone of basanite (volcanic rock) with a length of 6.2 cm was found in the grave of a man in the Vrijthof cemetery. This stone is identified as a touchstone, used to verify the quality of gold. It was found with a seax, rivets of its scabbard and several belt fittings, of which the iron plate buckle with silver inlay is an elaborate specimen, to the right side of the body. The finds from this grave date primarily to the seventh century.

Iron ring rods

Vrijthof: 15 (1671-2); 168 (1534-3, 4); 259 (1834-4); 0 (1487-6). Pandhof: 10360 (575-4)

Appendix 1: Figure 96.

Five iron rods with a ring head were found in the Vrijthof cemetery, and one in the Pandhof cemetery. The iron rod from Vrijthof grave 15 was part of the grave goods assemblage of a man, which consists furthermore of an axe, a seax and a plate buckle and counter plate of iron with silver and brass inlays.

Vrijthof grave 168 is also that of a man. Apart from the two iron rods this grave contained a seax, a knife, an iron buckle and a carinated pottery dish. The iron ring rod from Vrijthof grave 259 is part of a grave goods assemblage of a man, which was identified as such on the basis of the fire steel and associated flint, as was the iron ring rod from Pandhof grave 10360. This grave also contained two seaxes with scabbard remains and a glass bottle. The iron rod (1487-6) of which the find context is not known is found together with a silver buckle with garnet, a knife and two decorative rivets which probably were part of a seax scabbard. On the basis of these finds it can be assumed that this iron rod also was deposited in the grave of a man.

Cattle bell: iron

Pandhof 19999 (548-1).

Appendix 1: Figure 97.

A bell of iron for which the find context is not known was found in the Pandhof cemetery. No other finds can be associated with this find. A similar example is known from Wörrstadt.¹⁶⁸⁴ This find, however, is

¹⁶⁸³ Martin 1976, grave 5, 136, 213-217, 5.18.

¹⁶⁸⁴ Wiczorek *et al.* 1996, Teil 2, 1042, Kat. X.1.58. The cattle bell belongs to the collection of the Landesmuseum Mainz.

unpublished (apart from its depiction in the catalogue) and it is not known to me at this moment if it was found in a grave or that it knows another find context. In the catalogue it is described as a cattle bell of iron and a date in the sixth and seventh century is mentioned.

Jews harp: bronze

Pandhof 19999 (352-1).

Appendix 1: Figure 97.

A so-called Jews harp was found in the Pandhof cemetery, the find context is not known. Although harps of this kind are known from ancient contexts it remains uncertain whether this specimen was part of Roman or Merovingian material culture.

Coins (Roman / Merovingian)

Vrijthof: 0 (1087-1); 95 (1478-2, -4); 0 (1526-1); 96 (1529-6); 48 (1586-3); 100 (1434-21); 259 (1835-3, 4); 95 (8888-95). Pandhof: 10193 (61-1); 10068 (93-15, 16, 17, 18, 19); 10088 (94-1); 10039 (113-1); 10805 (189-1); 10866 (202-1); 10865 (209-1); 10864 (230-1, 2, 3, 4); 11120 (262-1, 2); 15013 (269-9); 11140 (294-1, 2); 10204 (318-1, 2); 11274 (366-1); 11321 (418-29); 11338 (421-1); 10511 (446-3); 10162 (453-2); 11362 (470-1); 11388 (481-1*); 10551 (491-1); 10583 (497-1); 10606 (503-1); 10526 (510-1); 10556 (512-1); 10589 (514-1); 10168 (520-7); 10337 (551-1); 10331 (559-1); 10420 (579-2, 3); 19999 (52-1); 19999 (156-1); 19999 (170-1); 19999 (171-1); 19999 (351-2); 19999 (353-1); 19999 (370-1); 19999 (486-1); 19999 (494-1); 19999 (524-5); 19999 (526-1); 19999 (566-1); 19999 (9999-20).

Coins (not Roman or Merovingian)

Pandhof: 10772 (85-1); 15013 (269-9 (6x)); 10225 (302-1); 10211 (307-1); 11120 (262-3); 19999 (75-1); 19999 (121-1, 2); 19999 (309-3); 19999 (310-1); 19999 (340-1); 19999 (351-3); 19999 (352-2); 19999 (431-1); 19999 (524-6); 19999 (542-1); 19999 (628-1).

The majority of the sixty-three coins are late Roman, some date in the fifth century and only one could be dated in the sixth century (table 116). The exact determinations can be found in appendix 1.¹⁶⁸⁵ In this section their minting dates are compared with the date of the graves or other sorts of context on the basis of the associated grave goods (the context types of the coins finds can be found in List 1). It appears that a considerable number of the coins (of those which are grave finds) are antiques in these grave goods assemblages (table 118). Some coins date after the Merovingian period (see the find numbers of the coins under the heading 'not Roman or Merovingian'), their association with a late Roman or Merovingian grave was caused by post deposition processes or was wrongly interpreted by the excavators.

Context/Grave	Coin	Date coin	Date context/ Grave
P 10039 (113-1)	Follis; Constantinus I, Fausta	326	... < -400
P 10068 (93-15)	Follis; Constans / Constantinus II	347-348	400-580/90
P 10068 (93-16)	As IV?	c.350-500?	
P 10068 (93-17)	As IV	c.350-500	

¹⁶⁸⁵ The determinations of the Roman coins were provided by drs. P. Beliën (Keeper Ancient Coins and Engraved Gemstones at the Geldmuseum, Utrecht); the determinations of the early medieval coins were provided by drs. A. Pol (Keeper Early Medieval coins at the Geldmuseum, Utrecht).

P 10068 (93-18)	Follis; Constantinus I, Constantinus II Ceasar	335-337	
P 10068 (93-19)	Follis; Constantinus II c.s.	337-340	
P 10088 (94-1)	As III; Valentinianus I	364-378	...<-400
P 10162 (453-2)	Follis; Constantinus I, c.s.	333-336	565-<...
P 10168 (520-7)	Missing		565-680/90
P 10193 (61-1)	Follis; Constantinus I	332-333	-
P 10204 (318-1)	Follis; Constantinus I / Constantinus II Ceasar	330-335	...<-400
P 10204 (318-2)	Follis; Constans	347-348	
P 10331 (559-1)	As III; indet	c.364-395	...<-400
P 10337 (551-1)	As II; Magnus Maximus	383-388	...<-400
P 10420 (579-2)	Follis; Constantinus I	332-333	400-565
P 10420 (579-3)	As IV; Constans	c.348	
P 10511 (446-3)	As III; Valens	364-378	400-460/80
P 10526 (510-1)	As III; Valentinianus I	364-378	...<-400
P 10551 (491-1)	As III; Valens	364-378	...<-400
P 10556 (512-1)	As III; Valens	364-378	...<-400
P 10583 (497-1)	As IV, indet	395-467	...<-400
P 10589 (514-1)	Follis; Constantinus I, c.s.	330-341	...<-400
P 10606 (503-1)	Dupondius /as; indet	117-192	
P 10805 (189-1)	As III; Valens	364-378	
P 10864 (230-1)	Follis; Constantinus I, c.s.	335-337	
P 10864 (230-2)	As IV; barbarian after Constantinus I	330-341, after)	
P 10864 (230-3)	Follis; Constans / Constantinus II	347-348	
P 10864 (230-4)	Follis; Constans / Constantinus II	347-348	
P 10865 (209-1)	As IV, indet	c.300-500	
P 10866 (202-1)	As IV; Constans / Constantinus II	347-348	
P 11120 (262-1)	Follis; Constans / Constantinus II	316-330	...<-400
P 11120 (262-2)	As IV; indet	c.260-500	
P 11120 (262-3)			
P 11140 (294-1)	Follis; Constantinus I	330-331	...<-400
P 11140 (294-2)	Follis; Constantinus I / Constantinus II Ceasar	332-333	
P 11274 (366-1)	Follis; Constans	337-341	...<-400
P 11321 (418-29)	Follis; Constantinus I	318-320	510/25-580/90
P 11338 (421-1)	As II; Magnentius / Decentius	350-353	...<-400
P 11362 (470-1)	As III; Valens	364-378	...<-400
P 11388 (481-1*)	Missing	-	-
P 15013 (269-9)	As II; Valentinianus II, c.s.	378-388	460/80-565
P 19999 (156-1)	As III; Valentinianus I, c.s.	364-378	-
P 19999 (170-1)	Dupondius; Traianus	103-111	-
P 19999 (171-1)	Follis; Constantinus I	330-341	-
P 19999 (351-2)	Dupondius; Gordianus III	241-243	-
P 19999 (353-1)	Follis; Constantinus I	330-340	-
P 19999 (370-1)	As III; Valentinianus I	364-367	-
P 19999 (486-1)	As III; Valens	364-378	-
P 19999 (494-1)	As; Hadrianus	119	-
P 19999 (52-1)	Follis; Constantinus I	313-318	-
P 19999 (524-5)	As IV; indet	c.350-500	-
P 19999 (526-1)	Follis; Constantinus II	337-340	-

P 19999 (566-1)	As IV; indet	c.388-402	-
P 19999 (9999-20)	Antoninianus; indet	260-300	-
V 0 (1087-1)	As; Domitianus	82	-
V 0 (1526-1)	Dupondius / As; Crispina	177-183	-
V 100 (1434-21)	As II; indet	c.346-423	565-670/80
V 259 (1835-3)	Indet	-	510/25-580/90
V 259 (1835-4)	Indet	-	
V 48 (1586-3)	Dupondius / As; indet	54-96	565-640/50
V 95 (1478-2)	Antoninianus; Quintillus	270	580/90-670/80
V 95 (1478-4)	Antoninianus; barbarian imitation	270-300	
V 96 (1529-6)	Imitation Justinianus I	527-565	510/25-580/90

Table 118. The coins from the Vrijthof and Pandhof cemeteries. V= Vrijthof. P= Pandhof.

It appears that the majority of the coins date from the fourth century. Compared with the Roman coins which were altered as pendants (see the section above), it is remarkable that the 16 altered coins from Pandhof grave 10021 all date to the first and the second century. A further evaluation of the rarity of the individual coins of the collection from the Vrijthof and Pandhof, their circulation and their distribution patterns will follow in the second volume of the all-round analysis of the Servatius complex in which all the archaeological features, among other analytical subjects regarding the cultural backgrounds of this burial site, of the Pandhof cemetery will be published.

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Summary

The archaeological remains of the Servatius complex (Maastricht) are for the majority the result of late Roman and early medieval funerary activities. The analysis of the topographical and temporal development of this complex on the basis of these remains was formulated as the initial research goal of the Servatius project. The physical anthropological research, the reconstruction of the horizontal and vertical development of the cemeteries and the individual grave structures was carried out in sub-projects, as was the chronological analysis of the grave goods. However, the accuracy of the chronological method of seriation, which is generally used to create chronological orderings of considerable numbers of grave goods, was questioned. The objections to this method eventually shaped the first part of this thesis in which a cultural perspective on the chronological analysis of Merovingian grave goods is introduced as an essential component of the chronological debate. The grave goods from Maastricht are published in the second part of this thesis in which the classification, distribution patterns and dating of the individual objects form the major discussion.

The content of the chronological debate is investigated through the comparison of the generally considered reliability of seriation as a chronological method, with the cultural assumptions of researchers involved with the burial chronology of the Merovingian period. Over the last few decades especially, the method of seriation has resulted in refined chronological schemes, which date graves in periods of 15 to 30 years. The meaning of these chronological results has been deconstructed on three levels. The chronological problems regarding the classifications used and the related analytical problems of the established circulation periods of these created types were discussed, as was the assumed chronological accuracy of seriated assemblages of grave goods. It was concluded that, in addition to the practical problems of seriation, the scholarly ambition for short chronological phases relies on a simplistic way of considering the material component of early medieval life, which can, in short, be defined as that the Merovingians buried the dead with their inalienable personal possessions, which were consequently not subject to practices of inheritance. The circulation of objects is therefore considered to be limited to one generation. This formation of an image is based on the persistent interpretative construction regarding the concept of personal possession. This construction is built on an incorrect interpretation of historical writings and the presumed historical reality of the obtained short chronological burial phases. It has resulted in the absence of a discussion that questions the multiple facets of the relation between material culture and persons. The concept of personal possession has therefore not been challenged and replaced with another model.

The legitimacy of the chronological debate for the future should not focus on the quest for chronological refinement, but rather on the addition and development of a cultural perspective regarding the use of grave goods and the consequences of these altered points of view for the performance of chronological research. The new essential points of discussion are the search for alternatives to the one-dimensional point of view that grave goods were the personal belongings of the deceased and the additional variety of circulation trajectories in the world of the living before their interment with the dead when other sorts of 'possession' are considered. The interpretative debate in early medieval mortuary archaeology, which developed separately from the chronological debate, is analysed on its contribution to these new discussions.

The research in these interpretative models of the last few decades has focused on the ritual choices of the survivors, which are generally considered to express social competition, the symbolic creation of suitable ancestors, the symbolic appropriation of rights of succession on land, and strategies of remembrance (which imply the complex process of forgetting and remembering). The models are identified as 'mourner-centred models'; they are preoccupied with the motives of the burying group, and are a reaction to the forgone 'dead-centred models' in which the concept of inalienable personal possessions is one of the pillars. The reaction to the mourner-centred models can be collected as so-

called 'modern dead-centred models'; the active role of the deceased, the role of objects in the community before burial activities take place, and their influence on the outcome of funerary practices become discussion points again. The analysis of the models, which represent all interpretative directions in early medieval mortuary archaeology, served to identify various contexts from which objects could have been selected for funerary purposes.

The strong correlation between gender-specific objects (especially dress-related) and age at death (the graves of the elderly are more soberly furnished than those of adolescents or young adults) is a characteristic of the early medieval burial rite. It can be interpreted as an indication of the existence of intergenerational transmission and/or the existence of individual ambition for temporary personal display (individual alienable possession). Three cultural categories of grave goods have been identified on the basis of the context of possession from which they could have been selected: inalienable personal possession (although not explicitly mentioned, this category still plays an implicit role in a number of reasonings), alienable personal possession, and family possession. Visitors of the funeral can also donate gifts to the deceased, which forms the fourth cultural category of grave goods. The mourner-centred models imply that the ritual moment during which the meaning of objects transforms is more important than the context from which the objects were selected. They merely have to be suitable objects to achieve the goal. On the basis of this reasoning, the category of occasional objects was identified. The five categories do not exclude one another; rather, they serve to illustrate that the historical reality was more complicated than the exclusive image of inalienable personal possessions in the chronological debate.

Although a shift away from the hard-core mourner-centred models can be observed, the role, and therefore the circulation of the grave objects in the world of the living, has only scarcely been investigated. Essential for the continuation of the chronological debate is whether the variety of contexts of possession also implies a variety of circulation periods.

The average circulation period of object types is generally extracted from the chronological analysis of grave good assemblages. It was, however, reasoned that the chronological accuracy of these results can be questioned when the role of objects in the world of the living is considered more complicated than inalienable personal possession. The circulation of objects therefore requires a theoretical approach. Regarding the role of material culture as multi-layered implies that objects could change from 'owner' and therefore could remain in circulation longer than one generation. The variability of prolonged circulation is analysed in relation to the various contexts of possession. The focus is on the incentives that lead to prolonged circulation, which includes not only the backgrounds of production and distribution, but also the processes of acquisition, appropriation, exchange and transmission.

The circulation of exclusive objects in early medieval elite networks of exchange has already been introduced in several studies. On the basis this discussion and a perspective from anthropological literature on the background of prolonged circulation and deposition, the categories of 'ceremonial heirlooms' and 'sacred heirlooms' could be formulated as relevant categories for the early medieval period. The ceremonial heirlooms in particular illustrate that material culture is connected to the maintenance and transformation of social networks, and as such, is subject to prolonged circulation prior to deposition in graves. However, this category does not cover the complete repertoire of Merovingian grave goods. It is proposed that the ambition to exchange and transmit objects to the next generation was not only applicable to the most exclusive objects in the elite networks of especially men, but also to other strata of society and to women as active participants in various networks. These assumptions result in acknowledging the existence of the prolonged but also variable circulation of objects, an image that is opposite to the one created in the chronological debate. The question remains whether this image of consistent prolonged circulation relates to the objects that were deposited in graves, or whether these objects relate to the construction of suitable ancestors. As such, they are occasional objects that become 'sacred heirlooms', but are not necessarily subject to the ambitions of regular object transmission before deposition.

The introduction of the category of 'family heirlooms' as a component of early medieval life served to discuss the existence of regular and variable object circulation in all strata of society. This category contradicts the general point of view in the chronological debate that grave goods were not part of a system of inheritance. Marriage was chosen as an example of a moment in family life that, nearly universally, is formalised and accompanied by the donation, exchange and transmission of objects. Selections of these objects are stated to be family heirlooms or family heirlooms to be. How can the trajectories of the bridal couple's received objects be defined?

The formal early medieval wedding is extendedly discussed on the basis of historical writings, especially law codes. Not only is the agreement of betrothal and marriage described, but also the related changes in social status and property rights of the people involved. The general lines of exchange are those from the groom-to-be to the father of the bride-to-be (dowry), from the father (family) of the bride to the bride (dowry and/or entitled part of the inheritance), and from the groom to the bride after the wedding night (morning gift). Numerous rightful lines of succession are written down in case the untimely death of one of the spouses occurs. Some possessions return to the family of descendant, some possessions go to the children, and some are bestowed to the surviving spouse. It can be assumed that some of the goods that are exchanged in the context of marriage are considered family property that requires continuous transmission. The specific content of the goods in each line of exchange and transmission remains obscure, but the texts generally refer to land, cattle, furniture, slaves and/or money. Explicit references to *mobilia*, as encountered in Merovingian graves, are scarce.

Despite the absence of these explicit references, the historical writings (wills are an additional source) illustrate that inheritance was a familiar concept in early medieval society. Other writings such as the *libelli dotis*, however, show that specific objects such as the ones from early medieval graves were exchanged as a dowry and morning gift. It requires further reasoning to answer the question of whether these references make it possible to consider the regular intergenerational transmission of the objects that were deposited in graves.

The sketch of exchange and the rights of possession and succession makes it presumable that not only was land subject to continuous transmission, but that people also had an ambition to contain movables for future generations. Both the scarce occurrences of explicit references to inheritance rules and *mobilia* and the age-related object deposition require an exploration of the mechanisms of transmission that are not explicitly mentioned in historical writings as regulated customs because they are more closely related to the private sphere of success and failure.

The concepts of 'objectified cultural capital' (Bourdieu) and 'cultural transmission' suit the illustration of private and not regulated mechanisms of intergenerational transmission. Important assumptions in this line of reasoning are, first, that the family group and belonging to such a group was of paramount importance in the Merovingian period, and second, that a social group such as a family had the ambition to transfer a certain immaterial group identity to the future, a transference that also involved a material correlate. The physical transmission of family 'treasure' (family heirlooms) was connected to the transmission of the specific group values and identities at specific moments. The importance of 'correct' transmission is what makes this moment crucial and potentially dangerous. It becomes effective when it accompanies meaningful moments of the individual life cycle such as a marriage, which at the same time represents the transformation of the family group.

This characterisation of transmission is in accordance with the correlation between certain grave goods and age groups. This correlation suggests a certain organisation of object transmission. However, it also indicates that there were moments of termination or interruption of transmission through deposition in graves. It is stated that the majority of the grave goods had a place in the mechanisms of continuous intergenerational transmission. In addition to the formalised exchange of goods during wedding ceremonies, one can also think of other moments of transformation that represent suitable occasions for intergenerational transmission. However, they were more closely related to the private family sphere and consequently are not registered in abundance in historical writings. These are then

other mechanisms and lines of exchange than those of the exclusive objects in the elite networks of predominantly men. This model also includes the intergenerational transmission of numerous sorts of objects between women and between members of other social strata than the elite.

This discussion illustrates the complexity of the possible existence of variable and prolonged object circulation. This contradicts the concept of inalienable personal possession, which stands at the basis of the majority of the chronological research. However, it also offers an additional image of the prolonged circulation of only the most exclusive objects in the elite networks of exchange. Why objects that functioned in a system of continuous intergenerational object transmission were eventually deposited in graves remains open for debate, but it probably relates to the dangerous moments of actual object transmission. The correlation between age and grave goods suggests that this transmission was organised around the life cycle rituals through which each family member had to pass. The possession of objects should not be perceived as personal possession, but merely as a temporary treasury of family possessions for which each successive individual holds the responsibility for correct and effective transmission to the next generation. Given that untimely death endangers this transmission, the (temporal) deposition in graves could be an appropriate solution to this problem.

The question of why objects were buried with the dead probably leads to numerous answers. The aim of this discussion is to illustrate that grave goods can also be studied as objects that shaped the lives and social relations in the world of the living before they were selected as grave goods and their associated meanings transformed in the funerary process. The discussion shows that the relation between people and objects is more complicated than the participants of the chronological debate envisioned, and that this complexity results in prolonged and variable circulation trajectories. Making this variability visible adds a theoretical dimension to chronological analysis, which legitimates the place of chronological discussions on future research agendas. Seriation as a chronological method can be maintained, but the quest for refinement should be abandoned. The need for the chronological phasing of graves should not be the primary research goal. Rather, the variability of object circulation and the search for explanations of this variability, in other words, the development of an extended cultural perspective that forms the basis of Merovingian burial chronology, requires further discussion.

The relation of this perspective with the publication of the grave goods from Maastricht in Part II is expressed with the variable circulation that can be observed in a number of graves. It appears that the period covered by complete assemblages exceeds much more than one generation; it even appears that this period comprises approximately 100 to 200 years. This does not necessarily represent the actual periods of combined circulation, but does demonstrate that prolonged circulation can occur. This observation can also be made in numerous publications of early medieval cemeteries in which short chronological phases are the aim. The cultural assumptions of the researchers are, apart from the discussion of the methodological foundations of the studies used for the analysis of the grave goods from Maastricht, also considered. In their opinion, as already generally discussed in Part I, the circulation of objects is limited to approximately one generation. Given that their work focuses on the dating of graves in short phases, they often overlooked the circulation variability that can occur in one single grave. Transferring the focus in chronological studies to this variability offers the possibility to explore concepts such as intergenerational transmission in the context of family structures and transformations as a component of early medieval life. The chronological debate requires a theoretical approach that must be shaped in research that questions the role of material culture not only in funerary contexts, but also in the world of the living.

Samenvatting

Een cultureel perspectief op de Merovingische begrafenischronologie en de grafobjecten uit het Vrijthof- en Pandhof-grafveld

De reconstructie van de topografische en chronologische ontwikkeling van het Servatius-complex (Maastricht) in de laat-Romeinse tijd en vroege Middeleeuwen vormde in aanvang de overkoepelende onderzoeksdoelstelling voor de analyse van dit complex binnen het Servatius-project. Het Servatius-complex bestaat merendeels uit de archeologische overblijfselen van begrafenispraktijken uit genoemde periodes: inhumatiegraven met skeletresten en een verscheidenheid aan meegegeven objecten. Het fysisch antropologisch onderzoek, de reconstructie van de horizontale en verticale topografie van de grafvelden en van de individuele grafconstructies is uitgevoerd in deelprojecten, zoals ook de chronologische analyse van de begrafenisobjecten die in dit proefschrift zijn gepubliceerd. Het tot stand brengen van een chronologische ordening van de objecten uit de Maastrichtse graven volgens de wetenschappelijke standaard zoals deze is geëvolueerd in de lange onderzoekstraditie van specifiek het typo-chronologische onderzoek van Merovingische grafobjecten, riep vragen op met betrekking tot de accuratesse van de methodes die hiervoor zijn ontwikkeld. Deze vragen hebben uiteindelijk geleid tot de discussie die in het eerste deel van het proefschrift is uitgewerkt. Hierin is een cultureel perspectief op de chronologische analyse van begrafenisobjecten geïntroduceerd als essentieel onderdeel van het chronologische debat. Het tweede deel van het proefschrift bestaat uit de publicatie van de objecten uit de Maastrichtse grafvelden, waarin de discussie zich voornamelijk richt op de classificatie, het verspreidingspatroon en de datering van de afzonderlijke voorwerpen.

De inhoud van het chronologische debat is tegen het licht gehouden door de veronderstelde mogelijkheden van seriatie als chronologische methode te onderzoeken in relatie met de culturele aannames van de deelnemers aan dit debat. In recente chronologische analyses hebben onderzoekers gestreefd naar het dateren van Merovingische grafassemblages in relatief korte fasen van vijftien tot dertig jaar met behulp van seriatie. De betekenis van deze chronologische ordeningen is op drie niveaus bekeken. In de eerste plaats is de vermeende chronologische nauwkeurigheid van de geserieerde grafassemblages ter discussie gesteld. Ten tweede zijn de chronologische problemen ten aanzien van de gebruikte objectclassificaties in kaart gebracht, evenals de daaraan gerelateerde analytische problemen met betrekking tot de afgeleide omlooperperiodes van deze objecttypen. De conclusie van deze ontleding is dat, naast de praktische problemen van seriatie, het streven naar korte chronologische fasen een eenvoudige voorstelling van de materiële component van het sociale leven in de Merovingische periode vereist. Deze aanname wordt dan ook algemeen onderschreven en bestaat kortweg uit de veronderstelling dat de objecten met welke men in de vroege Middeleeuwen werd begraven, bestonden uit onvervreemdbare individuele bezittingen en, hieruit volgend, dat overervingpraktijken niet van toepassing waren op deze roerende goederen. Volgens deze zienswijze blijft de circulatie van objecten voor het overgrote deel beperkt tot één generatie. Deze beeldvorming wordt gevoed door de persistente interpretatieve constructie ten aanzien van het concept (persoonlijk) bezit, dat enerzijds zijn oorsprong vindt in een foutieve lezing van historische bronnen en anderzijds wordt bevestigd door de vermeende historische realiteit van de behaalde verfijnde chronologische resultaten. Deze interpretatieve constructie heeft ertoe geleid dat de relatie tussen mens en materiële cultuur zelden ter discussie is gesteld. Een vervangend concept met dezelfde algemene verklaringswaarde is dientengevolge nog niet gevonden.

De voortzetting van het chronologische debat vindt zijn legitimiteit daarom niet in het streven naar verdergaande chronologische verfijning, maar naar een uitgebreider cultureel perspectief op het gebruik van grafobjecten. Dit heeft consequenties voor de chronologische analyses. Een essentieel discussiepunt in het chronologische debat van de toekomst is in hoeverre de opvatting dat de objecten het onvervreemdbare individuele bezit vormden van de overledene nog houdbaar is. Het bestuderen van

de circulatiemogelijkheden van deze objecten in de wereld van de levenden, voordat zij werden geselecteerd als grafobjecten, zal dan steeds belangrijker worden. Het interpretatieve debat dat zich naast het chronologische debat heeft ontwikkeld, is geanalyseerd vanuit de bijdrage die het aan deze inzichten kan leveren.

De laatste drie decennia heeft het onderzoekszwaartepunt in de interpretatieve modellen gelegen op de betekenis van de meegegeven objecten in de rituele context van vroegmiddeleeuwse begrafenisprijken: objecten zijn beschouwd als de materiële overblijfselen van rituele strategieën gericht op sociale competitie, het symbolisch creëren van (geschikte) voorouders, het symbolisch toe-eigenen van overerfbare rechten op land en herinneringsstrategieën, die een complex proces van selectief herinneren en vergeten impliceren. Deze modellen leggen zozeer de nadruk op objecten als de materiële neerslag van de actieve keuzes van de achterblijvers dat ze benoemd zijn als *mourner centred models*, die als reactie op de voorafgaande *dead centred models* (waar het individueel onvervreemdbaar bezit als verklarend concept de overhand heeft) zijn ontstaan. De reactie op deze *mourner centred models* kunnen als moderne *dead centred models* worden gekwalificeerd: de actieve rol van de overledene in de samenleving voor zijn dood, en dus ook de rol van objecten in de gemeenschap der levenden, krijgen, hoewel nog niet gedefinieerd als specifieke onderzoeksdoelen, (weer) enigszins de aandacht, en dan met name de invloed die zij uitoefenen op de vormgeving van een begrafenis. De analyse van de *mourner centred* en de hedendaagse *dead centred models* diende ertoe een overzicht te krijgen van de verschillende contexten waaruit de grafobjecten werden geselecteerd.

De sterke correlatie tussen geslachtsspecifieke objecten (veelal kleding-gerelateerd) en leeftijd (de graven van de ouderen zijn over het algemeen soberder uitgerust dan die van adolescenten en jongvolwassenen) is een opvallend aspect van het vroegmiddeleeuwse ritueel. Het kan geïnterpreteerd worden als een aanwijzing enerzijds voor het bestaan van intergenerationele doorgifte en anderzijds voor het bestaan van individuele ambities om objecten te verkrijgen (individuele representatie) en ook weer af te stoten (vervreemdbaar bezit). Met de kwalificatie van bezitsvormen als uitgangspunt zijn drie culturele categorieën grafobjecten gedefinieerd als contexten waaruit ze eventueel zijn geselecteerd: het onvervreembare individuele bezit, het vervreembare individuele bezit en het familiebezit. Hoewel onvervreemdbaar individueel bezit geen expliciete optie meer is in het interpretatieve debat van de afgelopen decennia, blijkt wel dat het, zonder verdere specificatie, impliciet onderdeel uitmaakt van verschillende redeneringen. Daarnaast kunnen bezoekers van de begrafenisplechtigheid geschenken in het graf hebben gedeponneerd waarmee de vierde categorie is gedefinieerd: de geschenken aan de dode. De interpretatieve modellen die het accent op begrafenisstrategieën van de begravende groep leggen, impliceren ook dat deze contexten minder belangrijk waren dan het rituele moment op basis waarvan de culturele categorie van 'gelegenheidsobjecten' is gedefinieerd waarmee wordt uitgedrukt dat de fysieke en symbolische verbintenis tussen grafobjecten en de overledene van ondergeschikt belang is. Het zal duidelijk zijn dat de vijf categorieën elkaar niet uitsluiten. Ze illustreren echter dat de werkelijkheid complexer is dan de aanname dat grafobjecten het individueel onvervreemdbaar bezit vormen doet vermoeden.

Hoewel de moderne *dead centred models* de aandacht beginnen te verleggen naar de dode en daarmee, onder andere, naar zijn/haar leven en het materiële correlaat daarvan, is de circulatie van het merendeel van de vroegmiddeleeuwse grafobjecten in de levende gemeenschap nog niet nauwgezet onderzocht. Een essentieel gegeven voor de voortgang van het chronologische debat is of de aanname dat de omloop van objecten in de vroege Middeleeuwen over het algemeen niet veel langer dan een generatie in beslag nam gehandhaafd kan worden wanneer naast diverse bezitsvormen ook de daarmee samenhangende variatie aan mogelijke trajecten van circulatie in kaart wordt gebracht. De vijf culturele categorieën van grafobjecten doen een zekere variatie aan circulatietrajecten vermoeden, die echter nog niet systematisch is onderzocht.

De gemiddelde omlooperperiode van objecttypen uit graven wordt doorgaans vastgesteld op basis van de chronologische analyses van grafassemblages. Dit proefschrift betoogt echter dat zowel de veronderstelde nauwkeurigheid van deze chronologische resultaten als de vastgestelde lengte van de gemiddelde omlooperperiode misleidend zijn wanneer, onder andere, de rol van de grafobjecten in de wereld van de levenden niet slechts als 'individueel onvervreemdbaar bezit' wordt beschouwd. Daarom zal de circulatie van objecten vanuit een andere invalshoek bestudeerd moeten worden. Ervan uitgaande dat het sociale leven en de daaraan verbonden materiële cultuur meerdere dimensies heeft, is het aannemelijk dat objecten van 'eigenaar' konden wisselen, waaruit volgt dat omlooperperiodes die meer dan een generatie omvatten tot de mogelijkheden behoren. Om de waarschijnlijkheid van het regelmatig voorkomen van verlengde omloop (meer dan een generatie) te onderzoeken, is ervoor gekozen de achtergronden van diverse circulatieprocessen in relatie tot diverse contexten van 'bezit' te belichten. In deze discussie ligt de nadruk op de drijfveren van sociale groepen die leiden tot verlengde objectomloop of circulatie, waarin de achtergronden van productie en distributie, maar ook processen van verwerven, toe-eigening, uitwisseling en doorgifte besloten liggen.

De circulatie van exclusieve objecten in vroegmiddeleeuwse elite-uitwisselingsnetwerken is onderwerp van diverse studies geweest. Aan de hand van deze discussie en een perspectief vanuit de antropologie (het collectief onvervreemdbaar bezit) op de achtergronden van verlengde omloop en depositie was het mogelijk om voor de vroegmiddeleeuwse periode in de eerste plaats 'ceremoniële erfstukken' en 'sacrale erfstukken' te definiëren. De ceremoniële erfstukken in het bijzonder illustreren dat materiële cultuur in belangrijke mate is verbonden met sociale netwerken en als zodanig onderhevig kan zijn aan doorgifte voorafgaand aan de uiteindelijke depositie (in graven), maar dekken het gehele repertoire van grafobjecten niet. Deze discussie betreft de uitwisseling van zeer exclusieve objecten tussen voornamelijk de mannelijke leden van elitenetwerken. Geopperd is dat de ambitie om objecten uit te wisselen en ze aan de volgende generatie door te geven ook aanwezig was in de overige sociale lagen en dat ook vrouwen hierin een actieve rol vervulden, hetgeen resulteert in verlengde maar ook variatie van omlooperperiodes. Dit is een ander beeld dan aanvankelijk werd voorgesteld in het chronologische debat. De vraag blijft bestaan of dit beeld van veelvoorkomende doorgifte verband houdt met de in graven meegegeven objecten, of dat deze alle moeten worden geïnterpreteerd als sacrale erfstukken die de symbolische constructie van voorouders uitbeelden. In dat geval betreft het gelegenheidsobjecten die niet onderhevig zijn aan ambities voor doorgifte in de wereld van de levenden.

De discussie over de mogelijkheid van een regelmatig maar ook variabel voorkomen van verlengde objectcirculatie in andere sociale strata dan de elite begint met de introductie van 'familie-erfstukken' als onderdeel van het vroegmiddeleeuwse bestaan. Het in overweging nemen van deze categorie in relatie tot de in graven gedeponeerde objecten staat in contrast met de mening van de meerderheid van de deelnemers aan het chronologische debat dat overerving van de grafobjecten nauwelijks aan de orde was in de vroegmiddeleeuwse samenleving. Het huwelijk is als voorbeeld genomen van een moment in het familieleven dat, vrijwel universeel, wordt begeleid en geformaliseerd door de schenking, uitwisseling en doorgifte van objecten waarvan een selectie gekwalificeerd is als familie-erfstukken of familie-erfstukken in de maak. Wat is het traject van de door het vroegmiddeleeuwse bruidspaar verworven objecten?

Het formele vroegmiddeleeuwse huwelijk is uitgebreid beschreven door historici op basis van geschreven bronnen, voornamelijk wetsteksten. Deze teksten beschrijven de afspraken die aan verloving en huwelijk zijn verbonden, maar ook de veranderingen in sociale status en bezitsverhoudingen die door deze verbintenis ontstaan. De meest voorkomende lijnen van geschenkuitwisseling zijn die van de aanstaande bruidegom naar de familie/vader van de aanstaande bruid (bruidschat), van de familie van de bruid naar de bruid (bruidschat en/of rechtmatig erfdeel), en van de bruidegom naar de bruid (morgengift). Door een huwelijk verandert de samenstelling van een familie, en dit gegeven vereist ook een zekere regulering wat betreft het in stand houden van de 'rijkdom' van de familie en daarmee het doorgeven van bezittingen aan rechtmatige erfgenamen. Tal van overervingsvoorschriften zijn bekend

uit de wetsteksten die de verdeling van bezit en de rechtmatige overerving in geval van het overlijden van een van de huwelijkspartners hebben vastgelegd. Diverse richtingen van doorgifte komen aan de orde, zoals de teruggave van (een gedeelte van) de bezittingen aan de familie van de overleden huwelijkspartner, de overerving naar de kinderen of naar de overgebleven partner. Verondersteld kan worden dat een deel van de in een huwelijkscontext uitgewisselde goederen worden gewaardeerd als onderdeel van familiebezit dat moet worden doorgegeven. Waar de geschenken in iedere lijn van uitwisseling precies uit bestonden blijft ambigu, maar algemene verwijzingen in de wetsteksten duiden op de uitwisseling van land, vee, meubilair, slaven en/of geld. Expliciete verwijzingen naar *mobilia* zoals worden aangetroffen in graven zijn schaars.

Van een uitgebreide bronnenkritiek die de waarde van deze teksten in relatie met de toenmalig bestaande praktijken beargumenteert, is afgezien. Hoewel geconcludeerd kan worden dat de wetsteksten voornamelijk van toepassing zijn op landbezit (van de elite) en expliciete referenties naar het bezit en de rechtmatige overerving van (specifieke) objecten zoals bekend uit graven schaars of niet expliciet zijn, maken ze het aannemelijk dat het principe van overerving (naast de wetsteksten zijn ook testamenten van de elite overgeleverd) bekend was in de vroege Middeleeuwen. Andersoortige historische teksten, zoals *libelli dotis*, verwijzen, onder andere, naar specifieke objecten die als bruidschat en morgengift zijn geschonken. Deze verwijzingen komen overeen met objecten die bekend zijn uit Merovingische graven, maar de vraag of dit aanwijzingen kunnen zijn voor het regelmatig voorkomen van intergenerationele doorgifte dan wel verlengde omloop van de objecten die in de graven worden teruggevonden, vereist een verdergaande argumentatie.

De beschreven analyse van uitwisseling en eigendoms- en overervingsrechten doet vermoeden dat niet alleen landbezit onderhevig was aan een streven naar behoud middels continue doorgifte, maar ook het roerende bezit. Zowel de schaarste aan expliciete verwijzingen naar *mobilia* in de gereguleerde overervingspraktijken als de aan leeftijd gebonden depositie van objecten in graven vereisen de exploratie van mechanismen van doorgifte die zodanig verbonden zijn met de private sfeer dat aangenomen kan worden dat zij niet expliciet in historische bronnen, in het bijzonder wetsteksten, als gereguleerde gebruiken zijn terug te vinden.

De concepten 'geobjectiveerd cultureel kapitaal' (Bourdieu) en 'culturele transmissie' lenen zich voor de illustratie van het private en niet formeel gereguleerde mechanisme van intergenerationele doorgifte. De voornaamste aanname in het betoog is dat de familiegroep van groot belang was in de vroege Middeleeuwen, en dat deze sociale groepen de ambitie hadden een bepaalde immateriële groepsidentiteit over te dragen naar de toekomst – een overdacht die ook een materieel correlaat kent. Gesteld wordt dat de fysieke doorgifte van bepaalde familieobjecten (erfstukken) verbonden is met de doorgifte van het geheel aan de voor de groep te behouden identiteitsvormende waarden op specifieke momenten. Het belang van een 'goede' doorgifte maakt deze gebeurtenis cruciaal, maar ook potentieel gevaarlijk. De doorgifte wordt effectief wanneer ze betekenisvolle momenten in de individuele levenscyclus begeleidt, zoals een verloving of huwelijk, die gelijktijdig ook een transformatie van de familiegroep representeert.

Bovenstaande kenschets van doorgifte correspondeert met de sterke correlatie tussen leeftijdsgroepen en specifieke grafobjecten in vroegmiddeleeuwse graven. Deze correlatie suggereert dat er een zekere organisatie van objectdoorgifte bestond, maar tegelijkertijd ook dat er momenten waren waarop deze continue doorgifte verbroken of onderbroken werd door objectdepositie in graven. De stelling is dan ook dat de meerderheid van de objecten die in graven zijn gedeponeerd in een mechanisme van continue intergenerationele doorgifte een plaats hebben gehad. Naast de geformaliseerde uitwisseling van objecten tijdens huwelijksceremoniën kan gedacht worden aan andere momenten van transformatie die voor deze doorgifte geschikt waren, maar die zozeer tot de private familiesfeer behoorden dat zij niet overmatig in de historische bronnen zijn opgenomen. Andere lijnen van doorgifte dan de uitwisseling van exclusieve objecten tussen mannen die functioneerden in

elitenetwerken, zoals van moeder naar dochter, zijn in dit model van continue intergenerationale doorgifte onder te brengen.

Deze discussie heeft tot doel gehad de complexiteit en de mogelijkheden van verlengde objectcirculatie te illustreren, hetgeen niet alleen in contrast staat met het veelvuldig gehanteerde concept van individueel onvervreemdbaar bezit, waarvan de circulatie niet veel langer dan een generatie in beslag zou hebben genomen, maar ook met de beeldvorming van vroegmiddeleeuwse elitenetwerken waarin alleen exclusieve objecten werden uitgewisseld. Waarom objecten die gefunctioneerd hebben in een systeem van continue doorgifte in graven zijn gedeponneerd is een vraag die echter blijft staan. Zoals gezegd, het moment van doorgifte is cruciaal en kan problemen opleveren. De correlatie tussen bepaalde objecten en de leeftijd van de gestorvenen maakt het mogelijk te opperen dat de doorgifte van roerend familiebezit is georganiseerd rondom de door de individuele familieleden te doorlopen levenscyclusrituelen. De objecten die een individu bezit moeten daarom niet worden beschouwd als onvervreemdbaar individueel eigendom, maar als familiebezit. Het individu vervult een tijdelijk schatbewaarderschap en is verantwoordelijk voor een deugdelijke en effectieve doorgifte. Het verwerven en doorgeven van objecten kan verstoord worden door het voortijdig overlijden van een tijdelijke schatbewaarder; dit zou een reden kunnen zijn voor het onderbreken van de continue doorgifte. Het meegeven van de objecten in het graf kan daarvoor een (tijdelijke) oplossing zijn.

De vraag waarom objecten werden meegegeven, zal meerdere antwoorden kennen en zal wel altijd onderwerp van discussie blijven. Het betoog diende echter aan te tonen dat grafobjecten ook bestudeerd kunnen worden als objecten die een rol hadden in het vormgeven van verschillende sociale relaties in de gemeenschap van de levenden voordat zij werden gekozen als grafobjecten en een betekenisverandering doormaakten. Deze discussie laat onder meer zien dat de relatie tussen mensen en objecten gecompliceerder is dan de archeologen van het chronologische debat tot op heden hebben voorgesteld en dat deze complexiteit leidt tot variatie in circulatietrajecten. Het in kaart brengen van deze verscheidenheid moet meegenomen worden in chronologisch onderzoek, waarmee het een theoretische dimensie verwerft en in deze gedaante een plaats kan vinden op de toekomstige onderzoeksagenda. Seriatie als chronologische methode kan worden gehandhaafd, maar dan zonder het nastreven van de verfijning die de afgelopen decennia heeft gekenmerkt. Niet de chronologische fasering van graven zou het ultieme doel van chronologisch onderzoek moeten zijn, maar veelmeer het inzichtelijk maken van de variabiliteit van objectcirculatie en het onderzoeken van verklaringen voor deze variabiliteit, of met andere woorden het ontwikkelen van een uitgebreid cultureel perspectief dat de basis vormt voor de chronologie van de Merovingische periode.

De verbinding met de publicatie van de grafvondsten uit Maastricht in Deel II is tot uitdrukking gebracht door de variatie aan circulatie binnen enkele grafassemblages uit Maastricht te beschouwen. Het blijkt dat de dateringspanne van de afzonderlijke objecten, en dus de tijdspanne van circulatie aanzienlijk is, en zeker meer dan een generatie beslaat. Voor de ter illustratie gebruikte graven komt een tijdspanne van circulatie die varieert van om en nabij de honderd tot tweehonderd jaar naar voren. Deze duur hoeft niet de werkelijke representatie van circulatie te zijn, maar toont wel aan dat verlengde omloop tot de mogelijkheden behoort. Dit verschijnsel komt overigens ook naar voren in de publicaties waarin graven in korte chronologische fasen werden gedateerd. Naast de bespreking van de methodologische grondslagen van de chronologische studies die voor de analyse van de Maastrichtse objecten de basis vormden, zijn ook de culturele overtuigingen van de onderzoekers met betrekking tot de rol van materiële cultuur in kaart gebracht. Het blijkt dat de onderzoekers over het algemeen van mening zijn dat de omloop van objecten gering is, omdat deze zijn toegeëigend als onvervreemdbaar persoonlijk bezit en als zodanig nooit worden doorgegeven, hetgeen op een abstracter niveau al in Deel I is bediscussieerd. Omdat de focus in deze werken ook ligt op het dateren van graven (in korte fasen) blijft de achterliggende dateringbreedte van de afzonderlijke objecten in een grafassemblage vaak verhuuld. Juist het verleggen van de aandacht naar deze circulatiebreedte biedt mogelijkheden om concepten als

intergenerationele doorgifte verbonden aan familiale structuren en transformaties in het chronologische debat op te nemen. Grafobjecten hebben een functie gehad in de gehele 'rite de passage' van sterven en begraven en zijn in deze hoedanigheid dan ook veelvuldig bestudeerd, maar het chronologische debat heeft een theoretische dimensie nodig die gezocht moet worden in onderzoek dat ook de rol van materiële cultuur in de wereld van de levenden bediscussieert.

Dankwoord

Dit proefschrift is tot stand gekomen binnen het Servatius-project, dat tot algemeen doel had de opgravingen van het Vrijthof (1969-70) en de Servaas Pandhof (1953-54) uit te werken en te publiceren. Het verzamelen van alle documentatie en materiële overblijfselen van deze opgravingen, die zich verspreid over verschillende depots en archieven bevonden, was dan ook de eerste uitdaging voor de onderzoekers verbonden aan dit project. Een eerste woord van dank gaat daarom uit naar het Provinciaal Depot Limburg, het Gemeentelijk Depot Maastricht, de Rijksdienst voor het Cultureel Erfgoed en het Rijksmuseum van Oudheden die hieraan hun medewerking hebben verleend.

De creatie van omvangrijke databases en digitale bestanden om de beschikbare data te ontsluiten en in geordende en geïnterpreteerde vorm te bewaren en toegankelijk te maken, vormde de tweede uitdaging. Vele uren zijn gaan zitten in 'databasevergaderingen' en het bedenken van de beste ontsluitingsstrategieën, wat met name in goede banen werd geleid door collega-projectleden Raphaël en Dieuwertje met hun gedegen kennis van digitaliseren, archiveren, databases en de overige computerprogramma's die zijn gebruikt. Maar ook onmisbaar waren Nina, Frans, Titus, Liesbeth en Menno die ervoor hebben gezorgd dat de 'digitale structuren' werden gevuld met gegevens waar ik dankbaar gebruik van heb gemaakt. Het resultaat bestaat uit digitaal beschikbare gegevensbestanden van het Servatius-complex op basis waarvan dit complex wordt gepubliceerd en toekomstig onderzoek mogelijk is. Deze digitale exercitie heeft daarnaast geresulteerd in 'uitwerksoftware' waarmee vroegmiddeleeuwse grafvelden, zoals binnen het nu lopende Anastasis-project, uniform kunnen worden uitgewerkt.

De derde uitdaging bestond uit het schrijven van een proefschrift. Naast de ontwikkeling van een vondstendatabase en de publicatie van de grafvondsten hield dit een zoektocht in naar een meer inhoudelijke verdieping die bij aanvang van het onderzoek nog niet precies gedefinieerd was. Het beschrijven en bediscussiëren van vroegmiddeleeuwse grafobjecten lijkt vanzelfsprekend ook een chronologische analyse van deze objecten te impliceren, waarbij meestal wordt voortgebouwd op al bestaande chronologische constructies. Ik ben gaan twijfelen aan de 'feitelijkheid' van deze constructies die vaak zonder kritische beschouwing de basis worden voor de verdere inhoudelijke interpretatie van (de temporele ontwikkeling van) begrafenisrituelen. Daarom heb ik ervoor gekozen de beginselen van de gehanteerde dateringsmethoden in de vroegmiddeleeuwse archeologie te doorgronden en daar waar nodig te bekritisieren en van een alternatief te voorzien. De methoden en technieken van de Merovingische begrafenischronologie, de interpretatieve onderzoeksgeschiedenis van vroegmiddeleeuwse begrafenispraktijken en de betekenis van materiële cultuur in het algemeen zijn de voornaamste onderzoeksgebieden waarop de in dit proefschrift gevoerde discussie met betrekking tot de mogelijkheden en onmogelijkheden van de dateringsmethoden is gebaseerd. De deskundige begeleiding van promotor Frans Theuws, die goed bekend is met al deze onderzoeksgebieden, maar ook met de materiële overblijfselen van vroegmiddeleeuwse begrafenispraktijken, was onmisbaar voor het volbrengen van het proefschrift, evenals de aanwijzingen van Titus Panhuysen in zijn rol als copromotor. Joep Hendriks bedank ik voor zijn hulp met de determinatie van het Romeinse aardewerk, Sophie van Lith voor haar hulp bij het uitwerken van het glas en Paul Beliën en Arent Pol voor het determineren van de munten. De tekeningen van de objecten gemaakt door Bob Donker, en de foto's van Anneke Dekker zijn niet alleen mooi en functioneel voor de uiteindelijke publicaties, maar waren ook bijzonder bruikbaar in het werkproces. Zij hebben gedurende de eerste jaren van het project hard gewerkt om dit beeldarchief tot stand te brengen. De betrokkenheid van de overige projectleden (hierboven genoemd) bij het promotietraject heb ik bijzonder gewaardeerd, zoals ook de aanwezigheid van Martine die zich de laatste jaren bij ons grafveldenproject heeft aangesloten en altijd een verfrissende kijk weet te bieden op rituele praktijken en andere menselijke gedragingen. Binnenkort verwelkomen we Maaike als nieuwe collega en ik kijk ernaar uit om samen met haar nog veel meer grafvelden onder handen te nemen.

Naast het project was er het AAC als prettige collegiale werkomgeving. Door de collectieve verhuizing en vele interne wisselingen van werkplekken heb ik gelukkig een aanzienlijk aantal collegae leren kennen als kamergenoten. Een paar aangename jaren heb ik afwisselend mogen doorbrengen met Jeltsje, Menno, Antoinette, Maartje, Arno en Dieuwertje; het was telkens weer anders maar met jullie allen was het goed toeven. De laatste wisseling heeft geleid tot een plaats op een 'projectkamer' waar de samenstelling van kamergenoten niet altijd even voorspelbaar is, maar waar het afgelopen jaar in elk geval Nina, Jelmer, Suzanne en Robin als student-assistenten langzaam maar zeker een werkplaatsje hebben veroverd en veel welkome vrolijkheid en gezelligheid hebben gebracht tijdens mijn laatste krachtingspanning om dit proefschrift te volbrengen, zoals ook de koffiepauzes met Anne hieraan hebben bijgedragen.

En dan was er buiten het proefschrift en het AAC ook nog wat. Velen hebben daar de afgelopen jaren een verschillende rol in gespeeld, maar speciale dank gaat uit naar Lisette, Anneke, Annet, Ad, Monique, Wändi, Janneke, Isidor, Lia, Judy, Shane, Juliette, Akira, Eveline, Herman, Ria, Nicky, Ron, Eveline en Peter, jullie weten zelf wel waarom...

Appendix 1

Figures 1-96: The grave goods from the Vrijthof and Pandhof cemeteries

Drawings: Bob Donker (Amsterdam Archaeological Centre, University of Amsterdam)
Photographs: Anneke Dekker (Amsterdam Archaeological Centre, University of Amsterdam)

Pottery	1-8
Glass vessels	9-18
Belts	19-30
Brooches	31-34
Bracelets	35
Earrings	36
Decorative pins	37-38
Finger rings	39
Decorative Pendants	40
Girdle hangers and amulets	40-44
Purses	45
Jewels	46
Beads	47-71
Seaxes / Scabbards	72-81
Franciscas and Axes	82-83
Lances	84
Umbo	84
Arrowheads	85
Sword	85
Shoes	86-87
Utilitarian objects	88-96

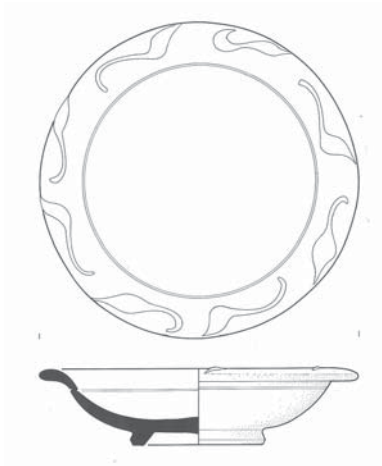
The photographs of the coins are not depicted because of their voluminous character. They will be published in the volumes of the upcoming all inclusive publications of the Vrijthof cemetery and Church cemetery (which includes the Pandhof cemetery), alike the complete corpus of all the stray finds and unidentifiable objects from both cemeteries.

Fig. 1: Pottery (Roman plates/dishes)

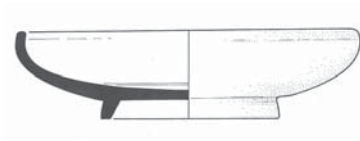
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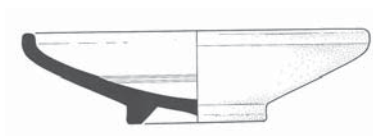
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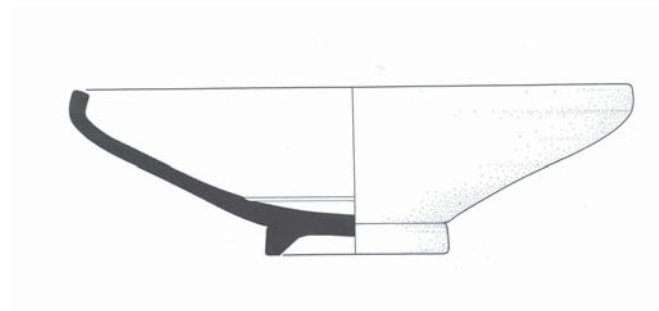
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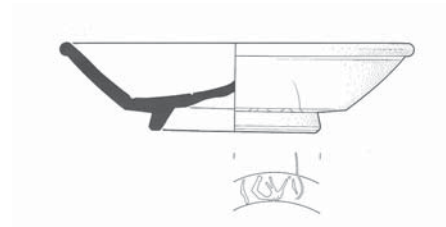
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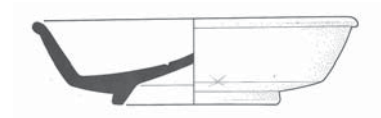
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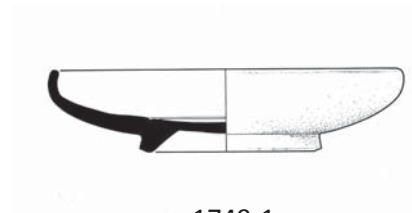
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301-2



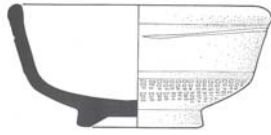
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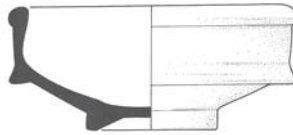
1749-1

Figure 2: Pottery (Roman bowls)

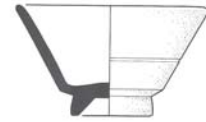
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393-2



535-1



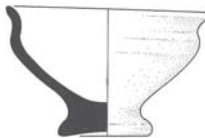
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128-2



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444-1

Figure 3: Pottery (Roman beakers, jugs and jars)

1:4



112-2

383-4

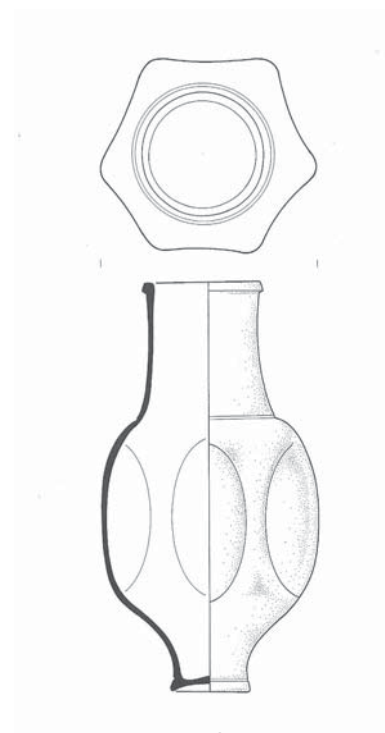
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112-1



393-7



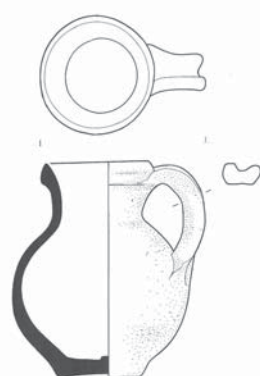
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1699-1



393-4



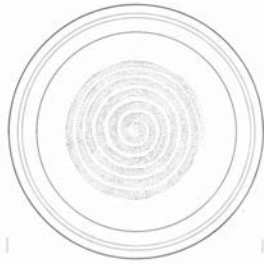
417-4



383-2

Figure 4: Pottery (bowls/dishes)

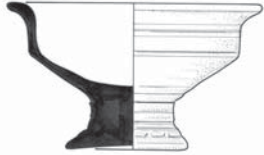
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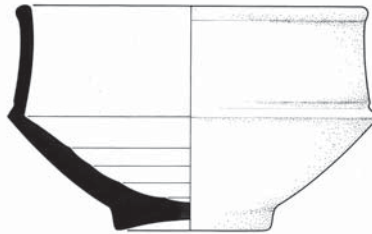
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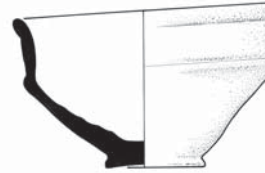
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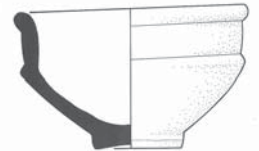
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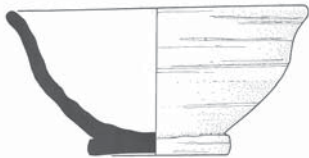
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1378-1



1838-5



1606-1



36-1



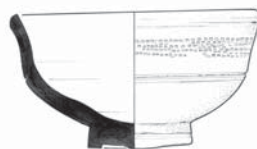
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1541-1



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1838-4



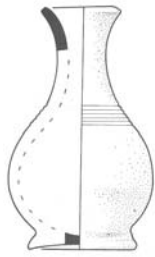
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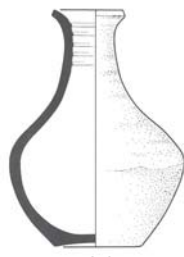
469-2

Figure 5: Pottery (bottles/jugs/jars)

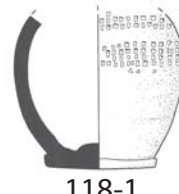
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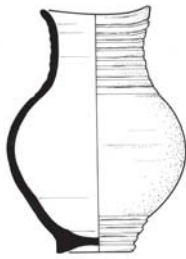
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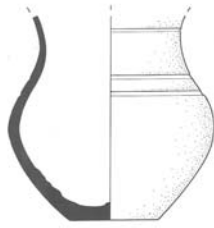
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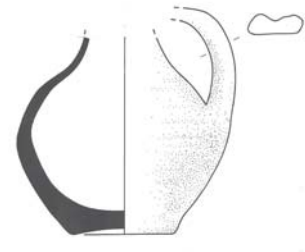
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1839-1



264-1



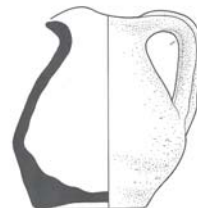
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57-1



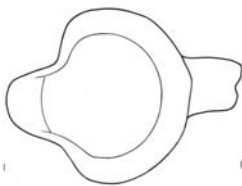
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1662-1



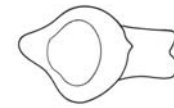
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1524-1

Figure 6: Pottery (jugs, jars, beakers)

1:4

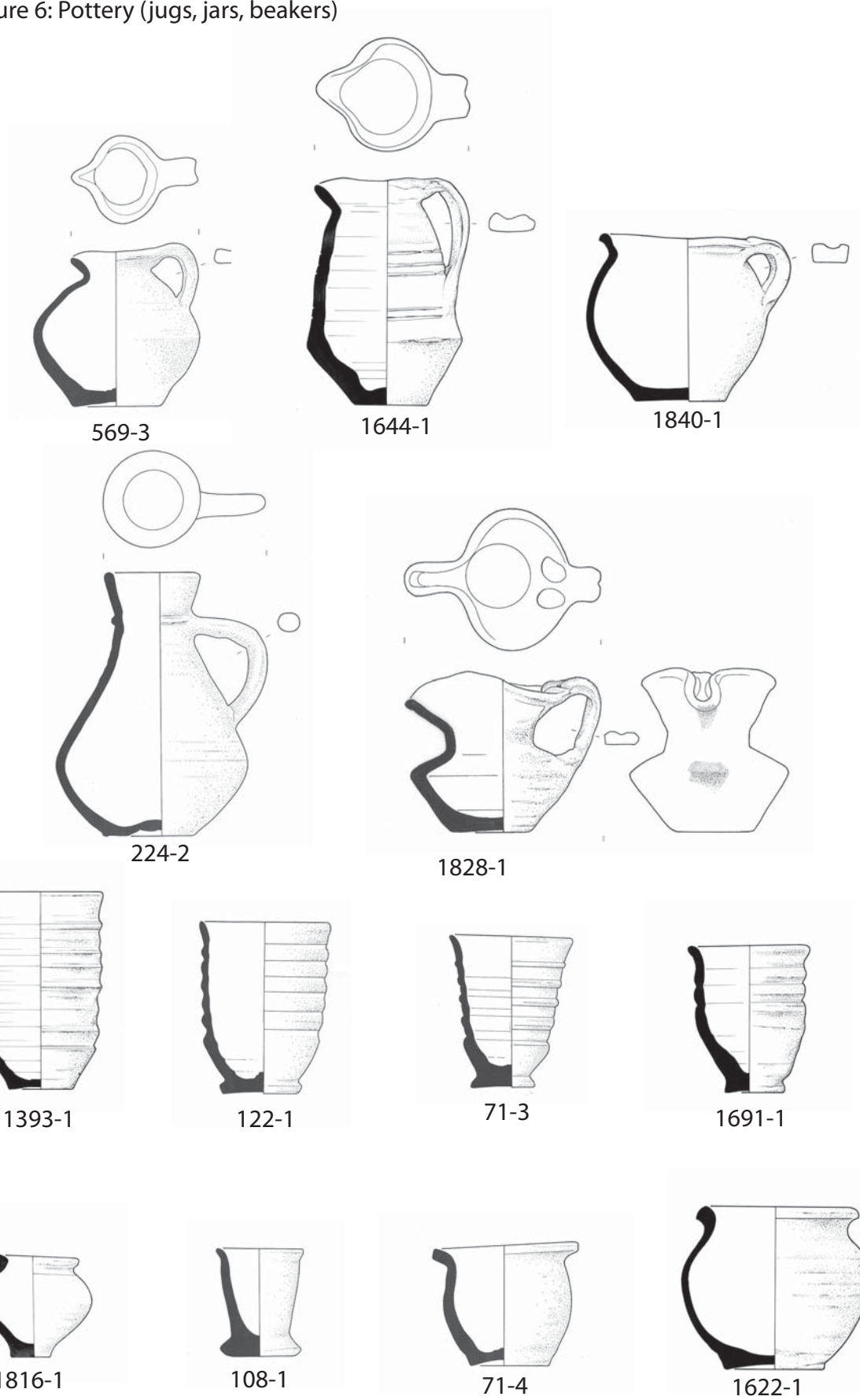
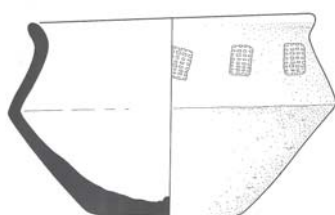
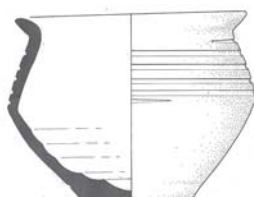


Figure 7: Pottery (Biconical pots)

1:4



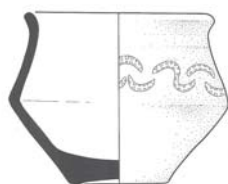
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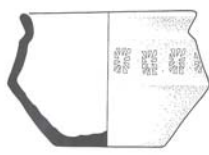
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1793-1



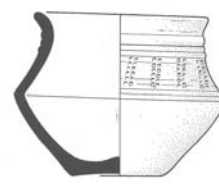
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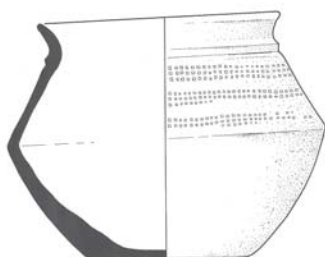
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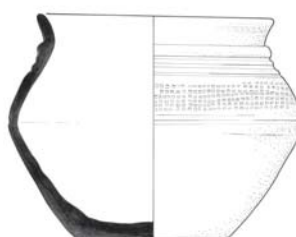
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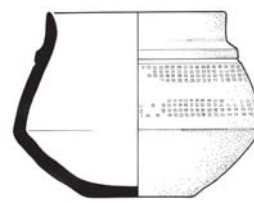
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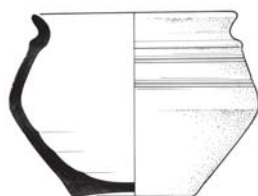
304-1



1784-1



1785-1



1756-1



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1626-1



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568-2

Figure 8: Pottery (Biconical pots)

1: 4



1607-1



341-6



1829-1



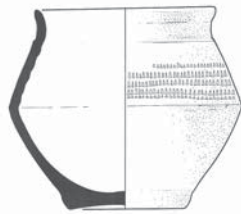
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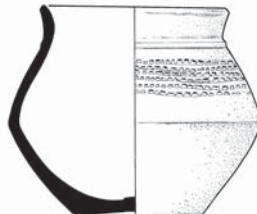
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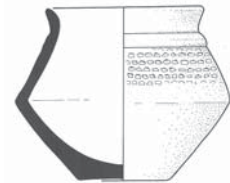
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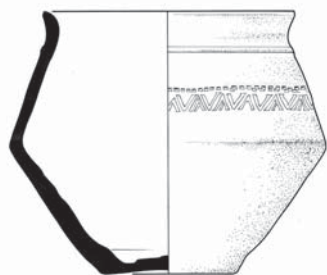
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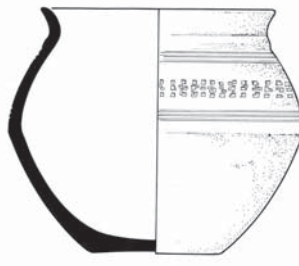
45-4



1395-1



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1790-1



433-3



1650-1



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1666-1



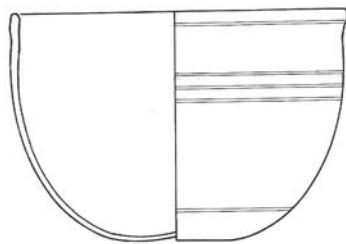
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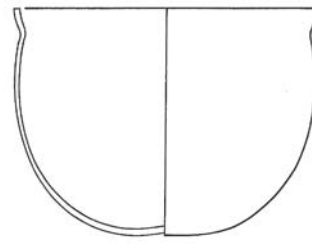
433-5

Figure 9: Glass (Roman)

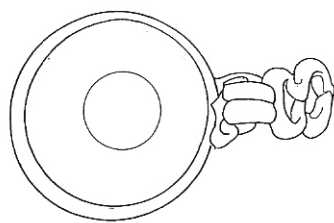
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393-5

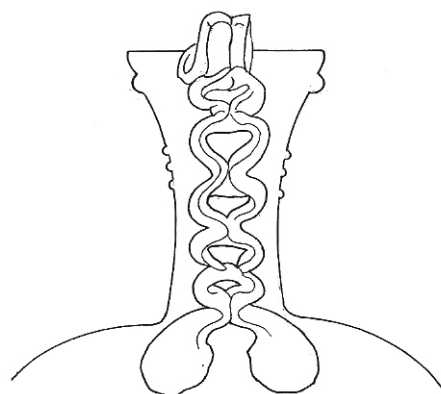
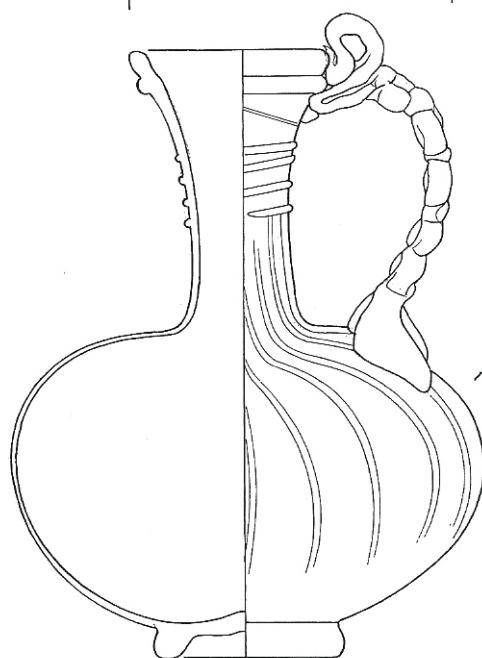


245-8



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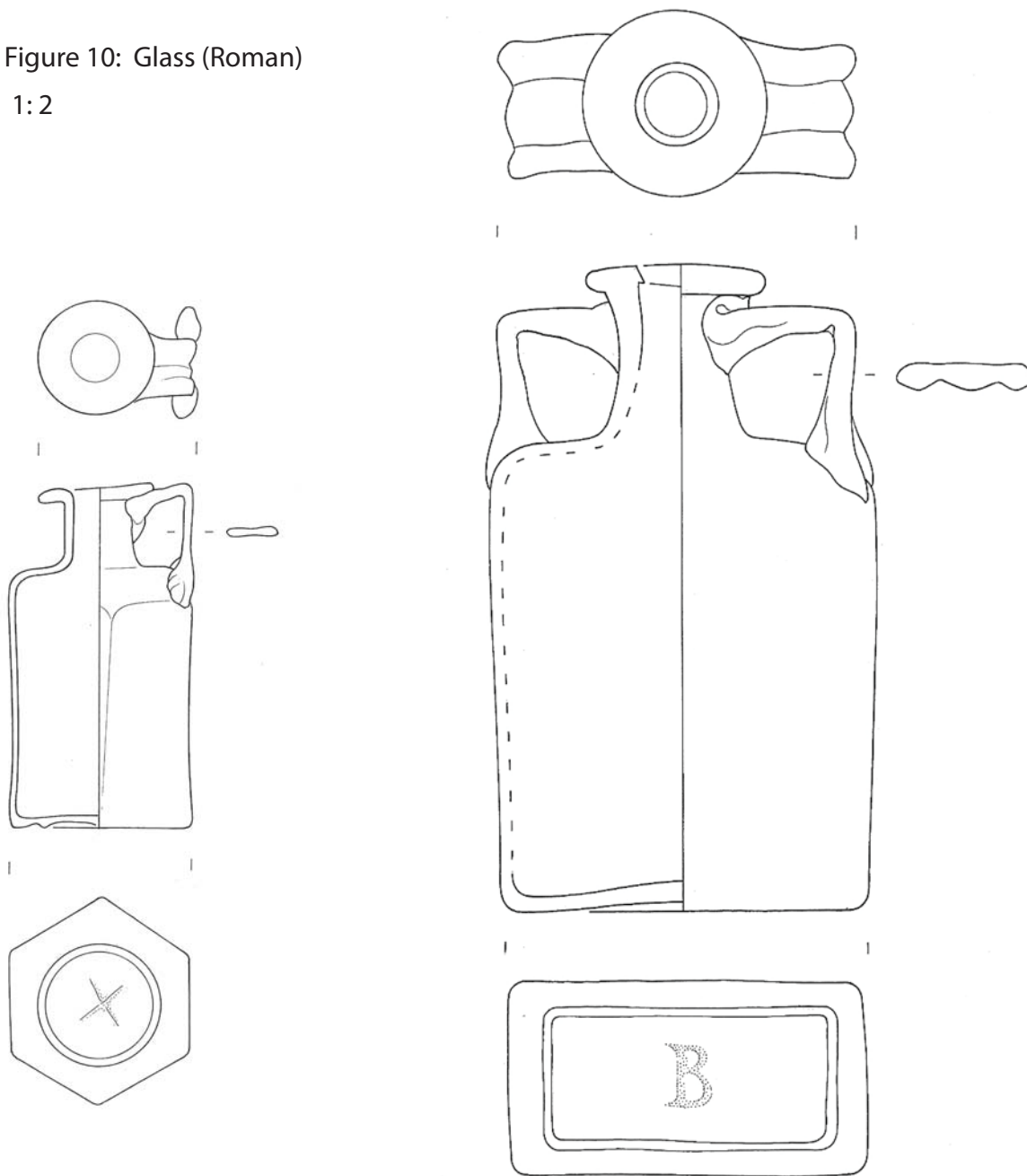
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417-2

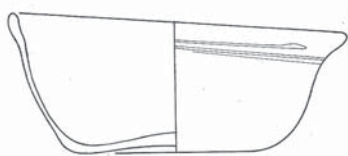
Figure 10: Glass (Roman)

1:2



128-15

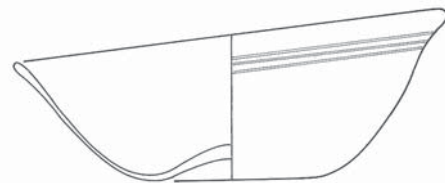
383-3



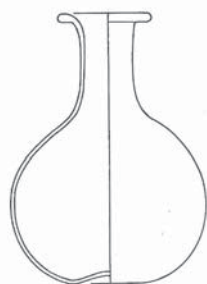
417-1



1732-1



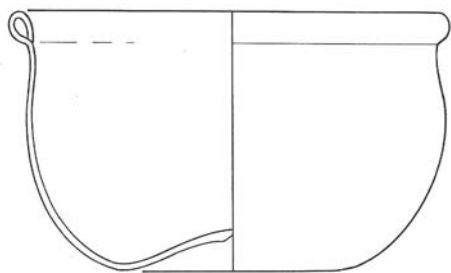
451-1



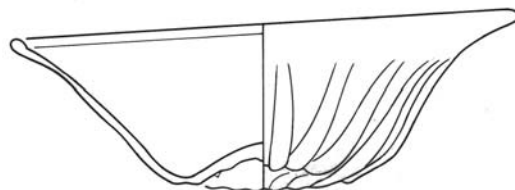
224-1

Figure 11: Glass

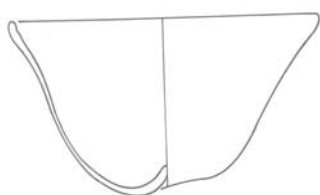
1:2



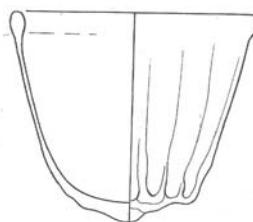
82-2



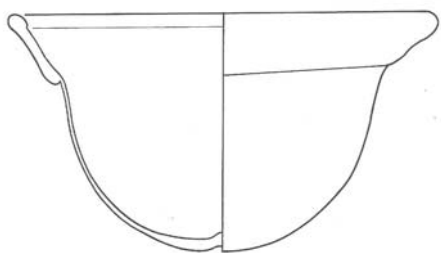
1838-7



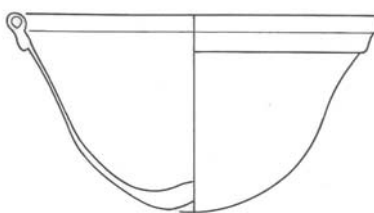
1392-1



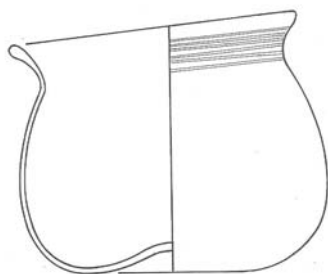
27-22



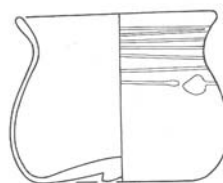
450-1



1623-1



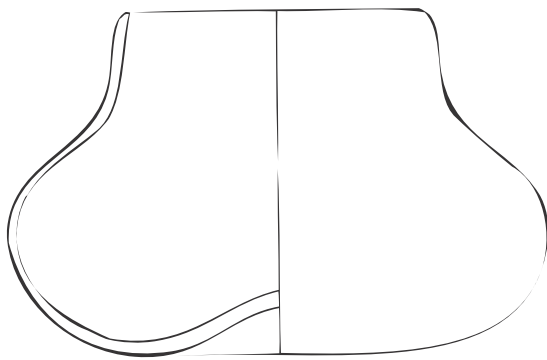
446-2



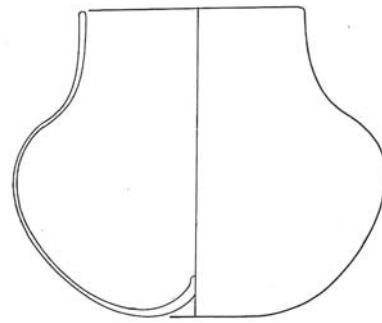
139-8

Figure 12: Glass

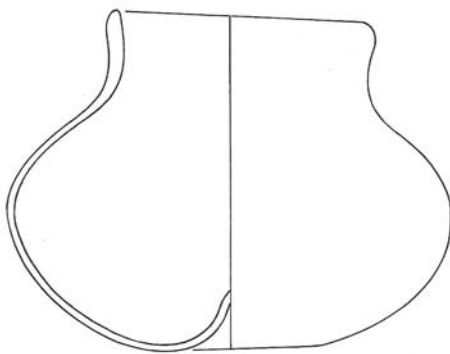
1:2



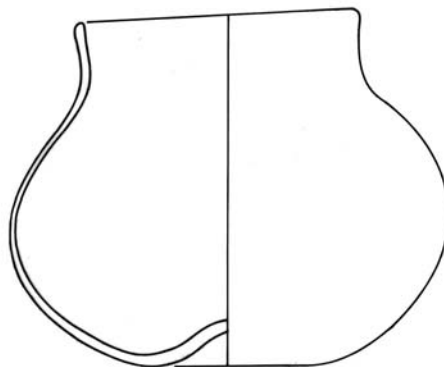
36-2



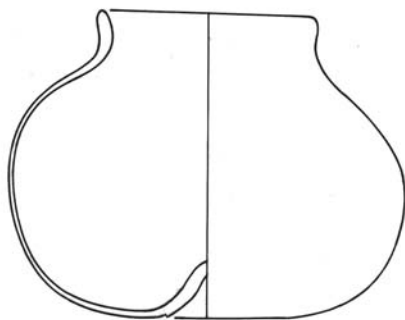
341-8



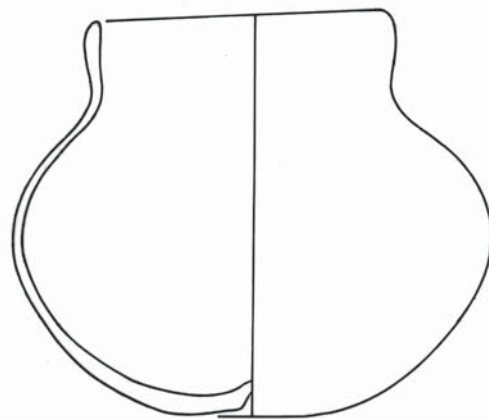
21-5



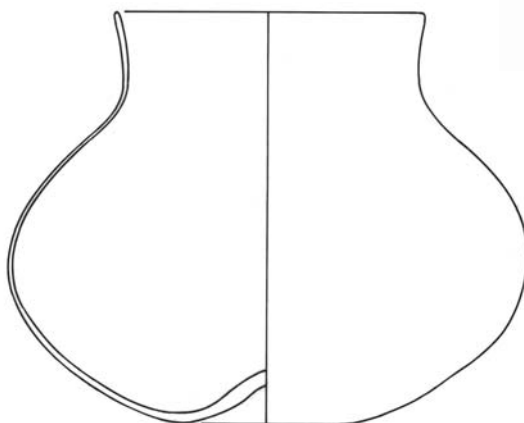
1390-1



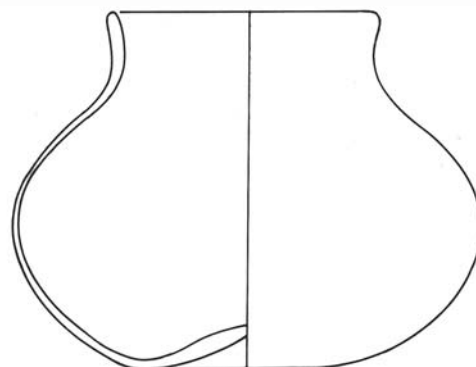
1422-1



1564-2

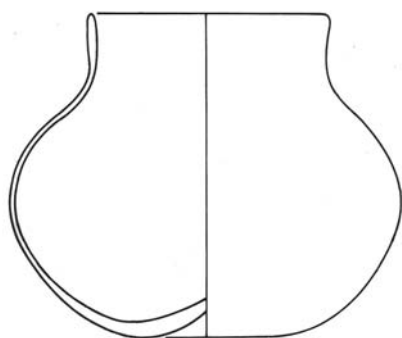


1574-1

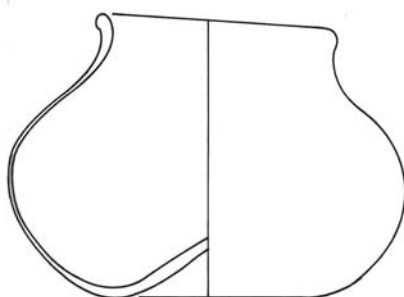


1522-1

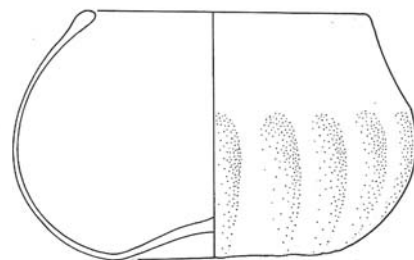
Figure 13: Glass
1: 2



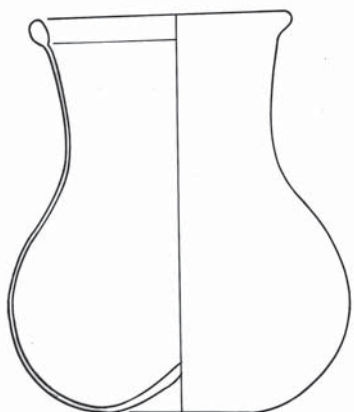
1750-1



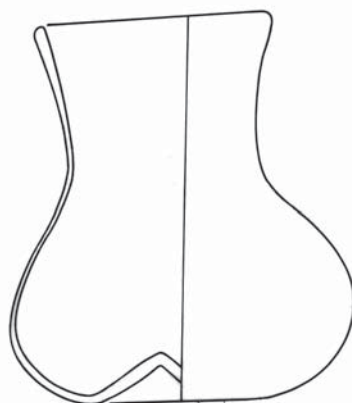
1852-1



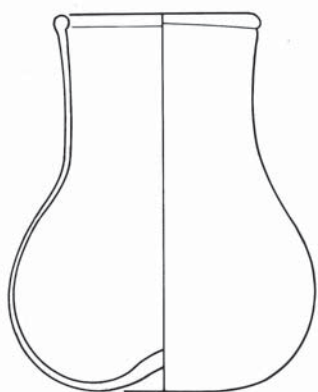
72-7



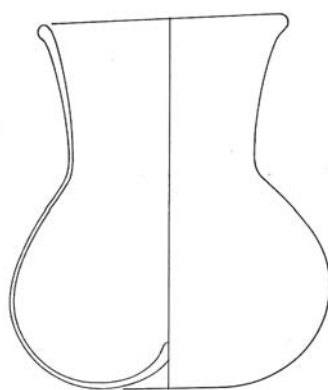
1564-1



1619-1



1471-1



88-1

Figure 14: Glass
1:2

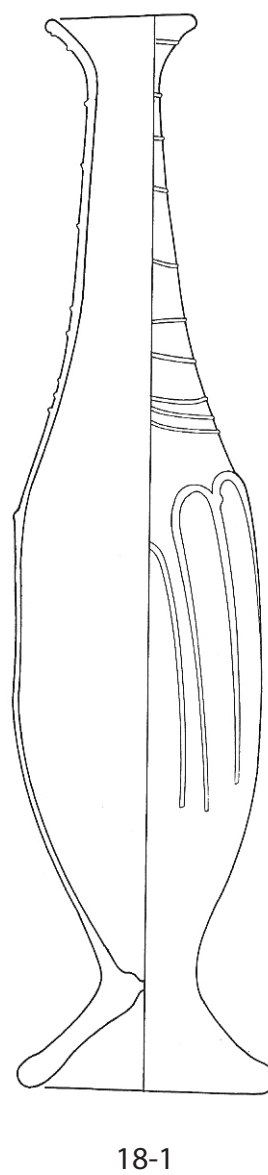
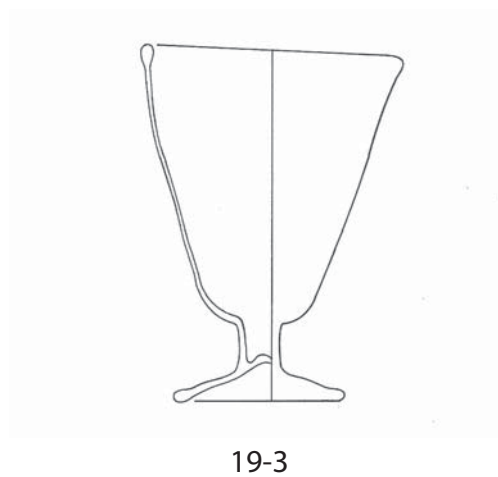
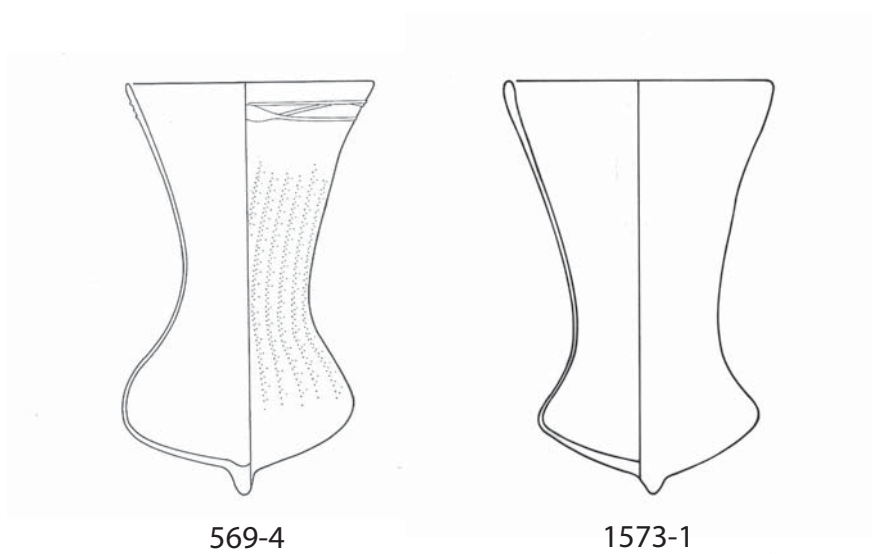


Figure 15: Glass
1:2

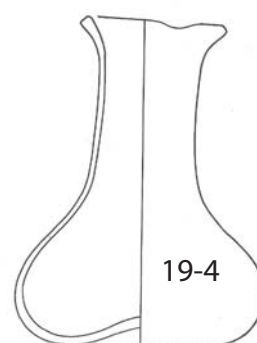
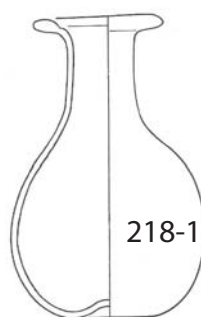
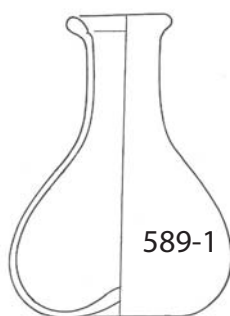
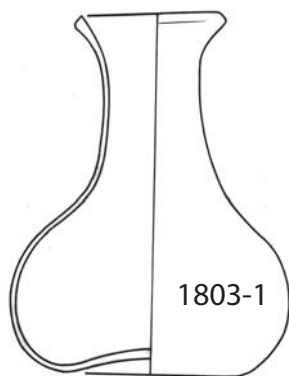
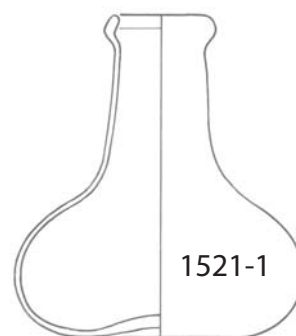
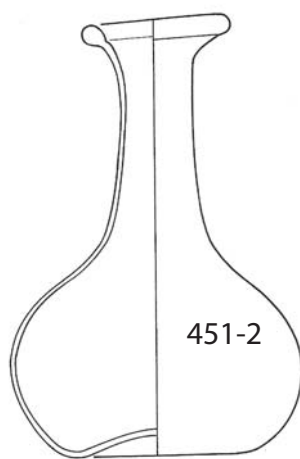
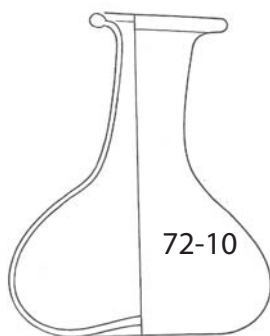
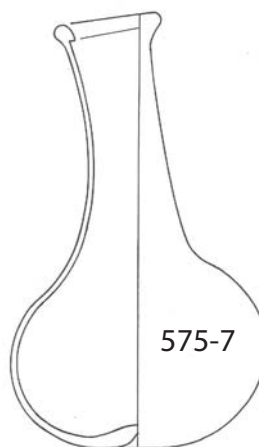
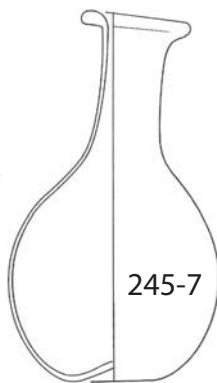
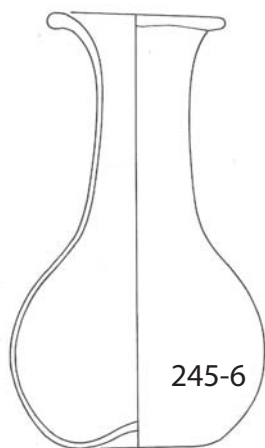


Figure 16: Glass
1:2

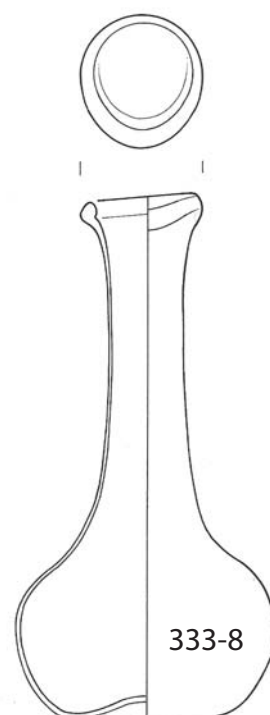
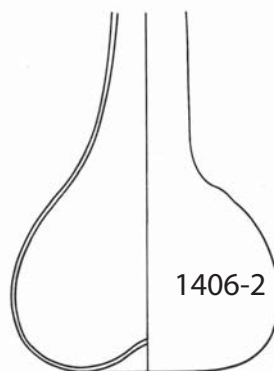
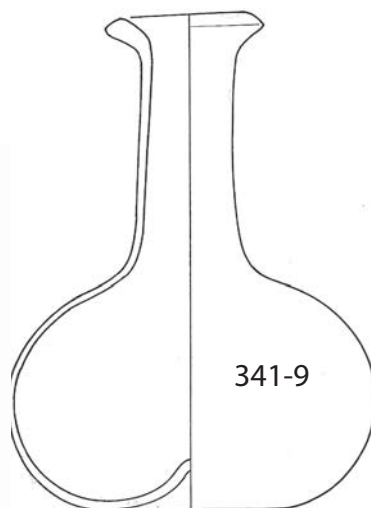
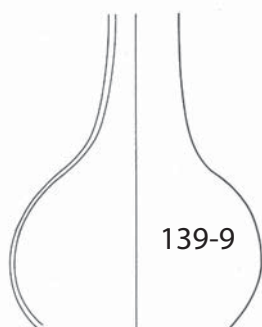
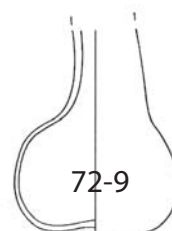
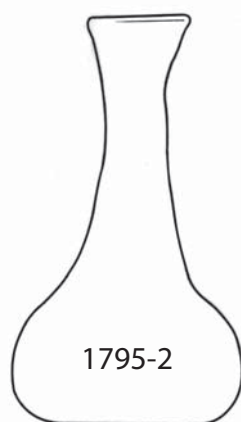
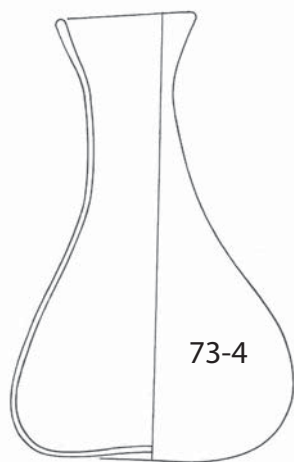
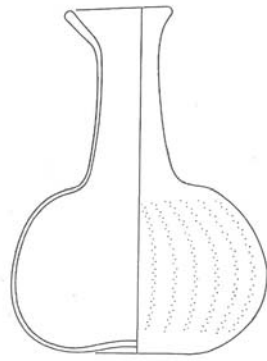
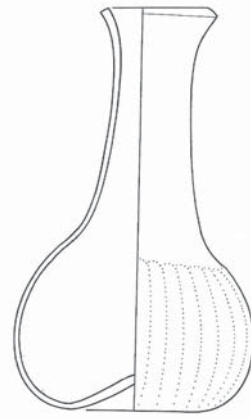


Figure 17: Glass
1:2

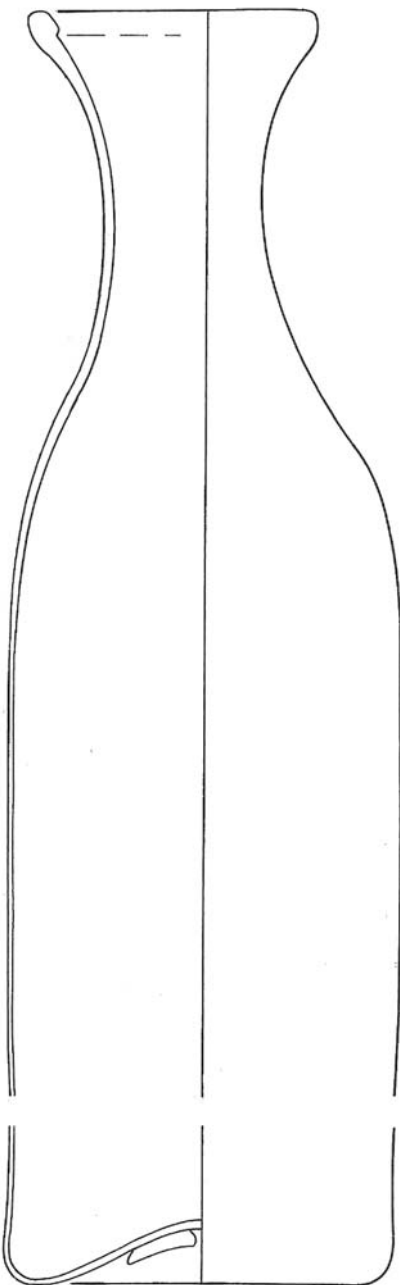


571-1

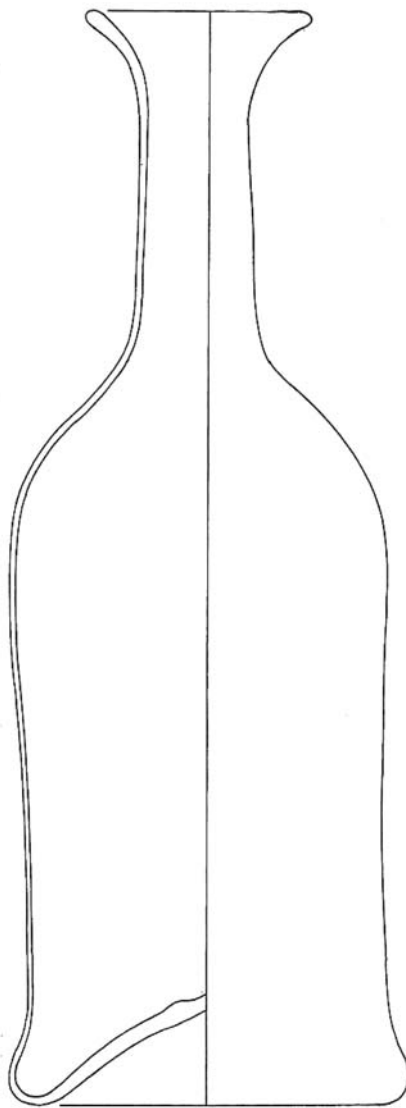
571-1



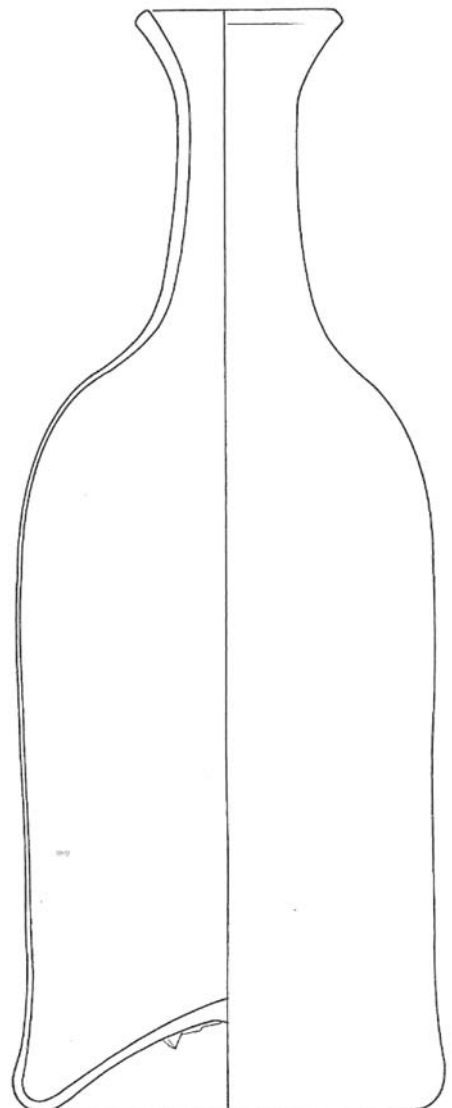
27-23



579-1



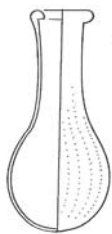
72-8



1566-1

Figure 18: Glass

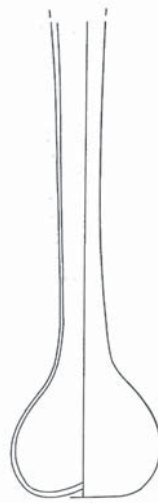
1:2



394-1



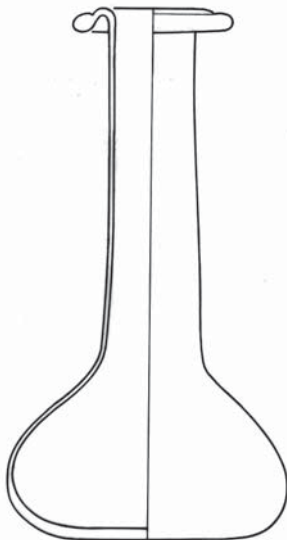
9999-13



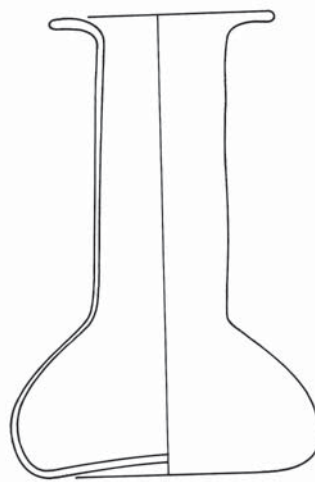
245-5



245-4



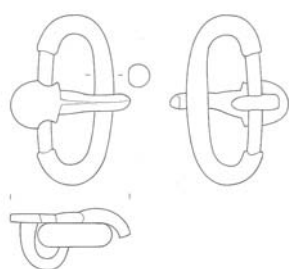
1853-1



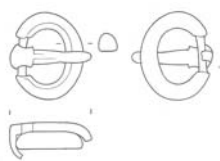
1427-1

Figure 19: Belts (buckles)

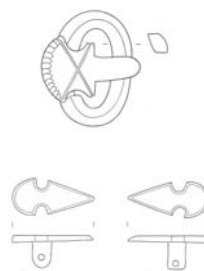
1:2



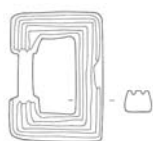
23-1



418-4



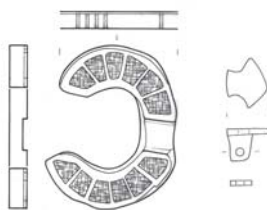
522-1,2,3



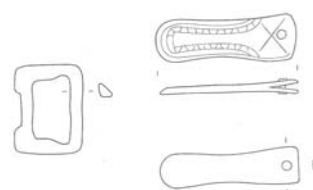
492-1



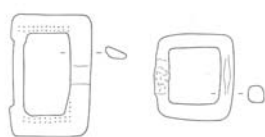
139-4



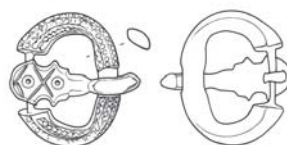
1487-5,3



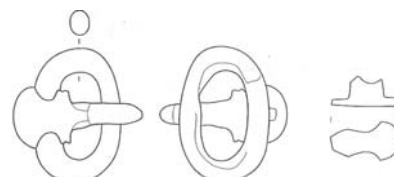
26-1,2,3



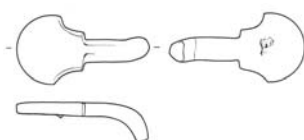
524-1,2



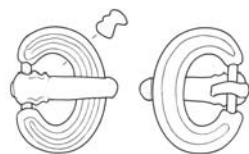
1428-1



1481-1,2



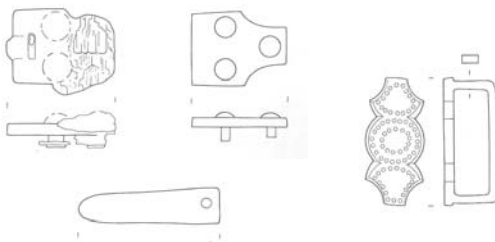
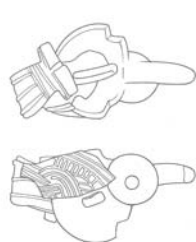
1761-1



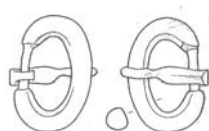
1810-1



452-1



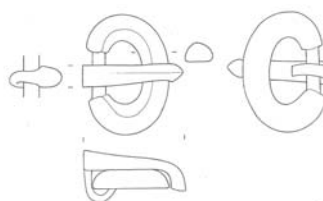
556-1 ,2,3,4,6



1643-1



142-6



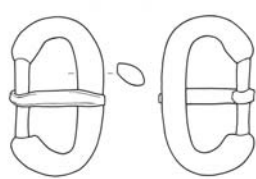
255-1



9999-1

Figure 20: Belts

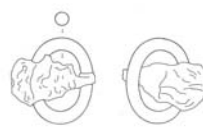
1 : 2



1149-1



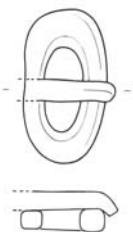
1766-1



48-1



150-1



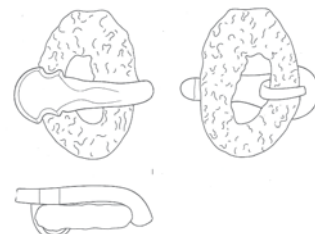
1533-1



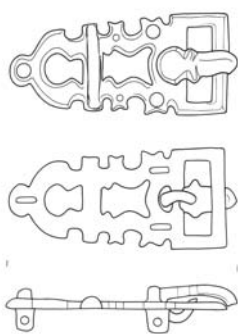
22-1,2



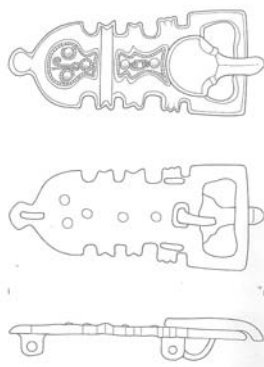
73-1



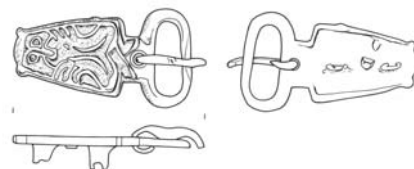
60-1



1503-1



128-1



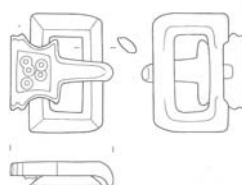
1648-1



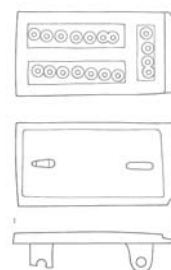
1584-1



489-1



1545-1



1413-1

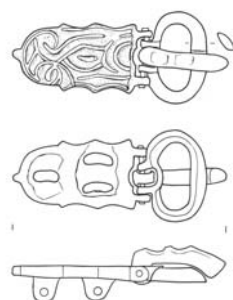
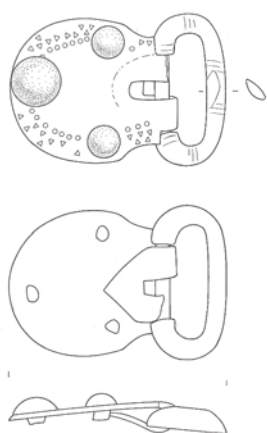
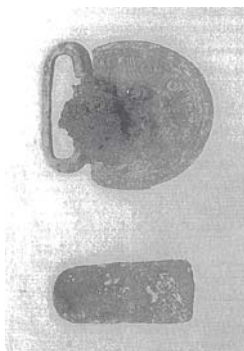
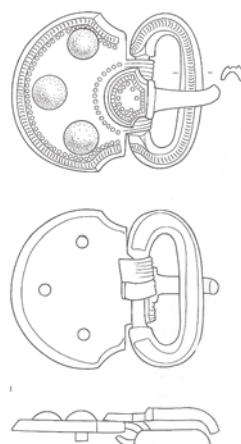
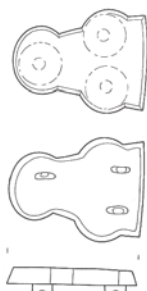


Figure 21: Belts (plate buckles)
1 : 2

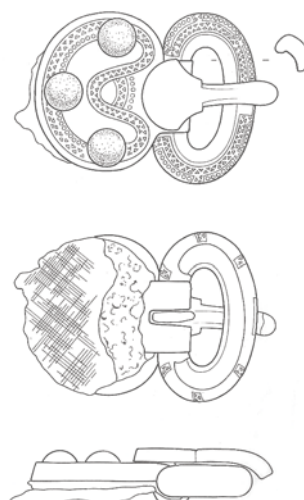
Missing
1382-2,3



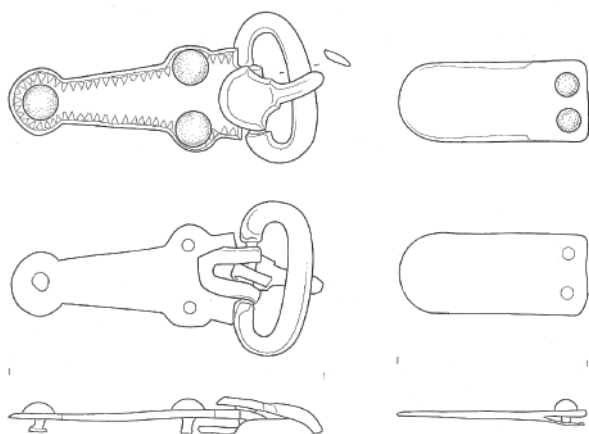
568-1, 3; 569-1



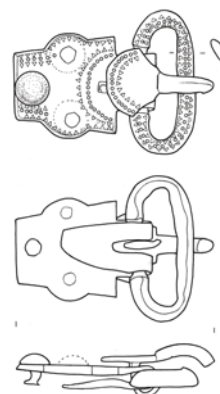
300-2



561-1



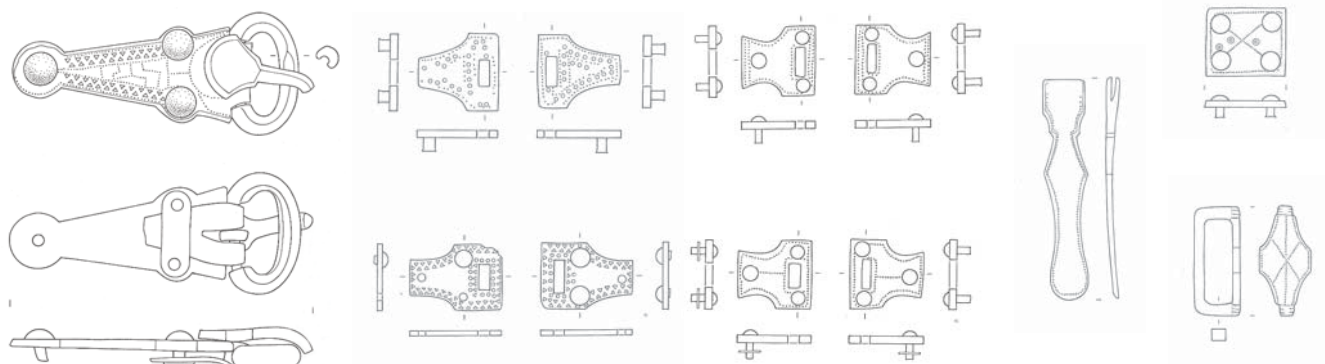
1592-1,2



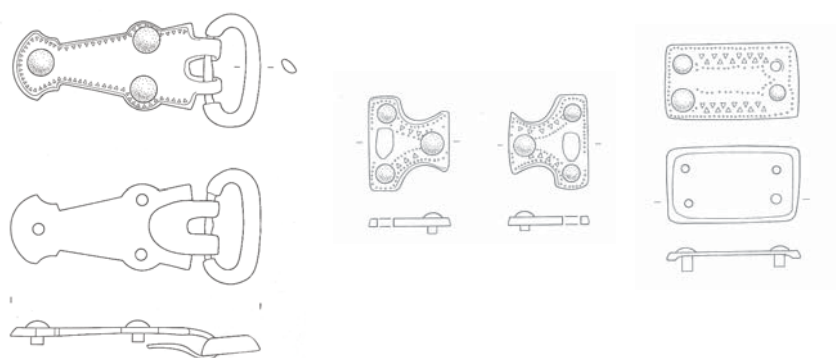
1783-1

Figure 22: Belts

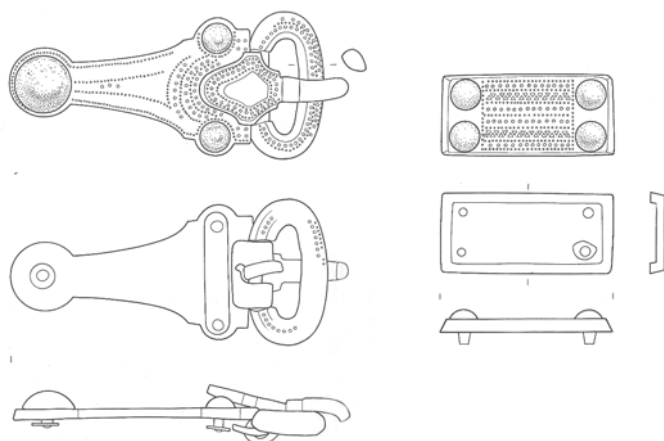
1 : 2



72-1,2,3,4,5,6,11,12,13,14,15,16,17

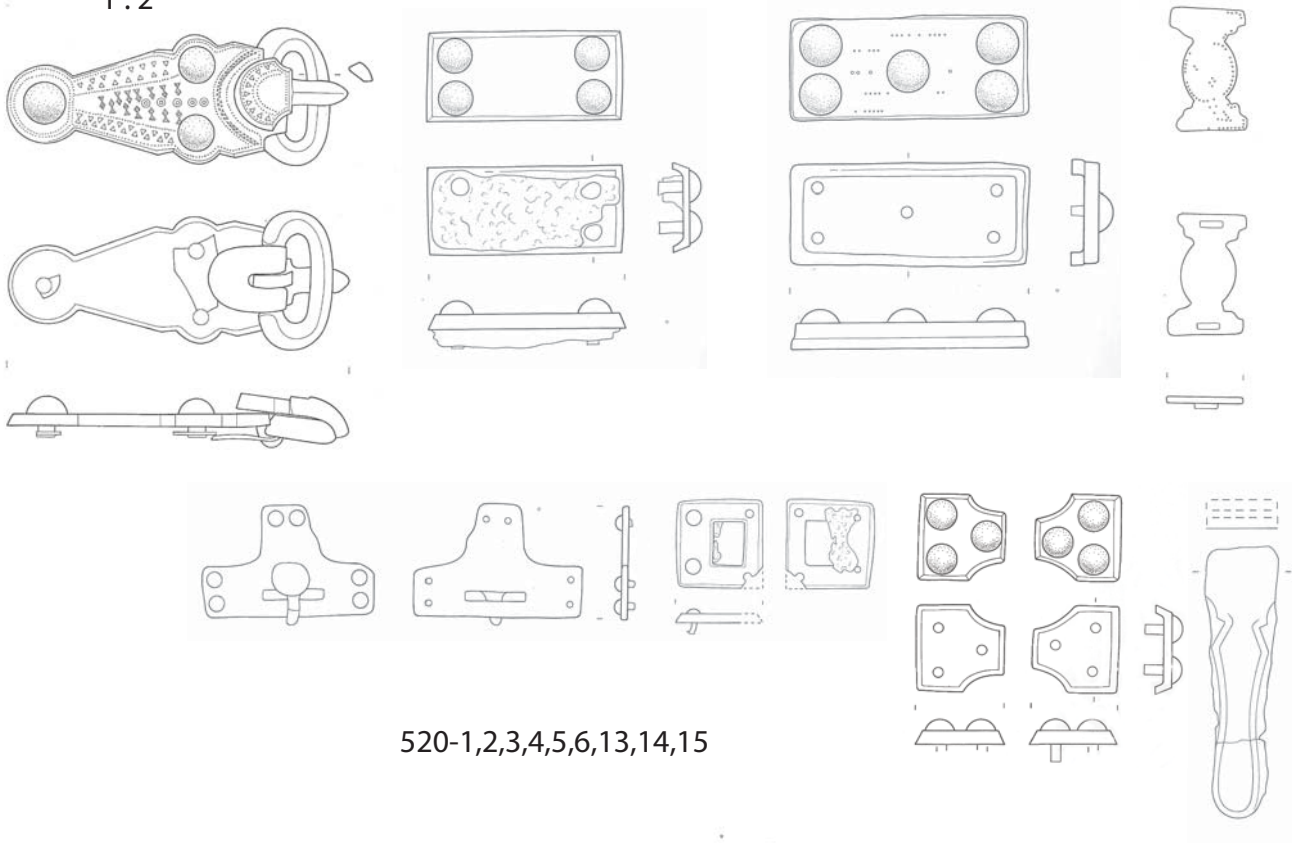


45-1,2,3,5

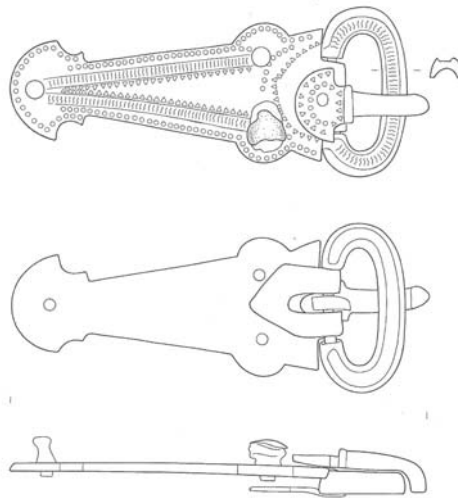


561-2,3

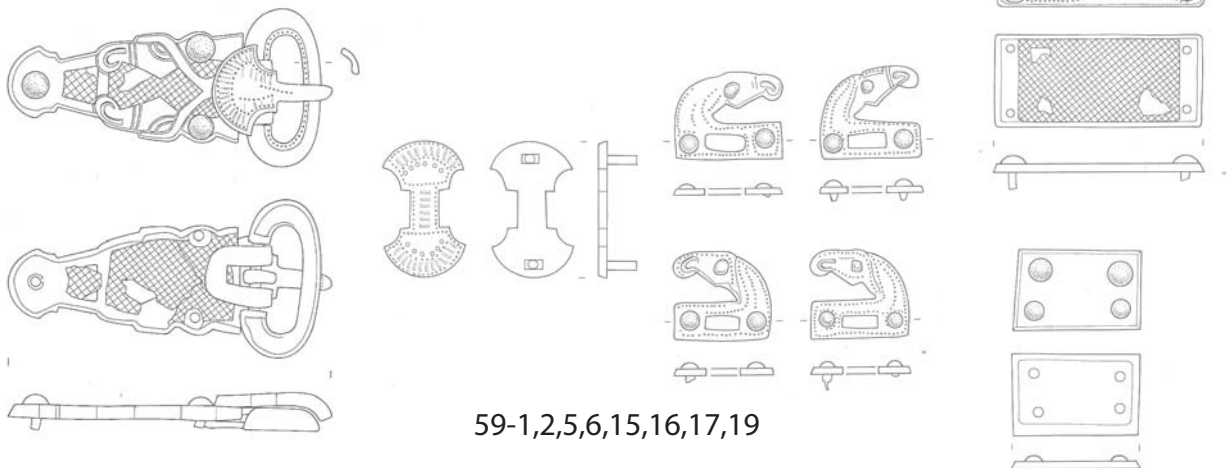
Figure 23: Belts
1:2



520-1,2,3,4,5,6,13,14,15



87-1



59-1,2,5,6,15,16,17,19

Figure 24: Belts

1:2

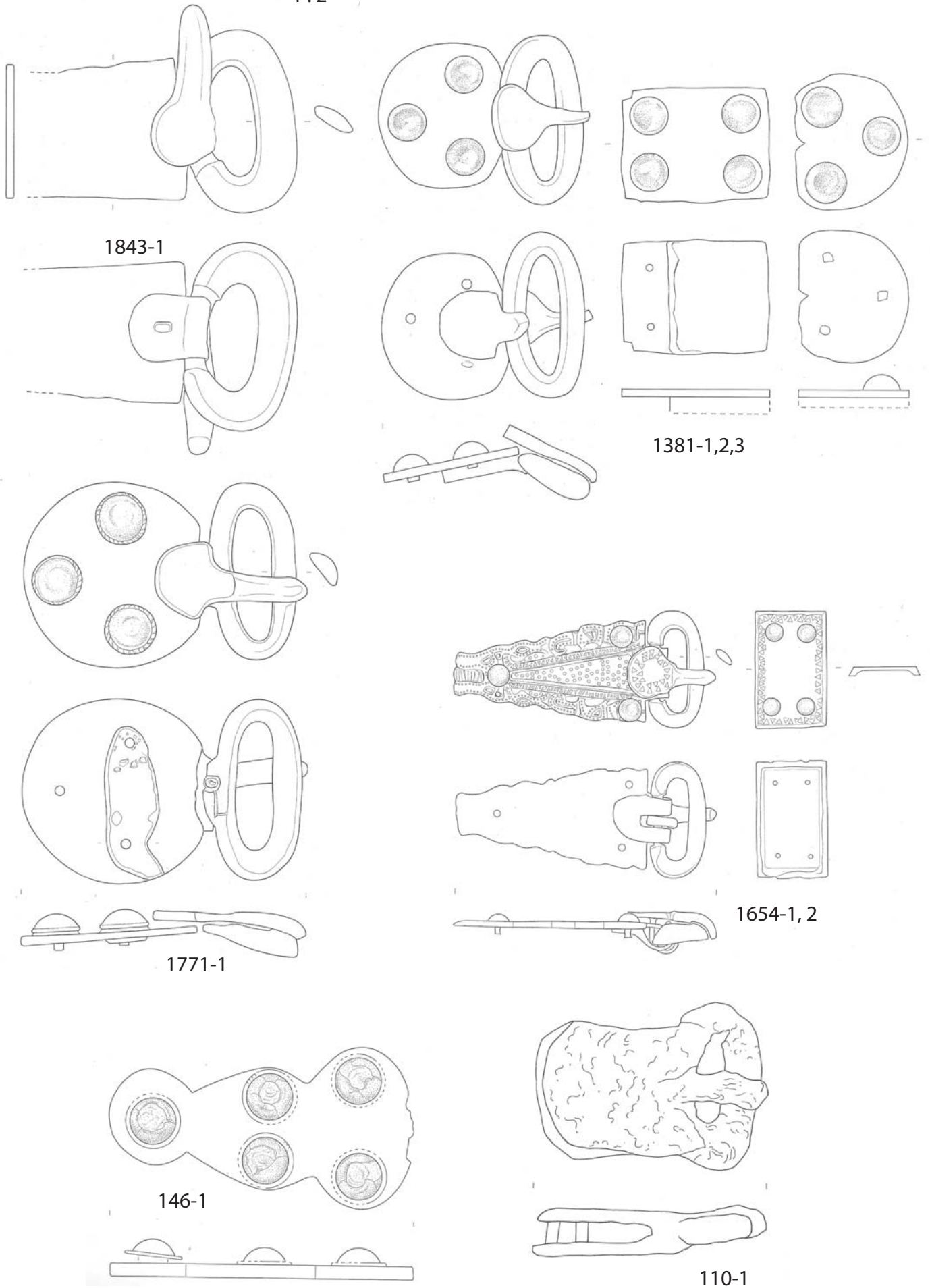
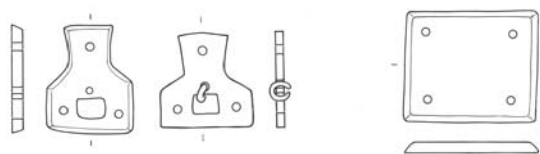
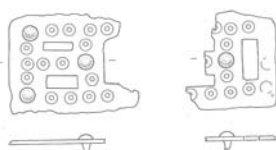
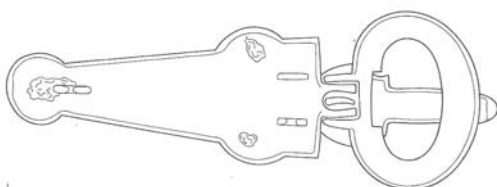
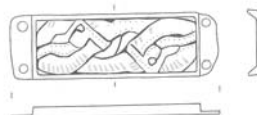
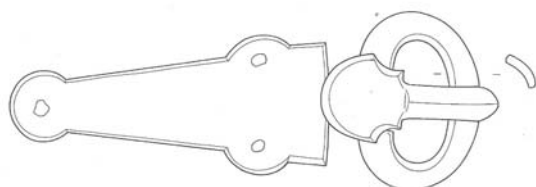
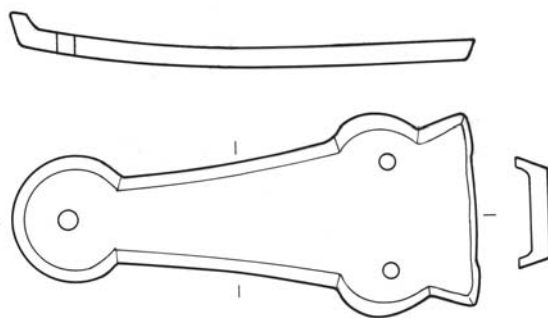


Figure 25: Belts

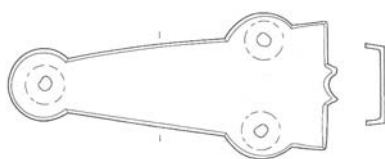
1:2



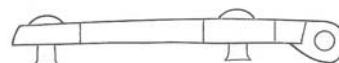
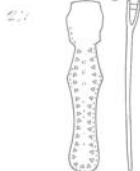
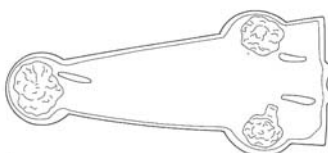
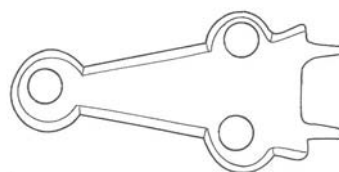
1596-1,2; 1553-1,2



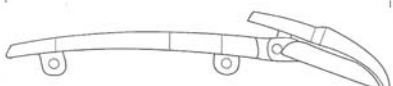
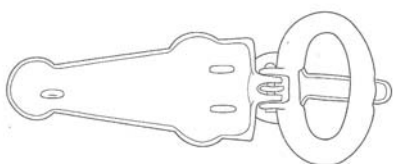
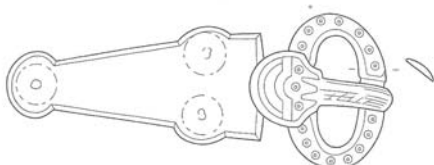
555-1,2,3,4,10,11,16



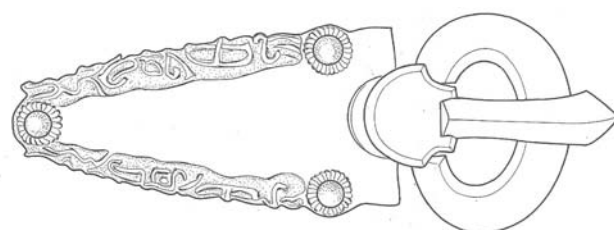
555



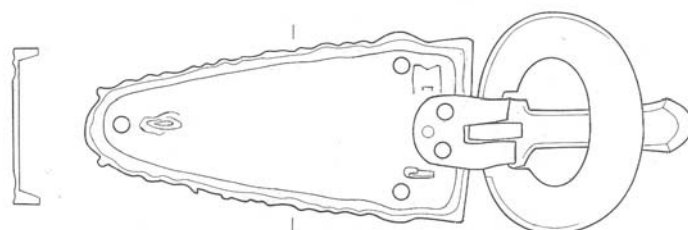
572-1,2



558-6



1:4



8888-4

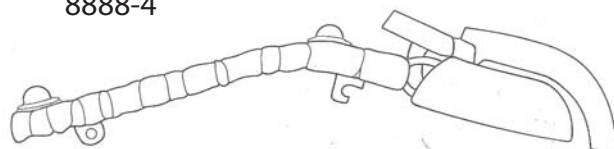
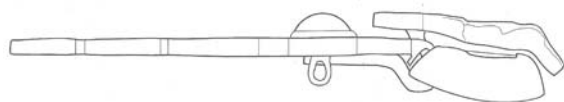
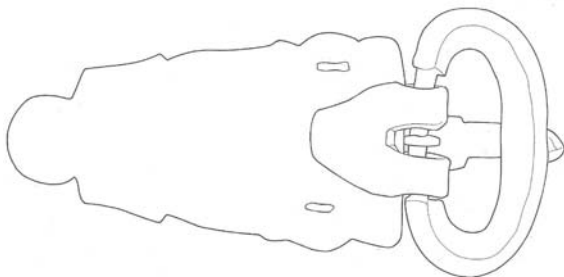
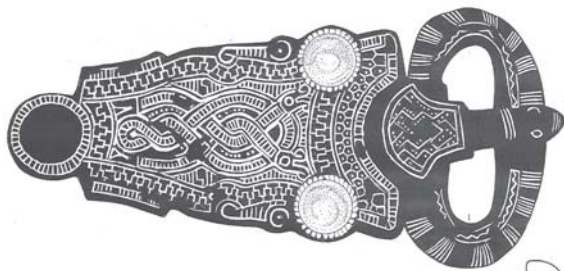
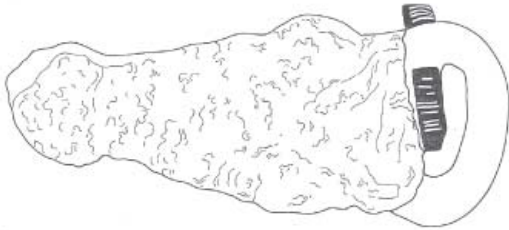
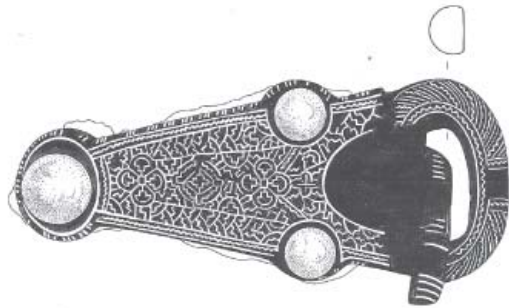
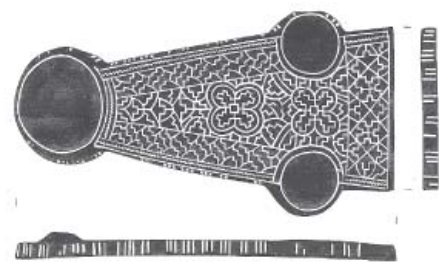
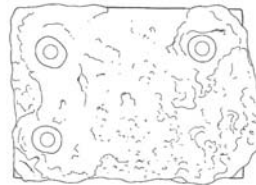
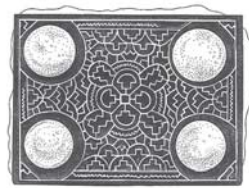
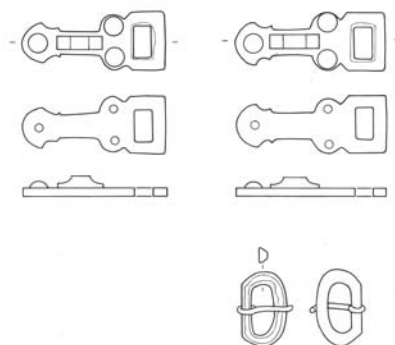


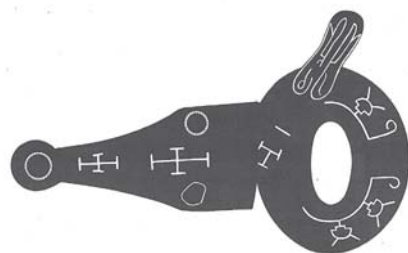
Figure 26: Belts
1:2



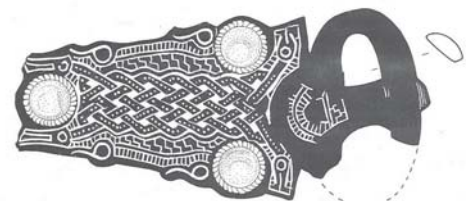
1387-1



139-1,2,



16002; 1598-2; 1599-1,2,3



1403-1,3,4

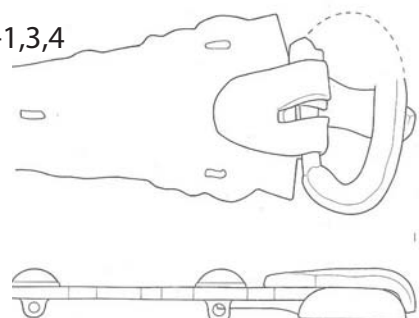
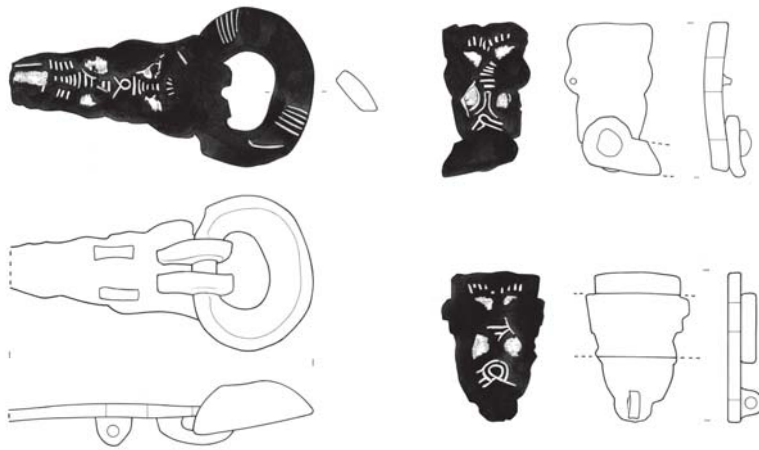
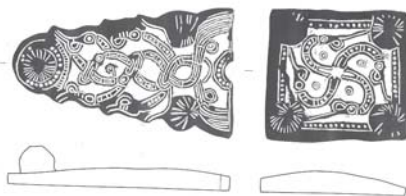


Figure 27: Belts

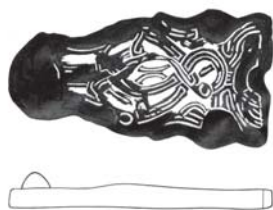
1: 2



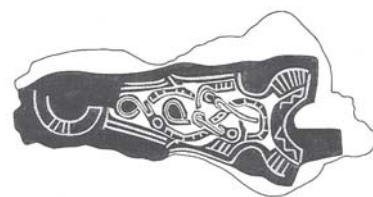
1817-1,2,3,4



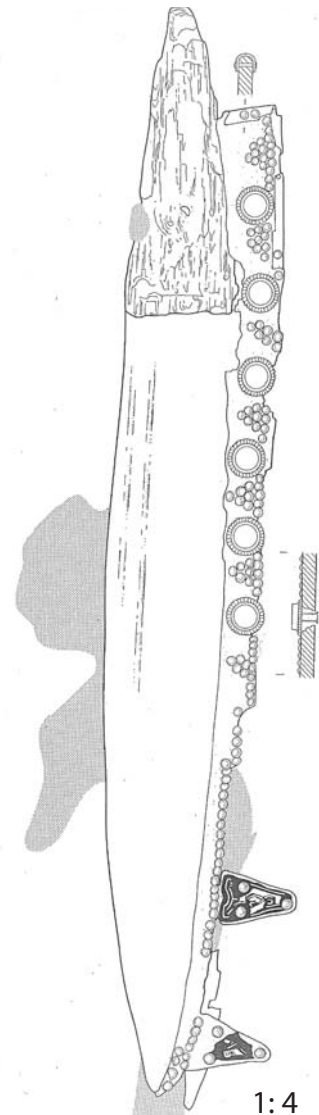
1634-1, 2



1815-1



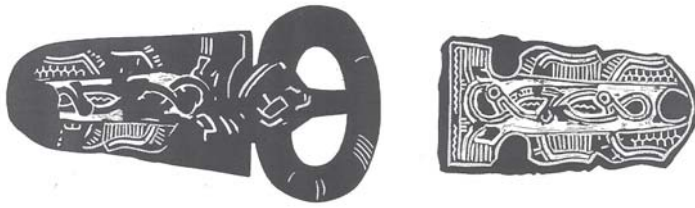
21-1,2,8,9



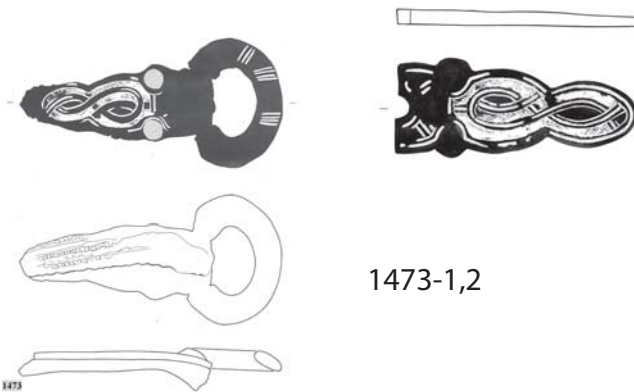
1: 4

Figure 28: Belts

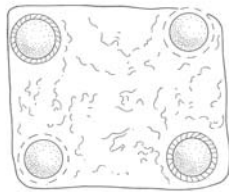
1 : 2



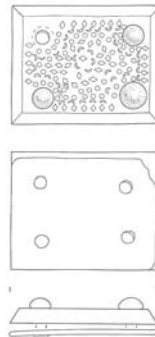
1670-1; 1671-1



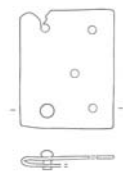
1473-1,2



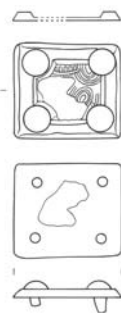
407-1



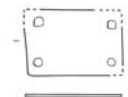
48-2



286-1



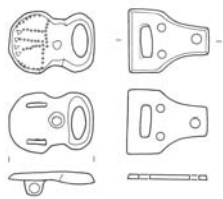
1528-2



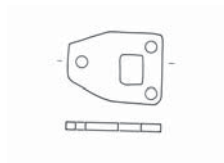
1175-3

Figure 29: Belts

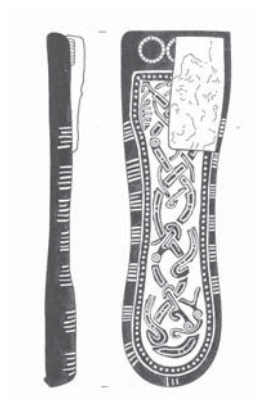
1 : 2



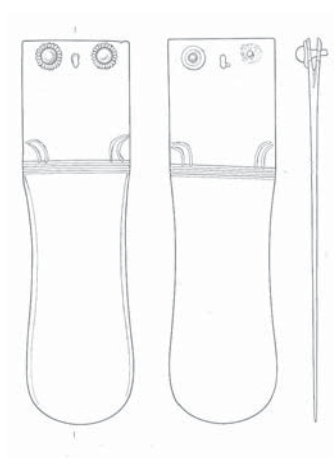
1767-2



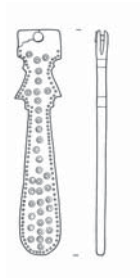
1603-4



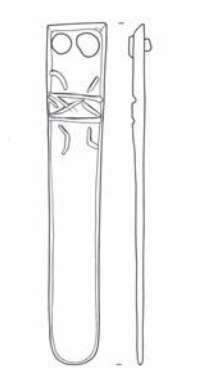
301-1



1646-1



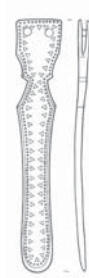
979-1



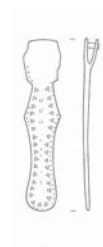
1576-1

missing

1542-1



1754-1

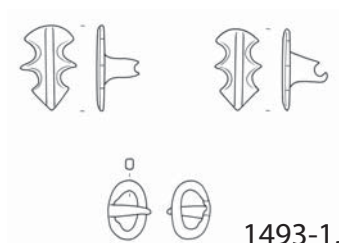


572-2

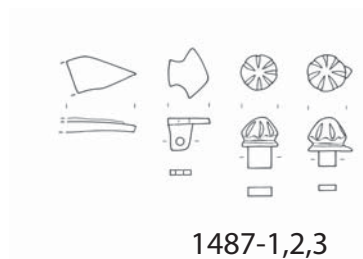
Figure 30: Belts
1 : 2



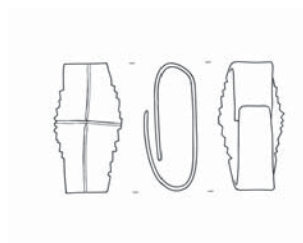
343-1



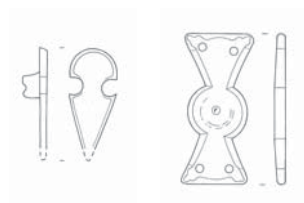
1493-1,2



1487-1,2,3



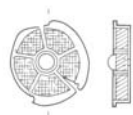
1595-1



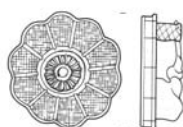
530-2,3

Figure 31: Brooches (garnet, disc)

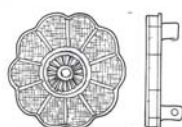
1:2



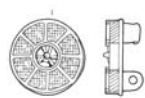
1796-1



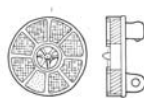
1641-1



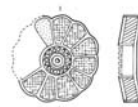
1642-1



1792-1



1782-1



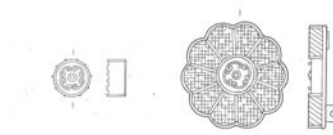
1172-1



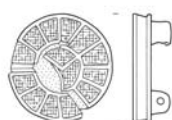
1484-1



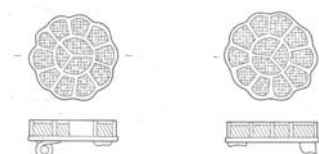
375-1,2



418-3,5



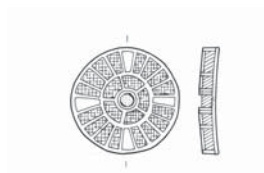
1539-1



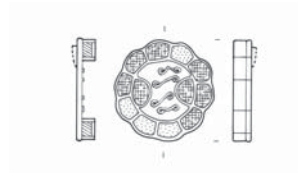
562-3,4

Figure 32: Brooches

1:2



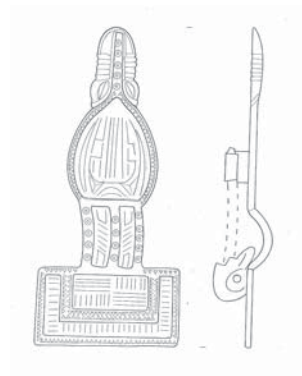
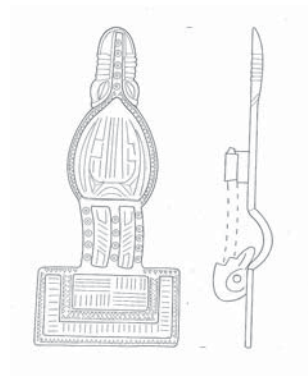
1681-1



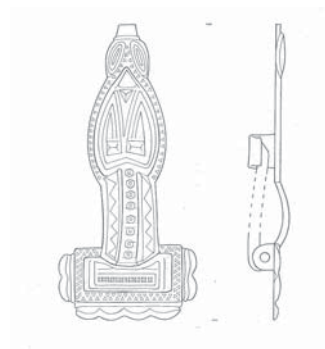
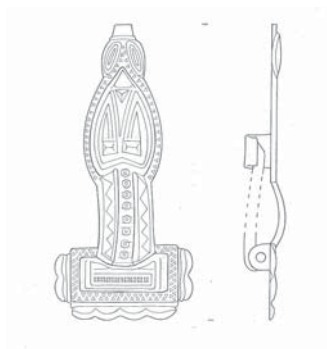
1489-1



60-5

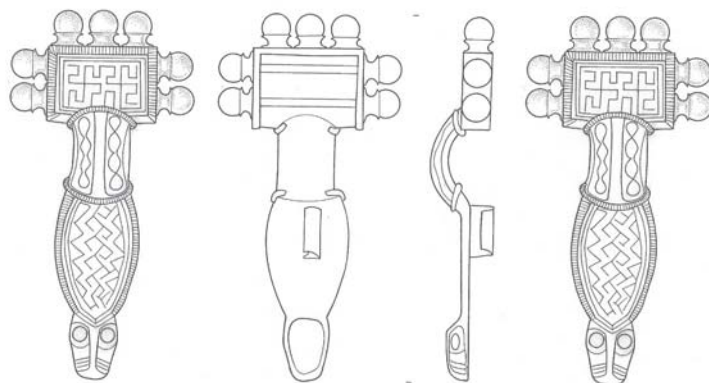


562-1,2



375-4,3

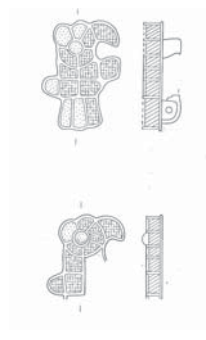
Figure 33: Brooches
2:1



418-16,17



2965-1



448-1,2



missing
8888-6



missing
1850-1

Figure 34: Brooches

2:1

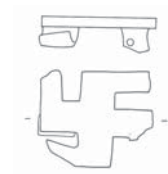
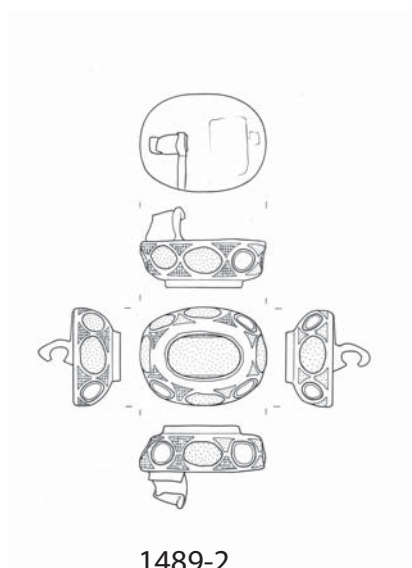
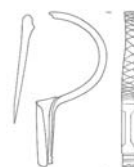
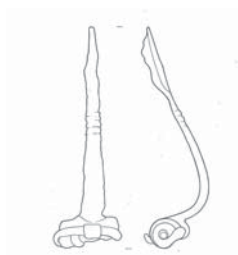
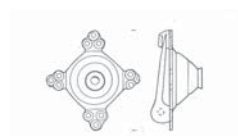
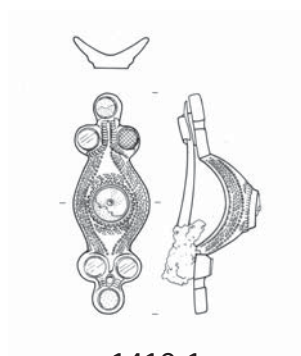
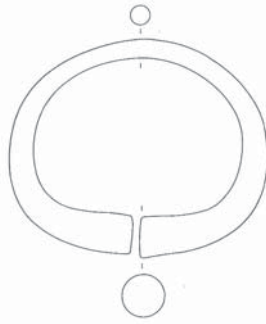


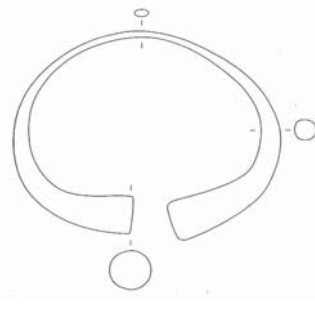
Figure 35: Bracelets
1 : 2



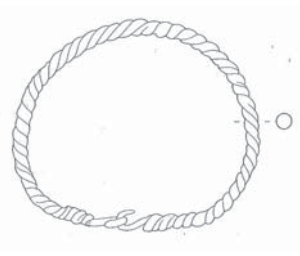
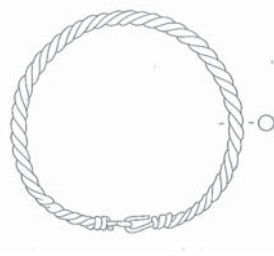
1478-3



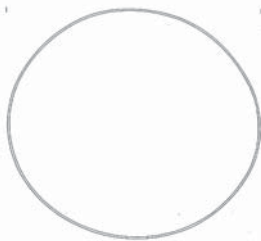
454-1



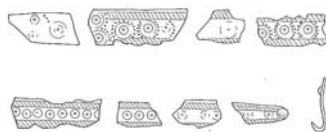
496-1



466-3,4,5



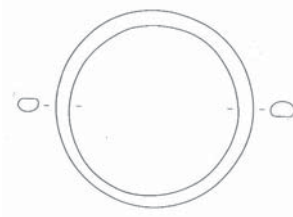
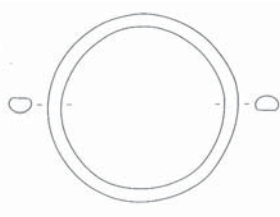
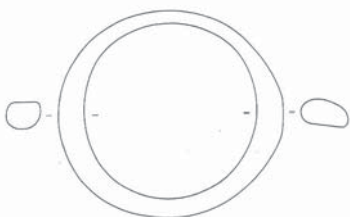
466-5



480-2

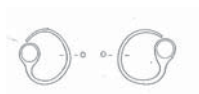


35-1



91-1,2,3

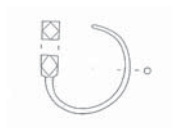
Figure 36: Earrings
1 : 2



581-1,2



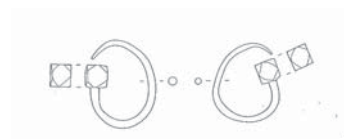
454-4,5



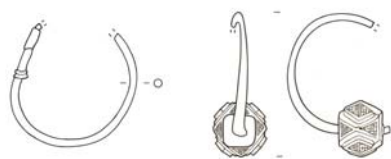
252-1



269-2



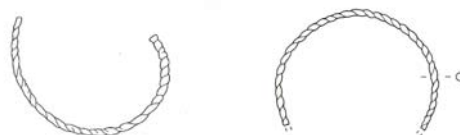
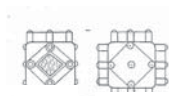
576-1,2



1640-1, 1638-2



1792-2



1485-1,2

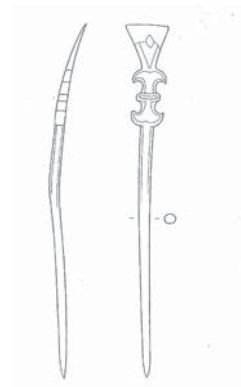
Figure 37: Decoartive pins
1 : 2



454-6



110-2



311-1



60-2



252-2



65-1



65-2



92-1



142-1



142-2



240-2



240-10



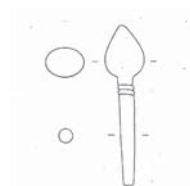
240-9



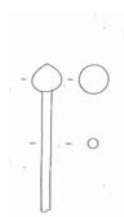
240-4



245-2



93-1



240-3



240-9



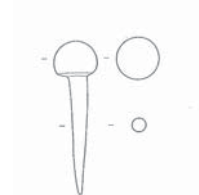
245-1



466-6

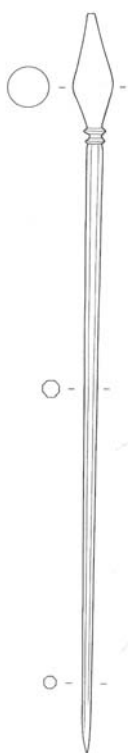


349-1



131-1

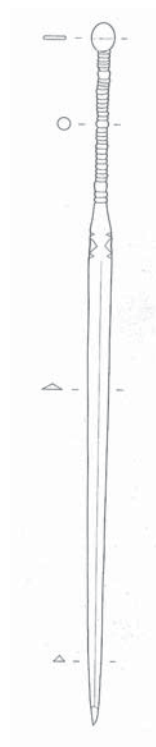
Figure 38: Decorative pins
1:2



1330-1



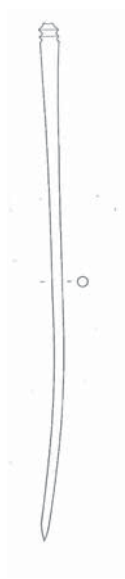
1383-1



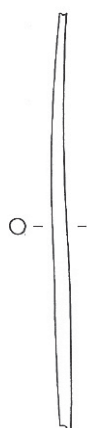
1735-1



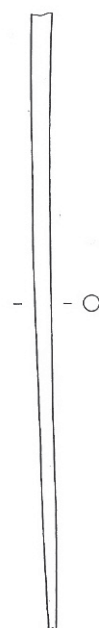
493-1



515-1

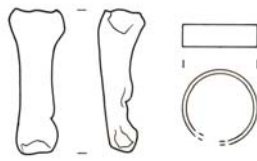


2-2



65-3

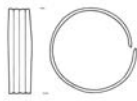
Figure 39: Fingerrings
1 : 2



1741-1



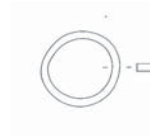
240-1



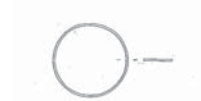
1593-1



1638-1



454-2



496-2



245-3



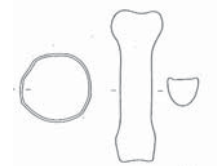
373-1



139-5



347-1



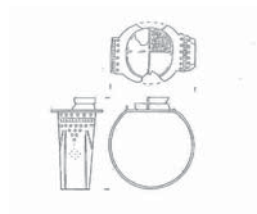
78-1



584-1,2



373-2



454-3



8888-2



469-5



86-1



397-1



343-2

Figure 40: Pendants
1 : 2



1624-1



1636-1,2



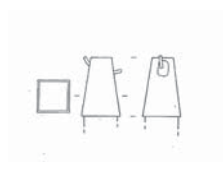
303-1



418-2



240-10



418-9

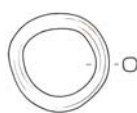
Girdle hangers (rings iron)
1 : 2



1474-1



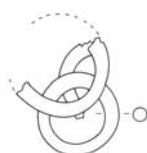
1475-1



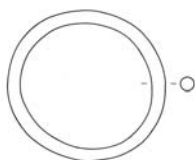
1627-1



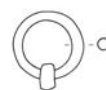
1849-4



1628-1,12



1628-3



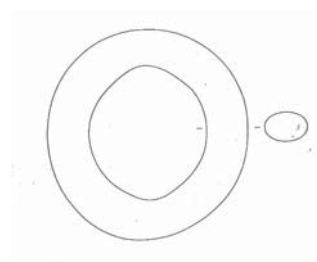
1628-5



1832-1

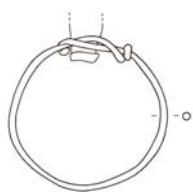


1798-1

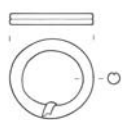


575-1

Figure 41: Girdle hangers (rings bronze)
1 : 2



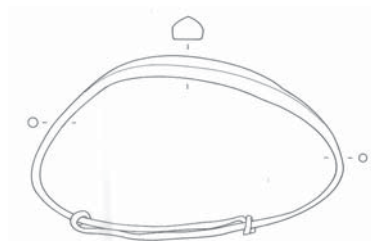
1628-2



1628-4



1502-2



1767-12



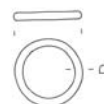
1106-1



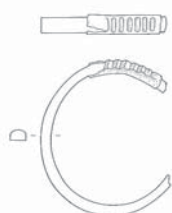
1740-1



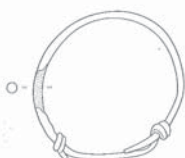
1849-2



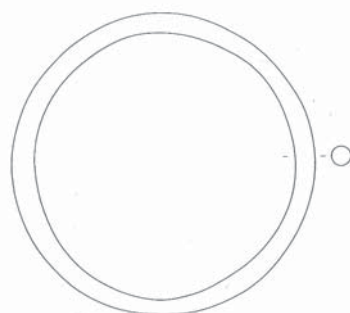
1849-1



35-2



35-3



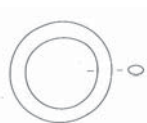
60-3



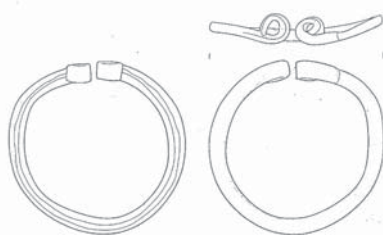
93-2



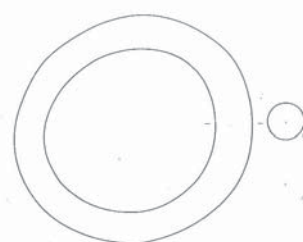
269-1



324-3



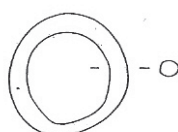
324-4



339-1



430-2

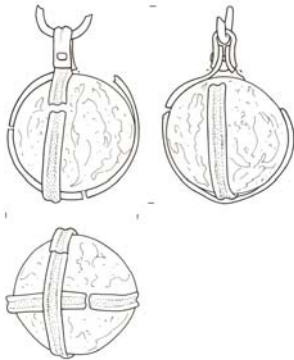


524-3

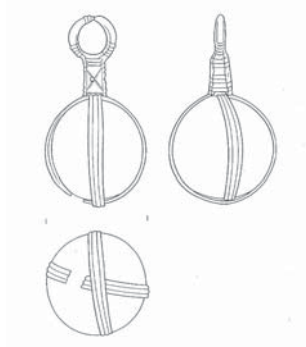


524-4

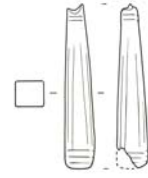
Figure 42: Pendants
1 : 2



8888-3



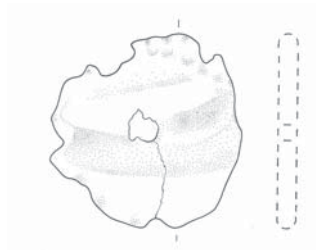
418-1



1500-1



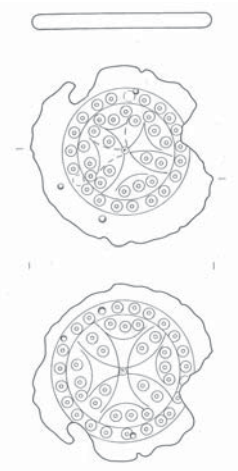
1767-9



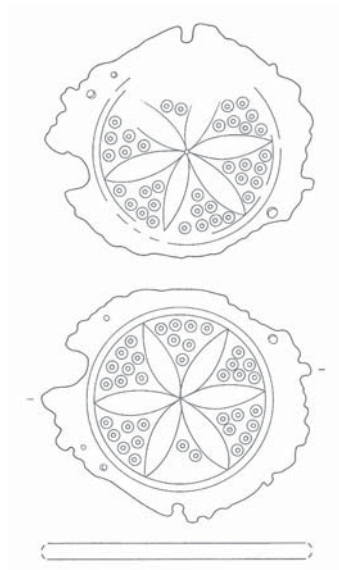
27-24



1435-1



581-19



108-4

Figure 43: Girdle hangers

1 : 2

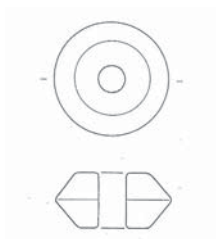
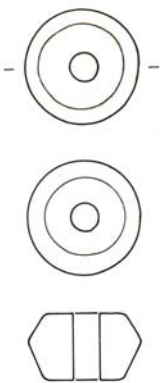
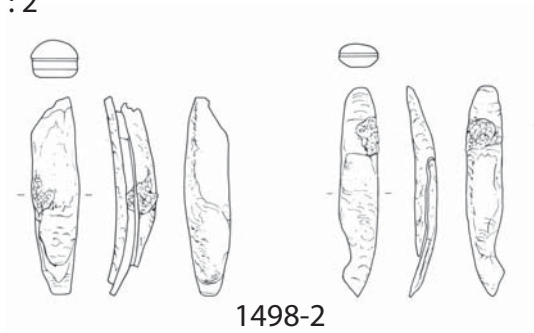


Figure 44: Girdle hangers
1 : 2



1551-1



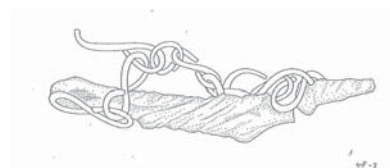
1594-1



1593-2



408-2



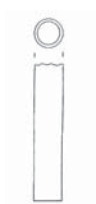
48-2



81-1



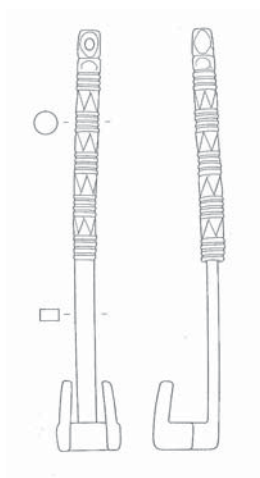
93-3



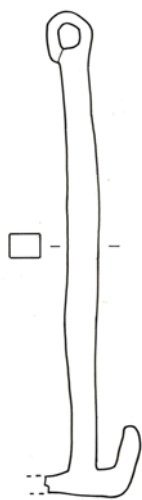
490-2



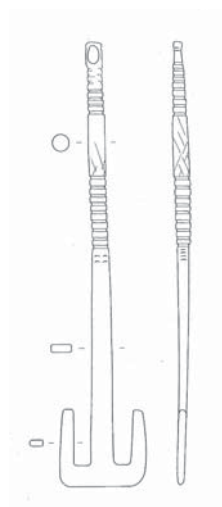
42-2



42-1



1/6/-/

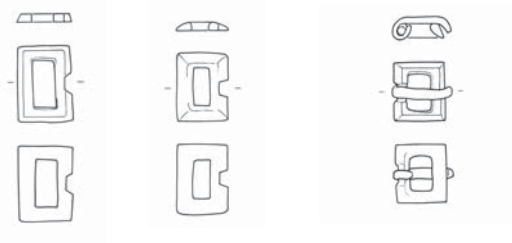


24-1

Figure 45: Purses
1:2



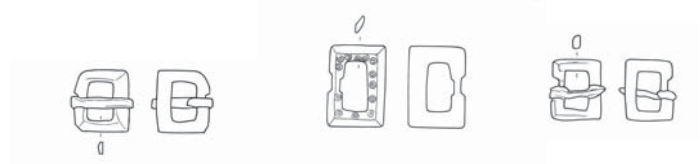
1540



1528-1

1654-3

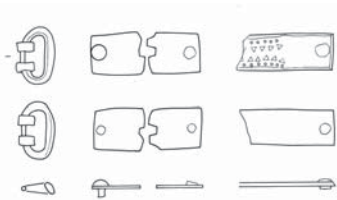
1834-1



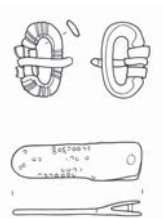
1744-1

1618-2

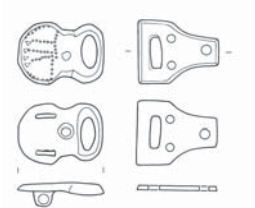
1501-1



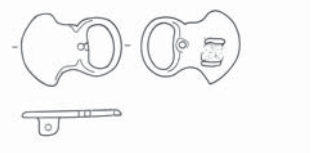
1590-1



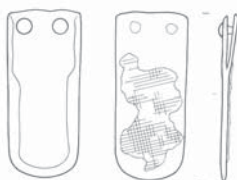
1628-7,8



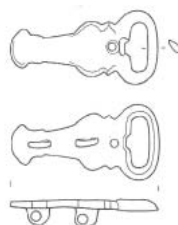
1767-1



1175-1



1389-1



1702-1

Figure 46: Jewels
1 : 2

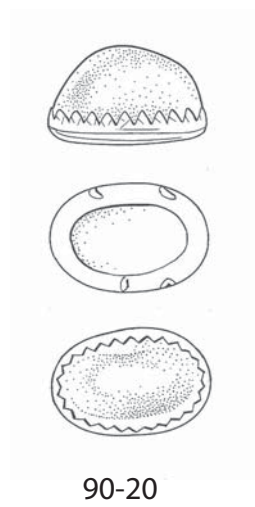
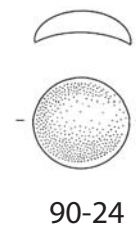
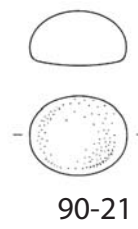
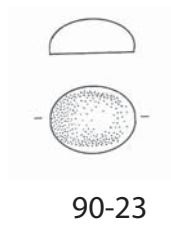
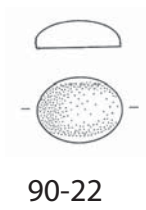
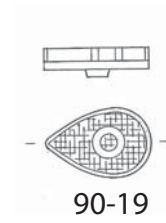
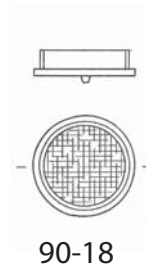
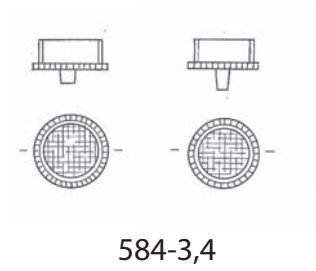


Figure 47: Strings with a majority of black beads



Figure 48: Strings with a majority of blue beads



Figure 49: Strings with a majority of blue beads



1617-1,2,3,4,5,6



1819-1,2,3,4,5



418-8,9,10,11,12,13,14



Figure 50: Strings with a majority of green beads



1587-1,3,4,5,6,7,8,9,10



1495-3,4,5

1418-1,2,3,4,5,6,7,8,9,10,12



1748-1,2,3,4,5,6,7,8,10

Figure 51: Strings with a majority of green beads

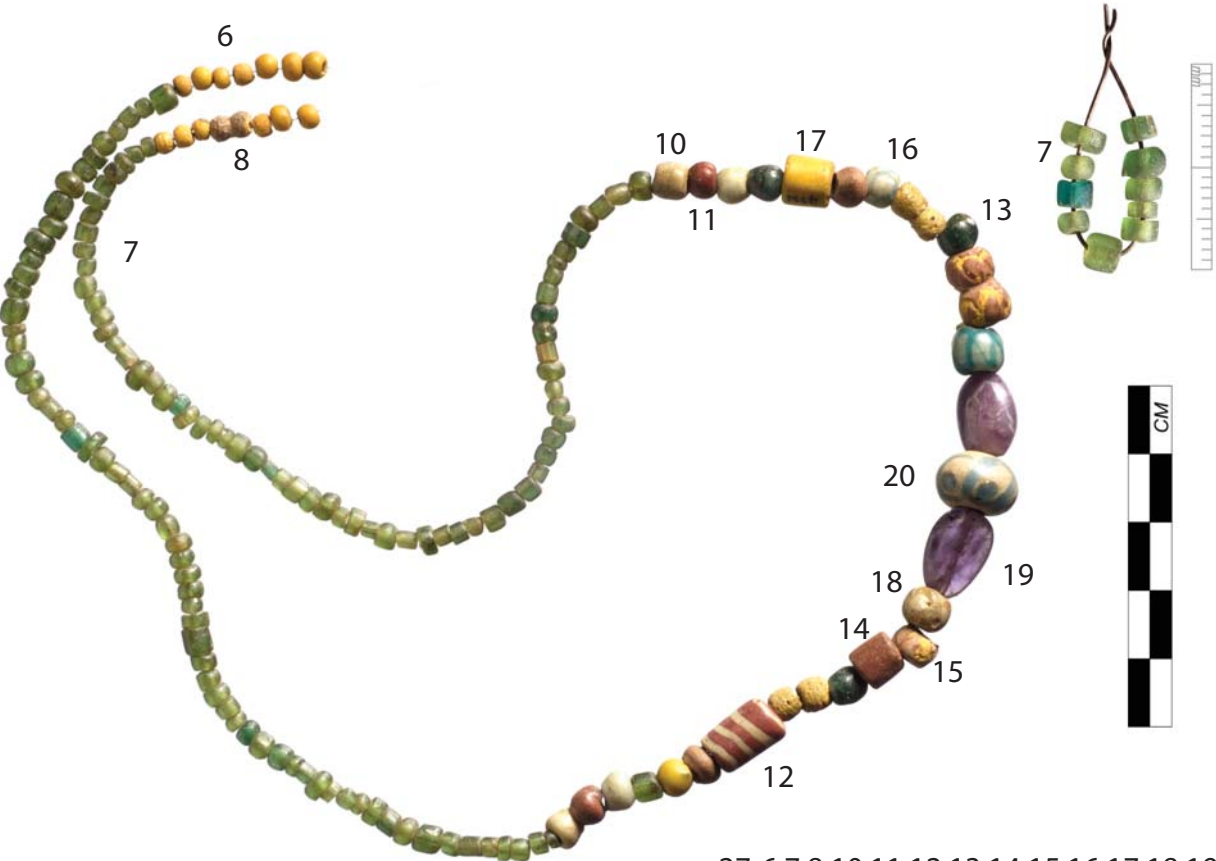


1019-2,3,4

Figure 52: Strings with a majority of green beads



1151-1,2,3



27-6,7,8,10,11,12,13,14,15,16,17,18,19,20

Figure 53: Strings with a majority of green beads

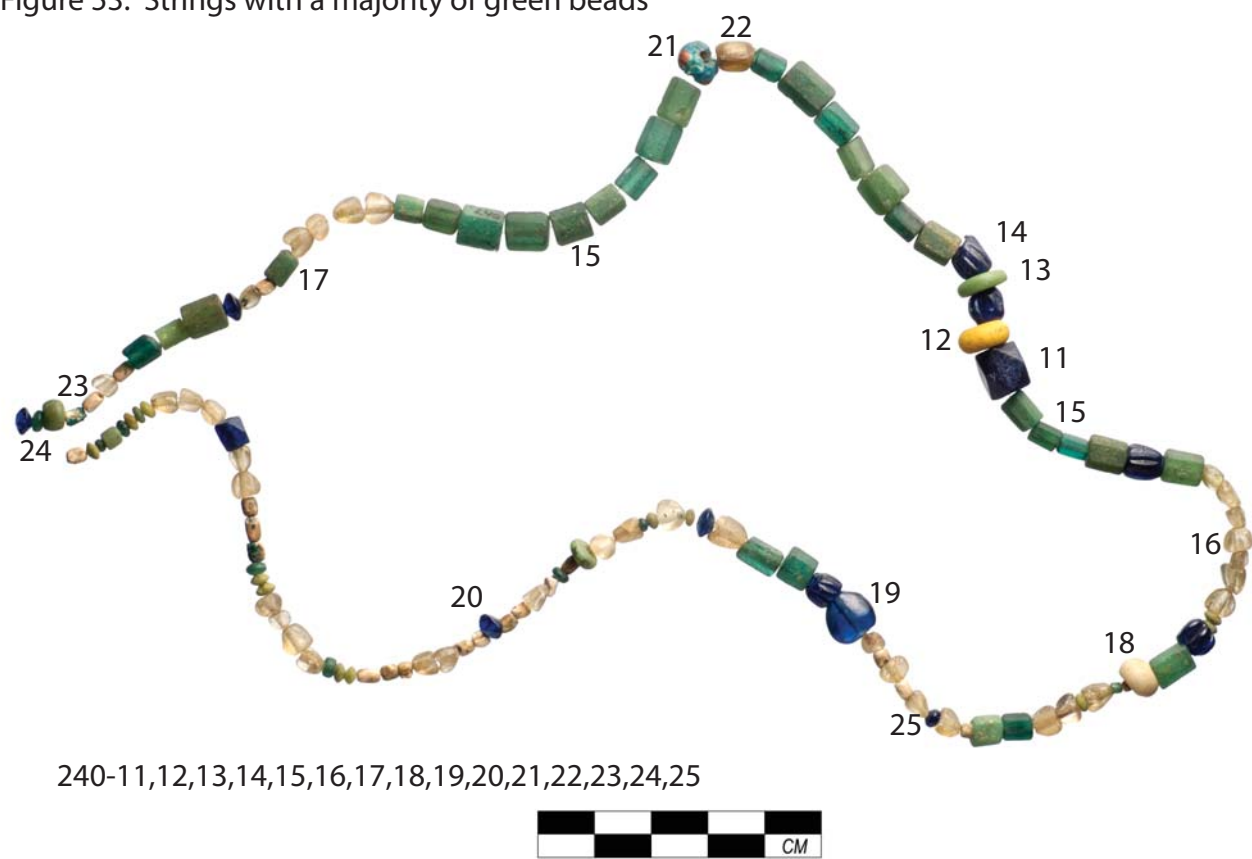
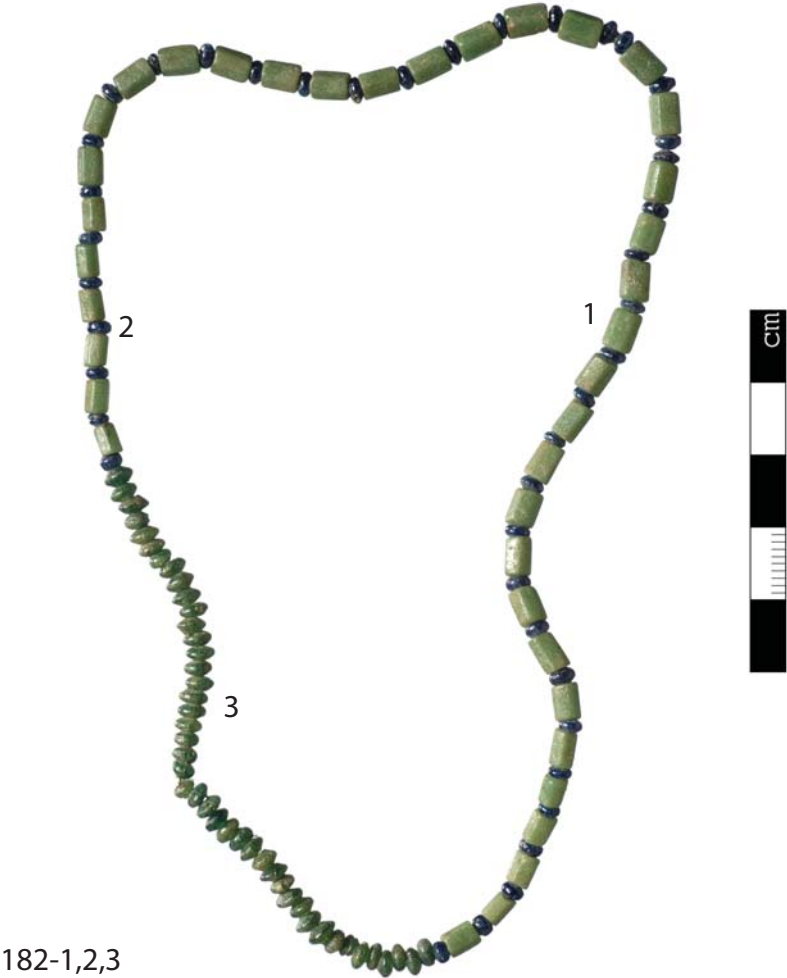


Figure 54: Strings with a majority of green beads



Strings with a majority of red beads

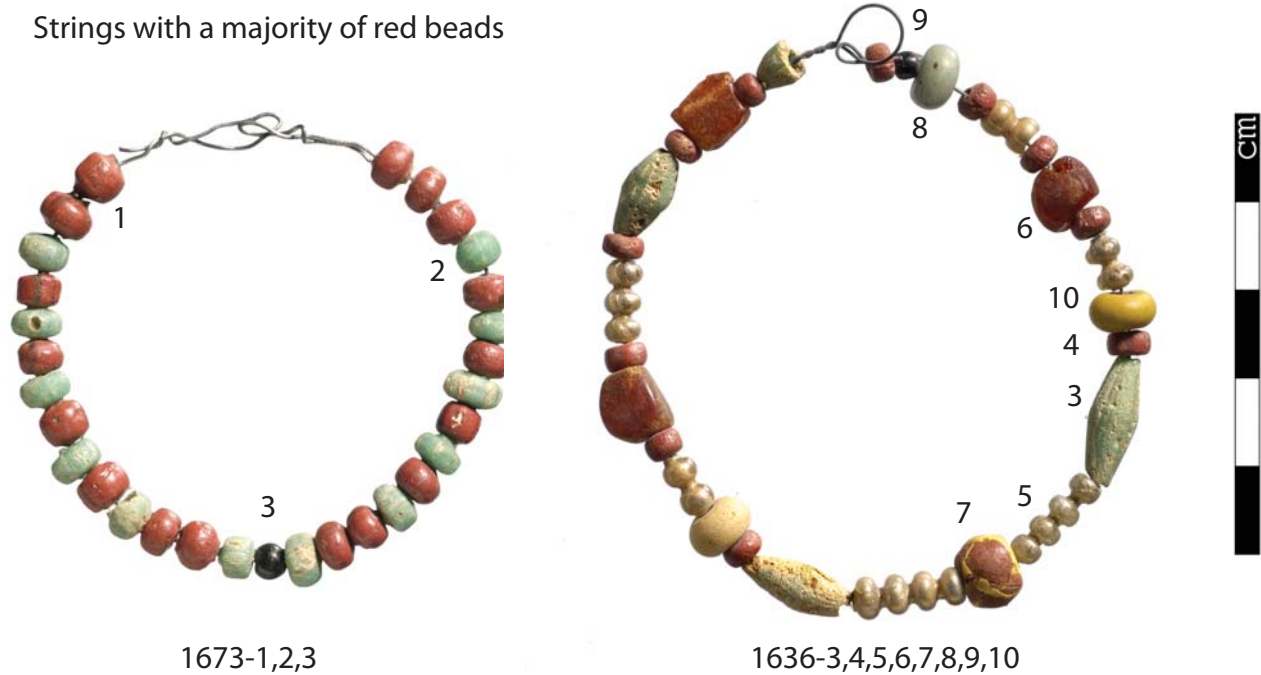
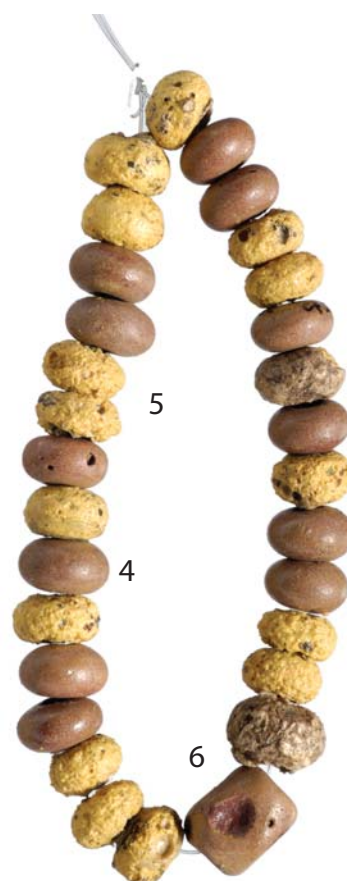
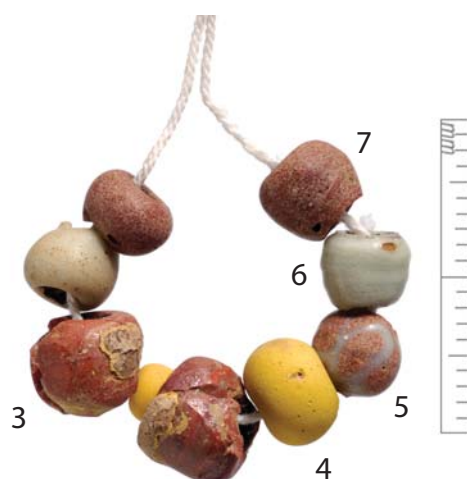


Figure 55: Strings with a majority of red beads

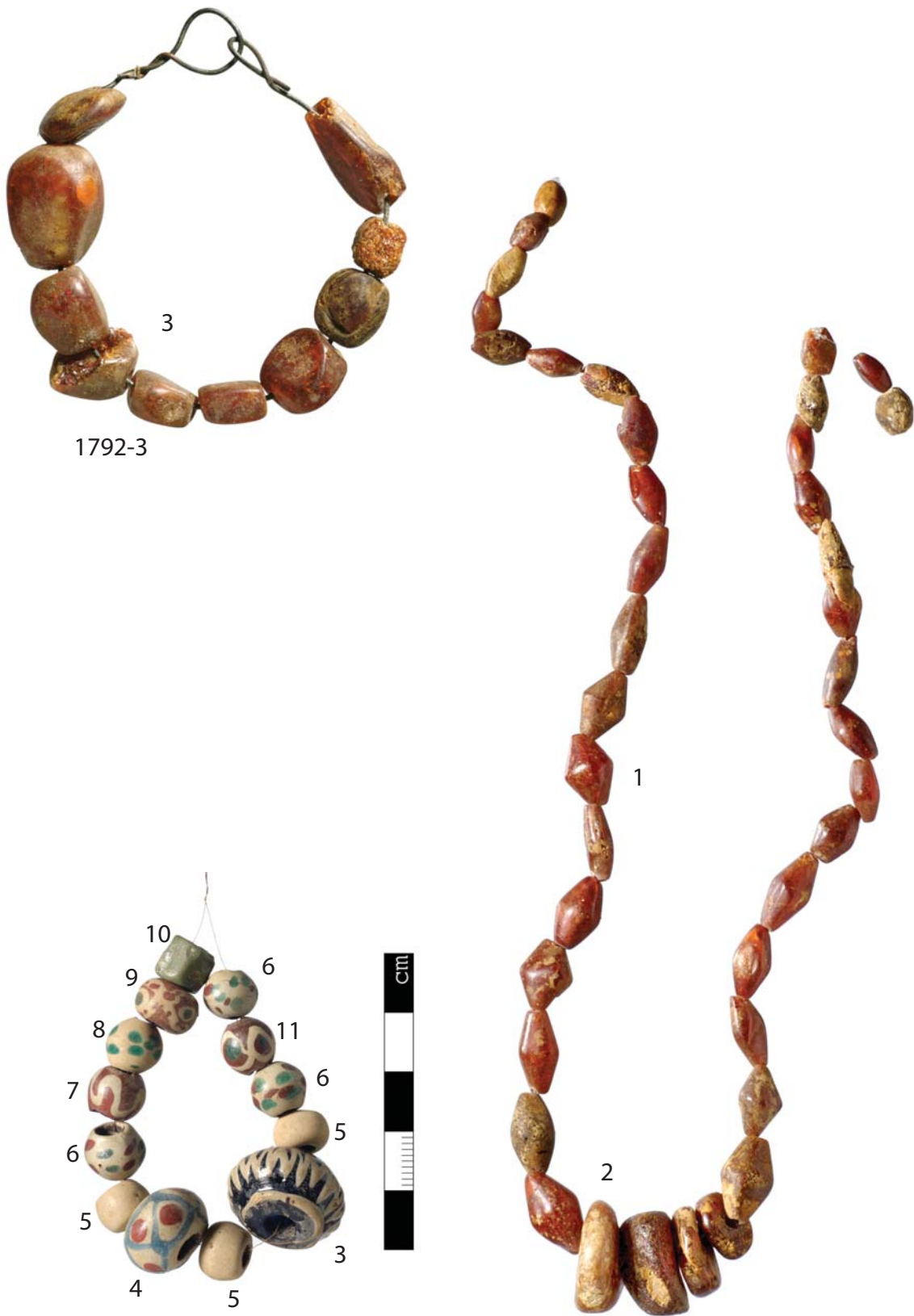


42-3,4,5,6



261-3,4,5,6,7

Figure 56: Strings with a majority of amber beads



365-1,2,3,4,5,6,7,8,9,10,11

Figure 57: Strings with a majority of amber beads

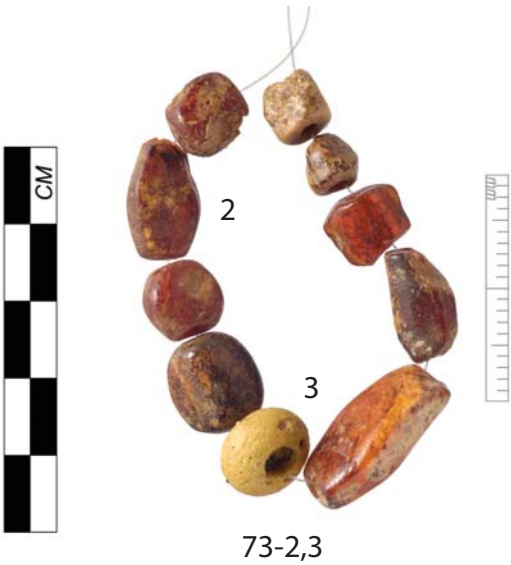
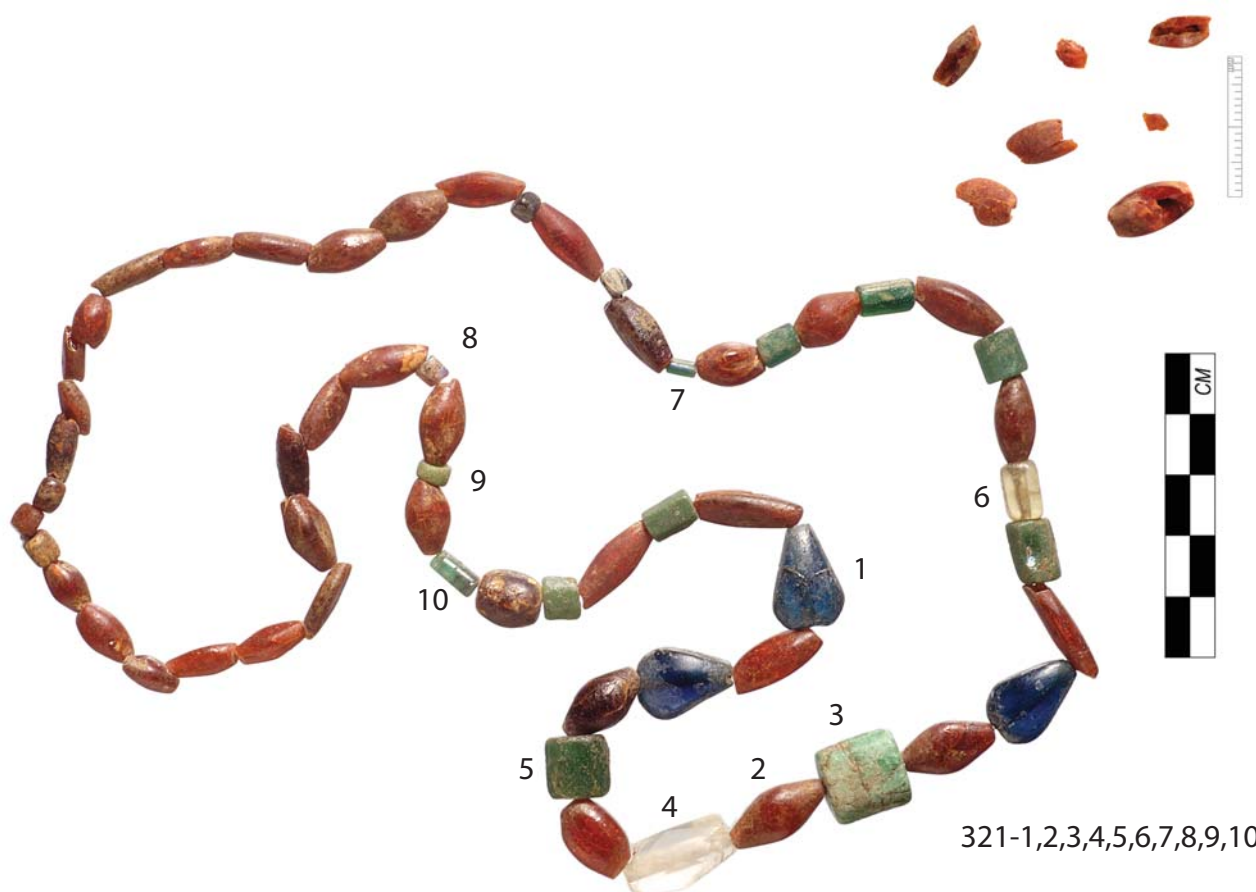


Figure 58: Strings with a majority of amber beads



418-18,19,20,21,22,23,24,25,26,27



321-1,2,3,4,5,6,7,8,9,10

Figure 59: Strings with a majority of amber beads



562-5,6,7,8,9,10,11,12,13,14,15,16,17

Figure 60: Strings with a majority of yellow beads



1434-1,2,3,4,5,6,7,8,9,10,11,12,13



1624-2,3,4,5,6,7,8,9,10,11,12,13,15,17,18,19,20,21,23,24,25,26,28,29,30

Figure 61: Strings with a majority of yellow beads

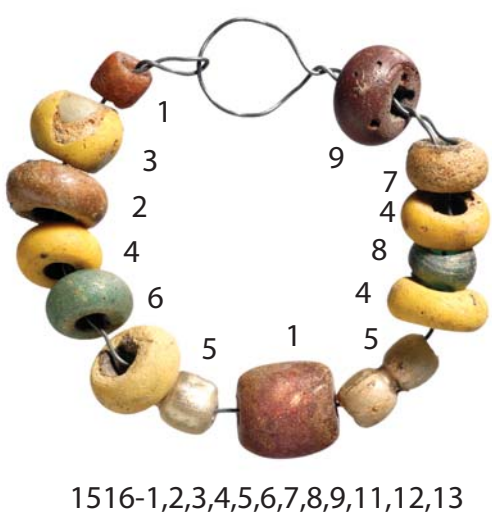


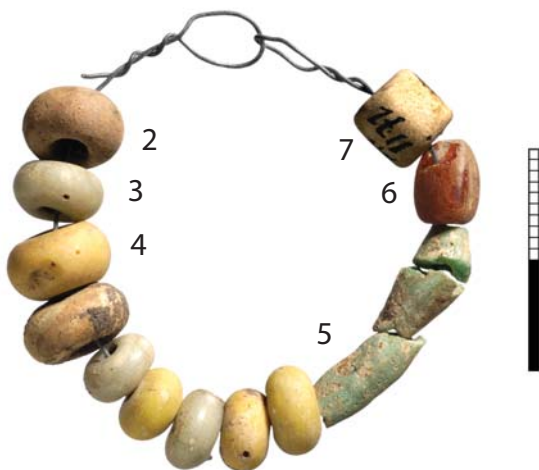
Figure 62: Strings with a majority of yellow beads



Figure 63: Strings with a majority of yellow beads



1752-1,2,3,4,5,6,7,8,9,10



1172-2,3,4,5,6,7



1173-2,3,4

Figure 64: Strings with a majority of yellow beads



Figure 65: Strings with a majority of yellow beads



581-3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18



18

Figure 66: Strings with a majority of yellow beads



Figure 67: Strings with a majority of amethyst beads

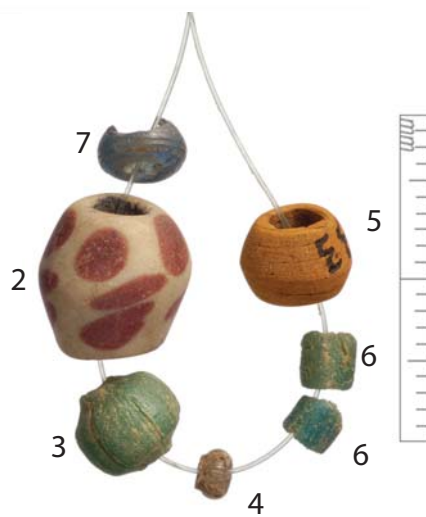
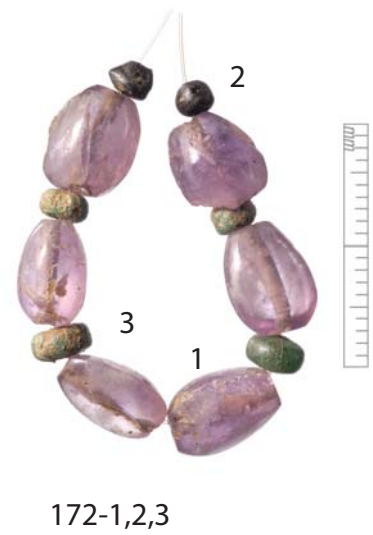
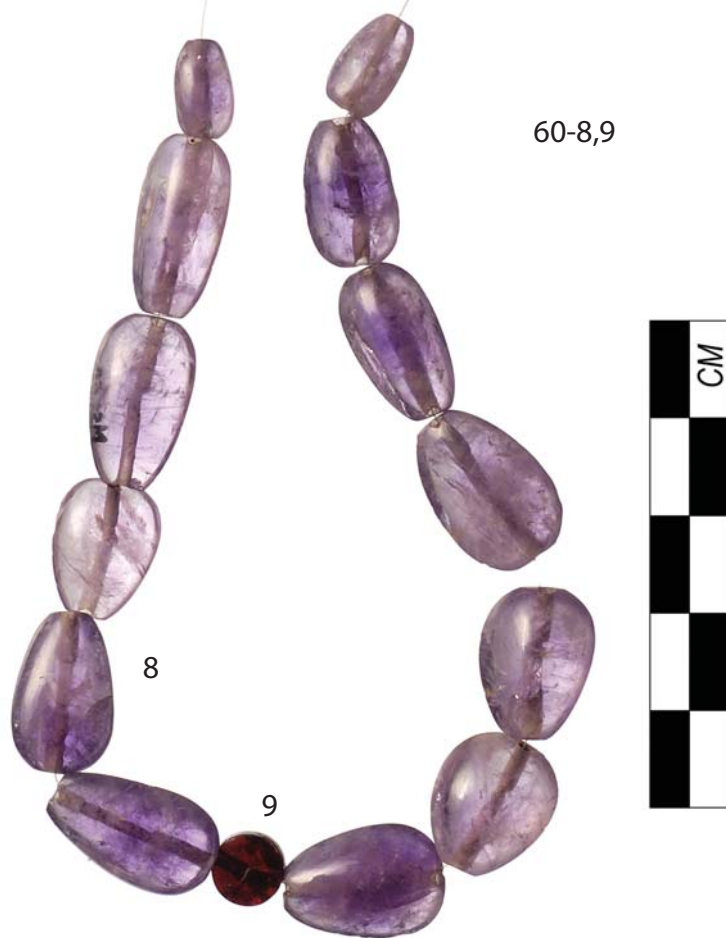


Figure 68: Strings with a majority of metal-in-glass beads



Figure 69: Strings with a majority of metal-in-glass beads



128-3,4,5,6,7,8,9,10,11,12,13,14

Figure 70 (single beads)



1361-1



1737-2



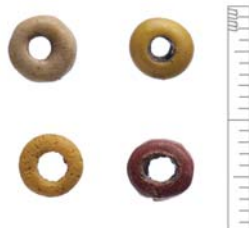
1633-1



23-2,3,4



43-1



44-2



59-12,13,14



142-11,12



252-



269-8



309-1



428-2,4



430-3



447-1



449-2



453-1

Figure 71: Beads (single)



490-4



493-2



555-9,8

Figure 72: Seaxes
1:4

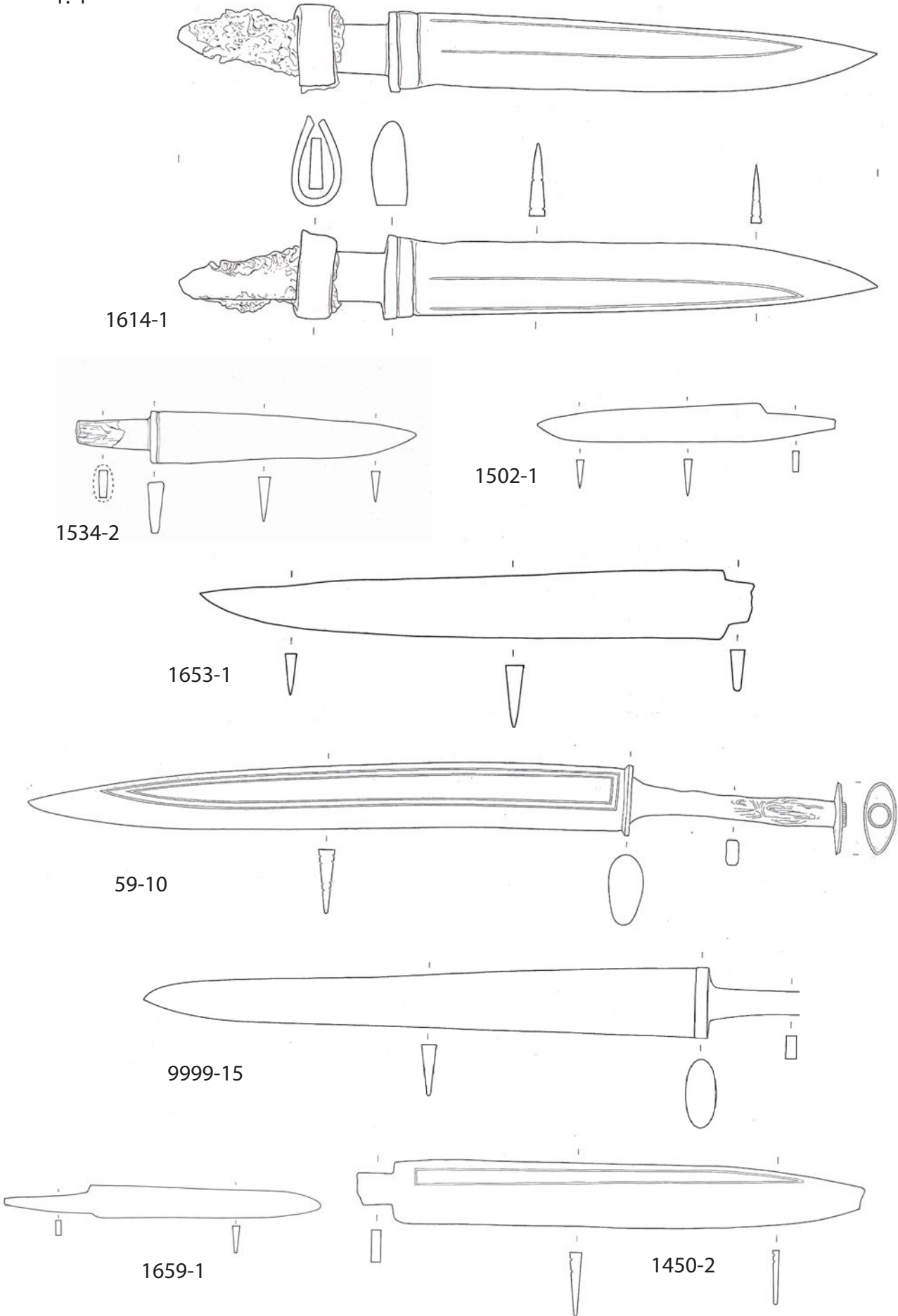


Figure 73: Seaxes

1:4

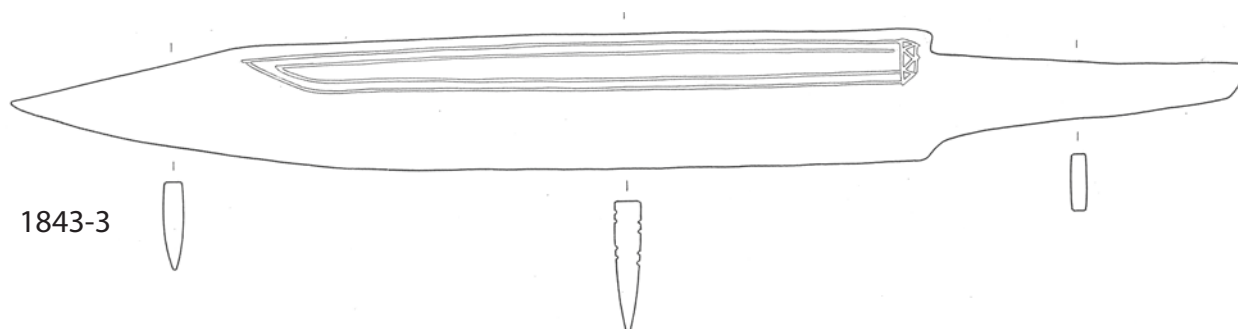
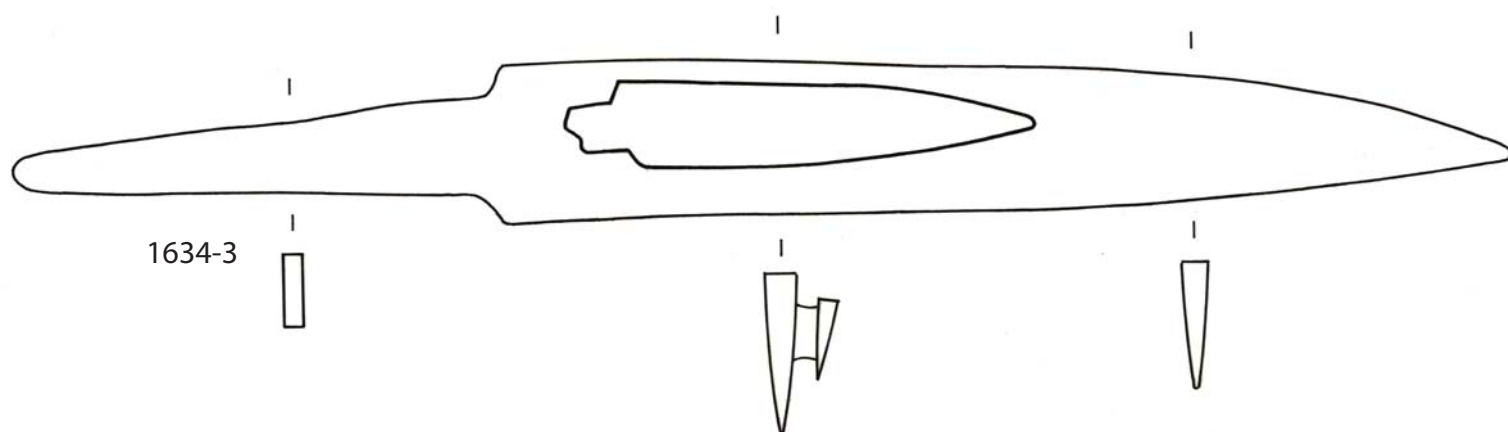
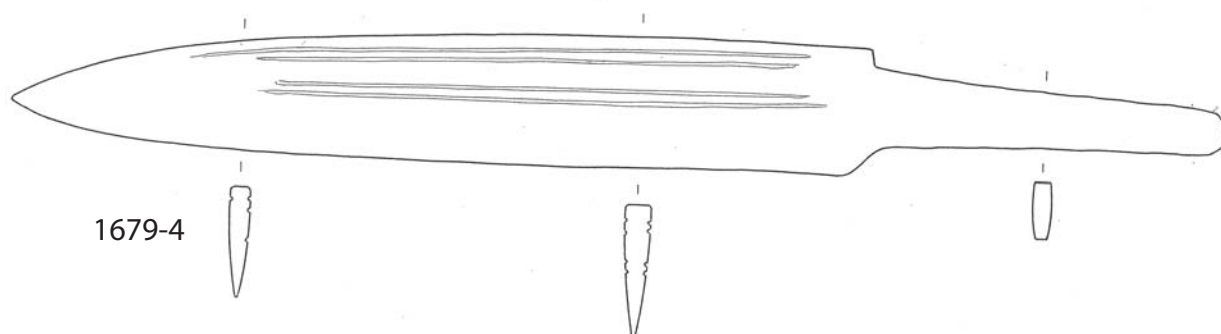
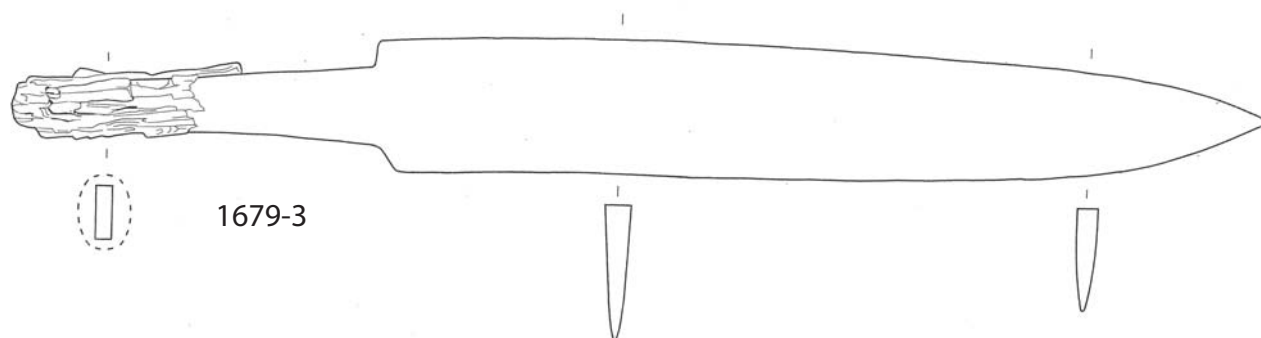
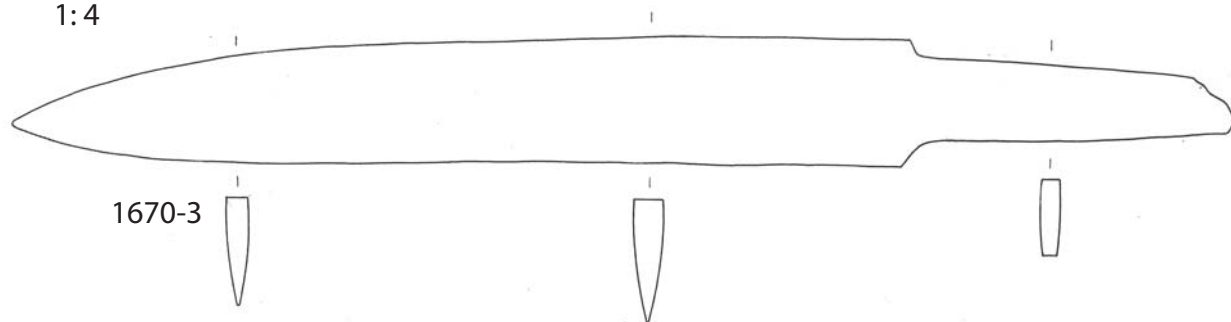
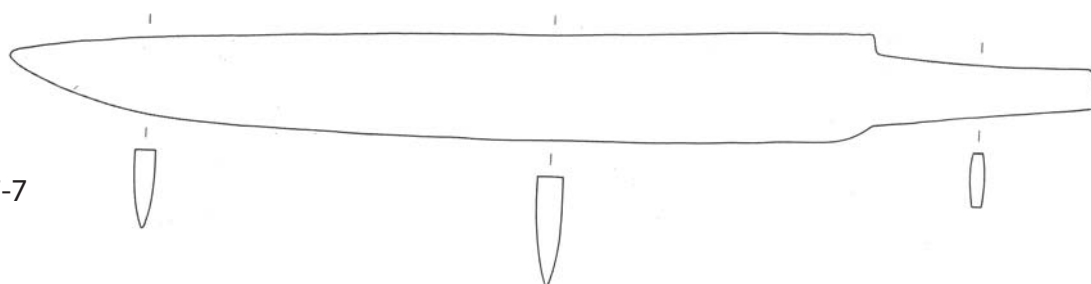


Figure 74: Seaxes
1:4

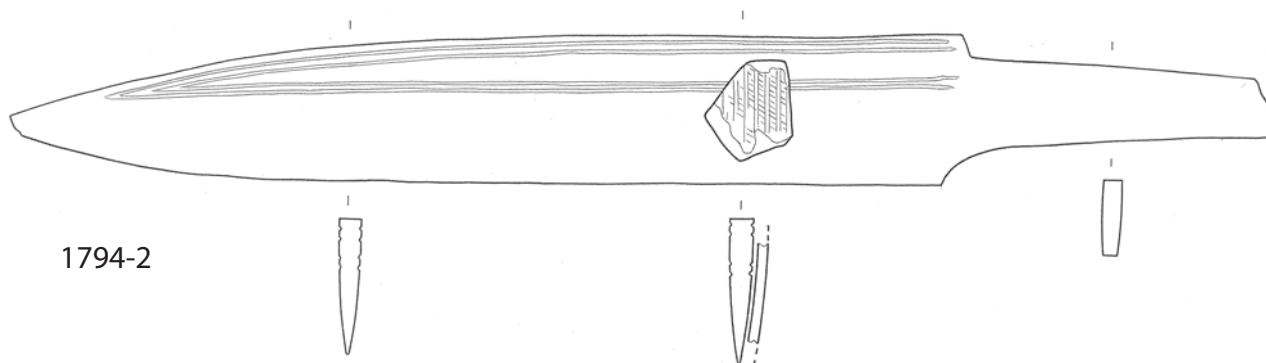
Corroded, no drawing

341-7

1387-7



1794-2



1665-5

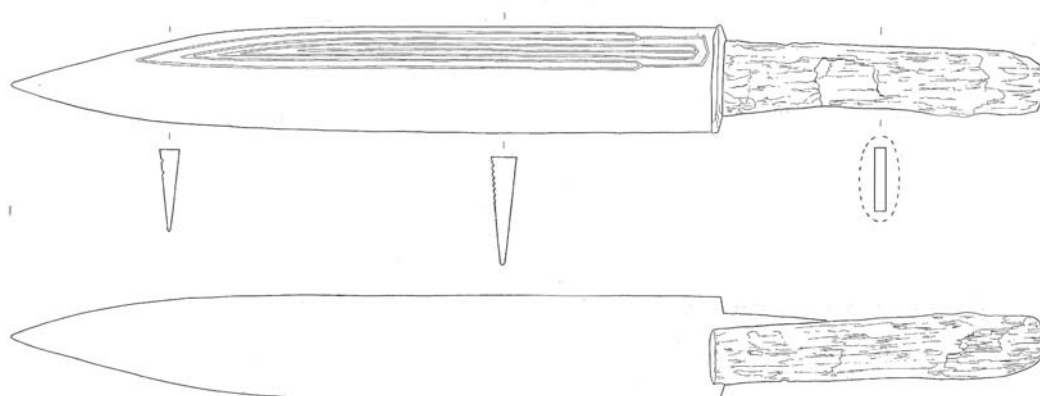


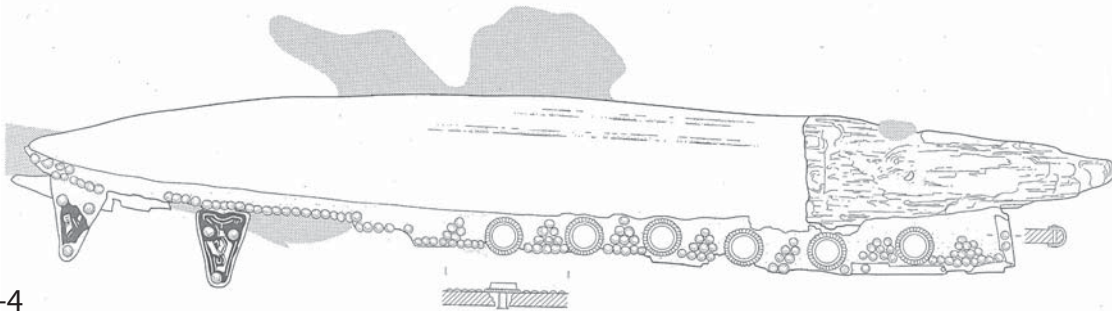
Figure 75: Seaxes

1 : 4

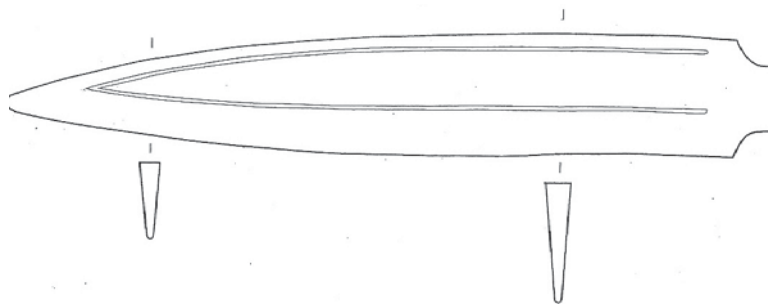
1703-3



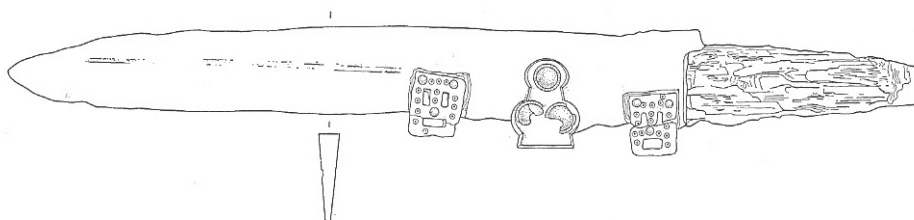
21-4



575-6



555-7

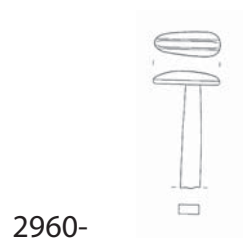
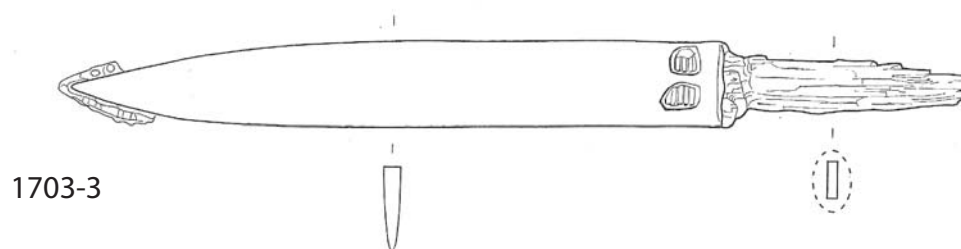
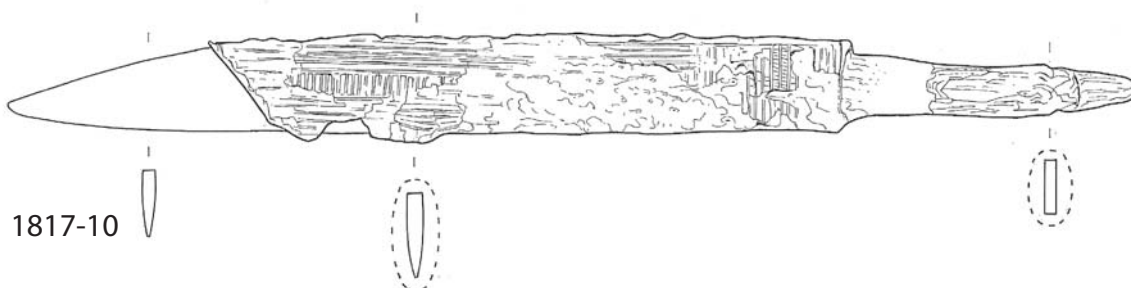
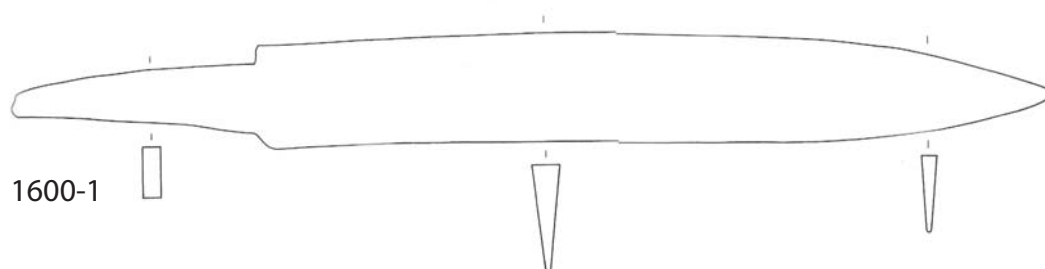
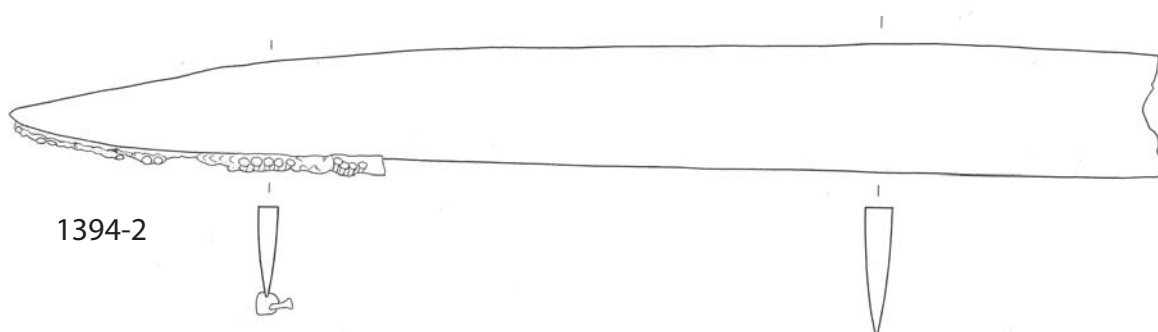


Corroded, no drawing

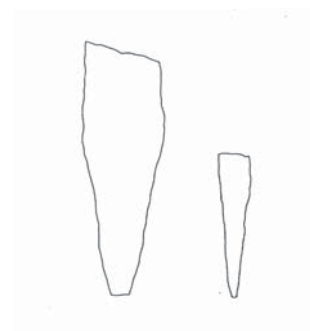
299-1

Figure 76: Seaxes

1 : 4



523-1



Corroded, no drawing

558-2

Figure 77: Seax scabbard
2 : 1

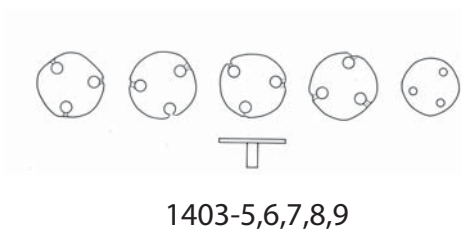
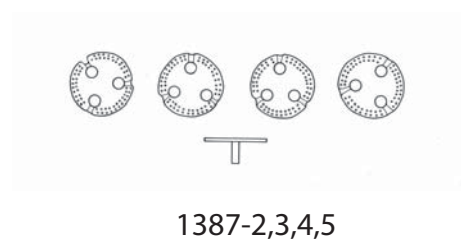
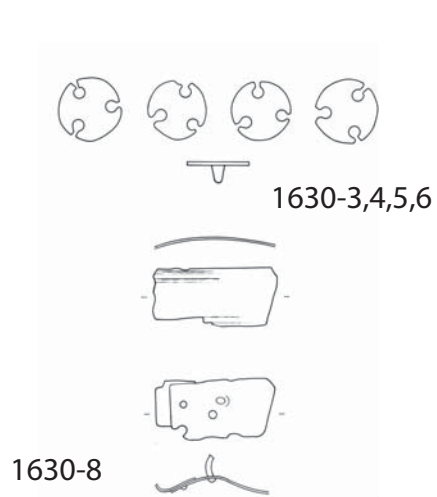
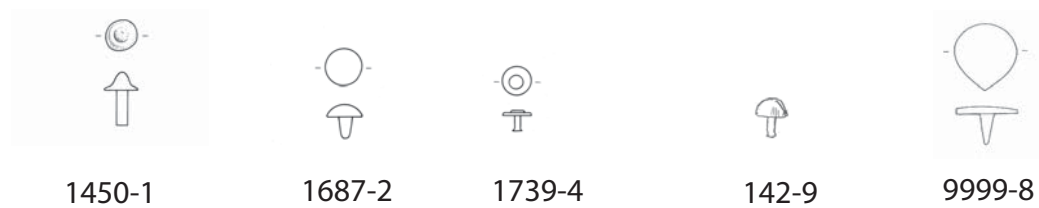
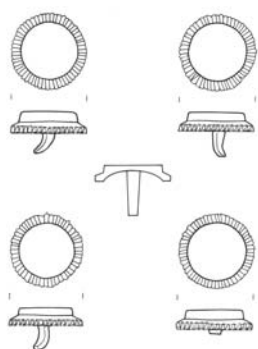
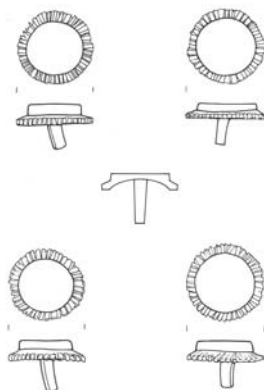


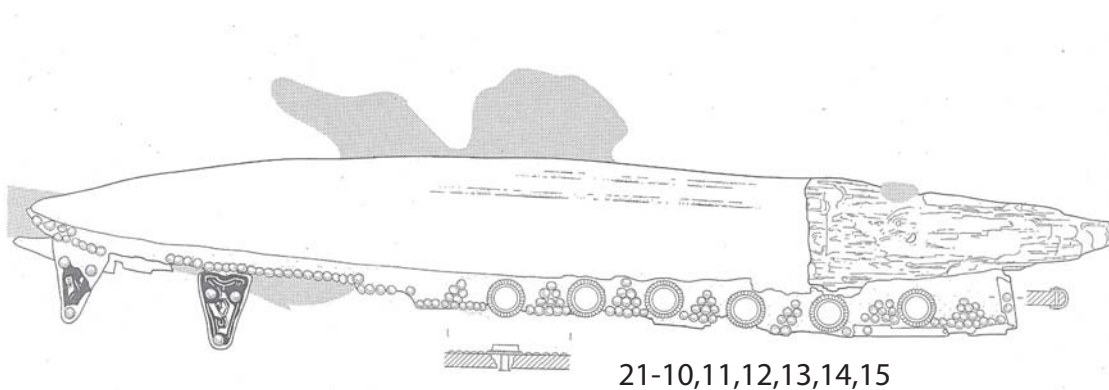
Figure 78: Seax scabbard
2 : 1



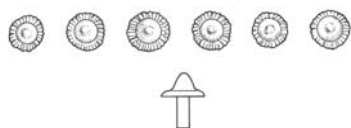
1817-5,6,7,8



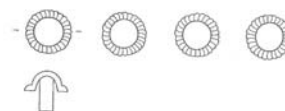
1815-2,3,4,5



21-10,11,12,13,14,15



1755-2,3,4,5,6,8



9999-17

Figure 79: Seax scabbard
1 : 2



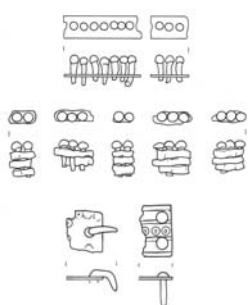
1815-7



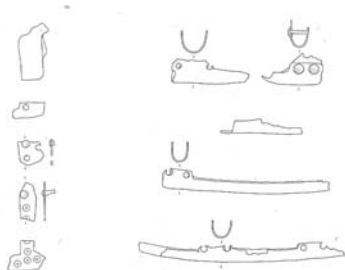
1817-11



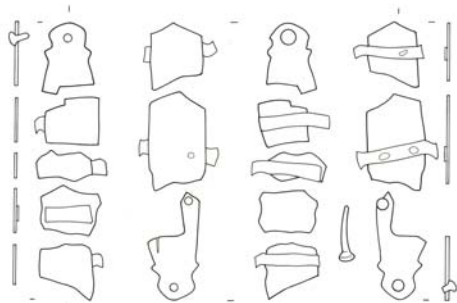
556-8



1665-7, 3,4,6



555-14, 15



1669-1



1670-4

Figure 80: Seax scabbard
1 : 2

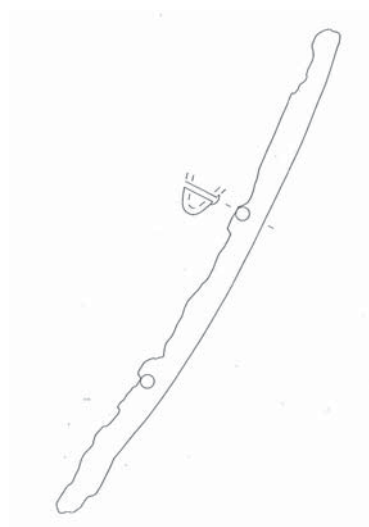
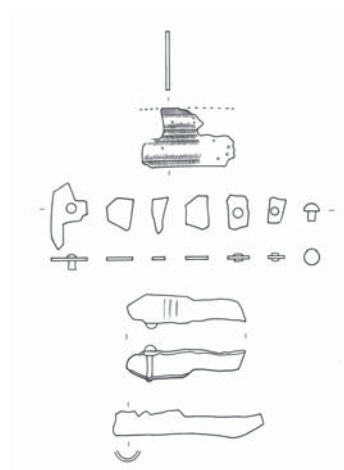
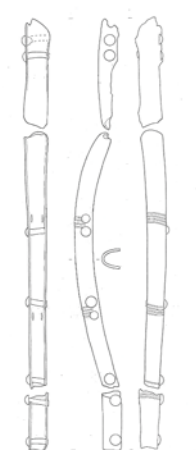
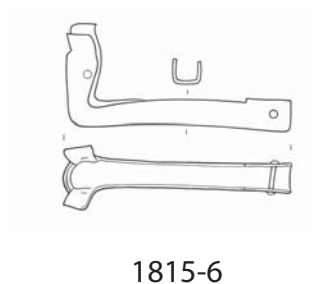
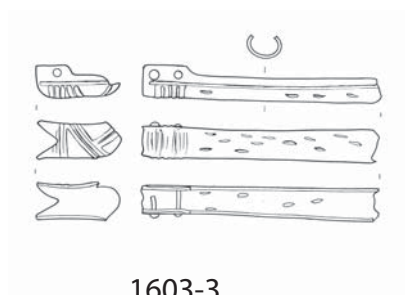
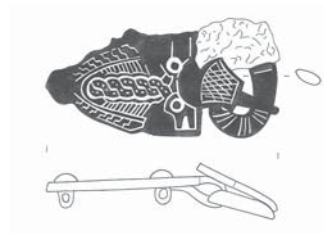


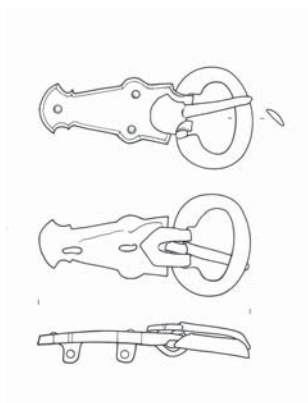
Figure 81: Seax scabbard
1 : 2



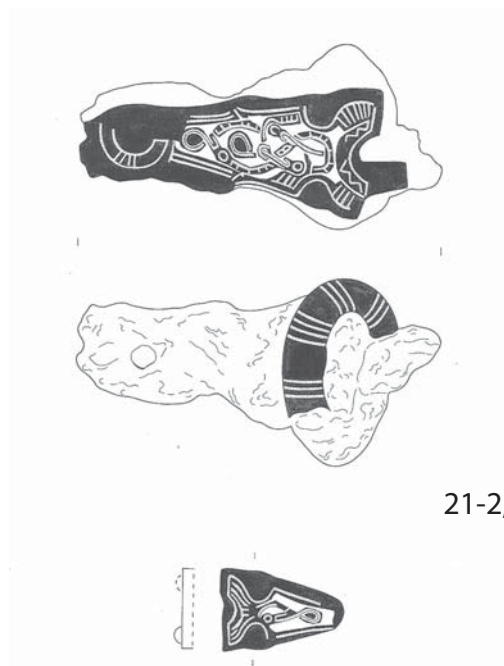
1817-12



341-1,2

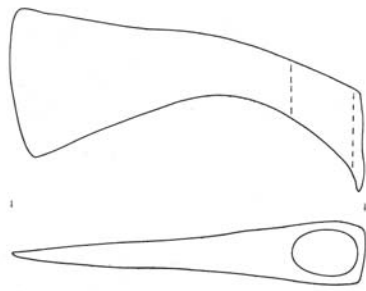


1664-1

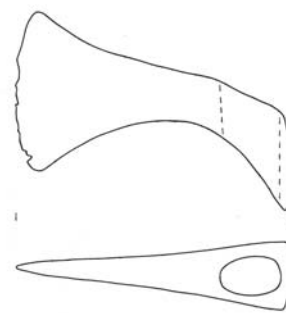


21-2,8,9

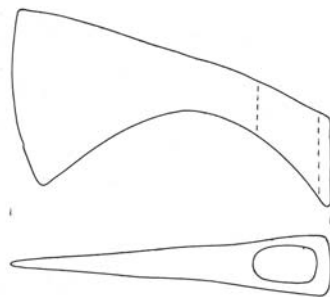
Figure 82: Francisca's
1 : 2



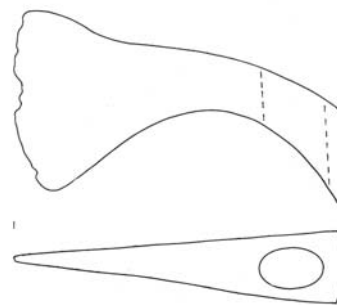
1786-1



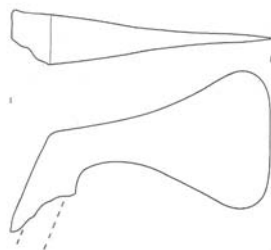
1823-1



1823-2

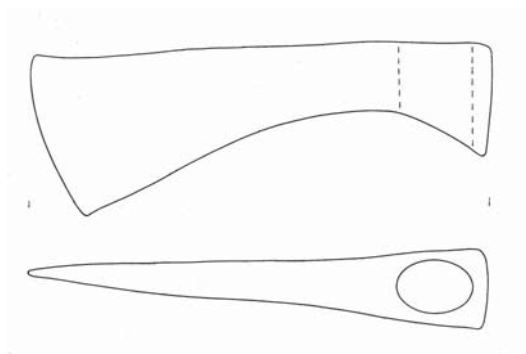


1783-2

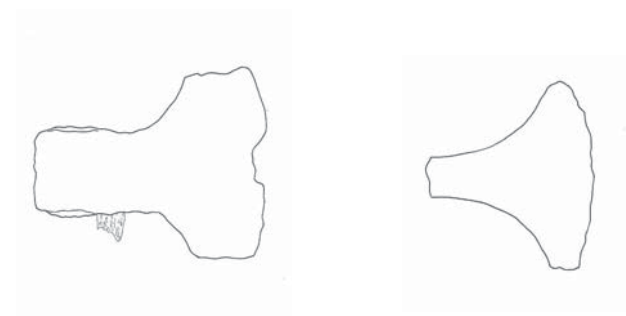


458-1

Figure 83: Axes
1:2

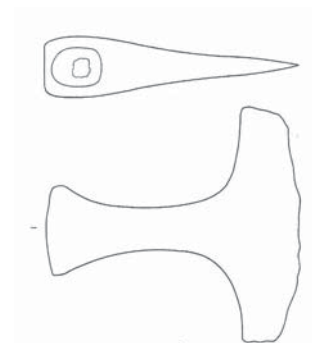


1670-2

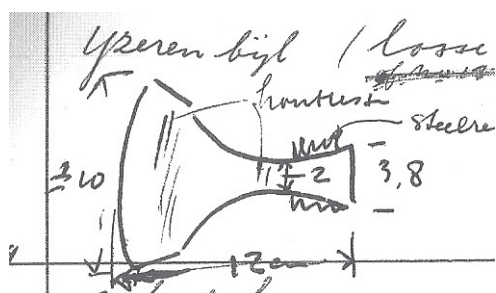


49-3

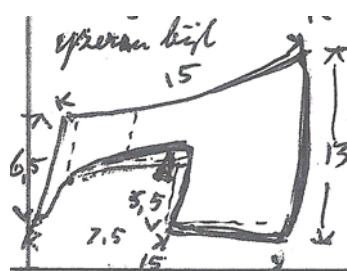
532-1



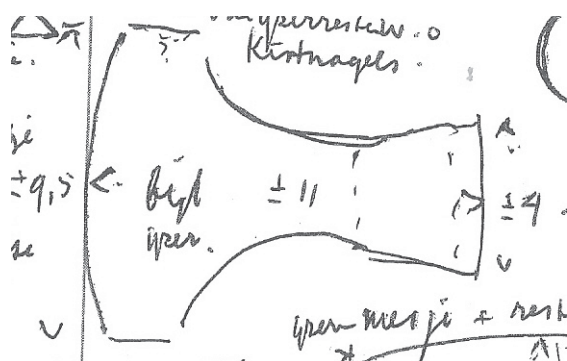
89-1



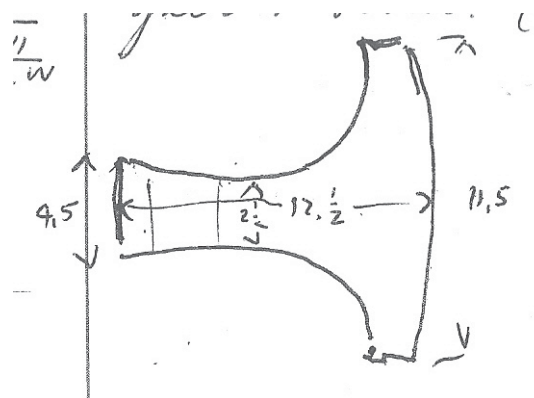
143-1 Missing



520-16 Missing



142-3 Corroded



147-2 Corroded

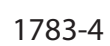
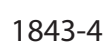
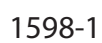
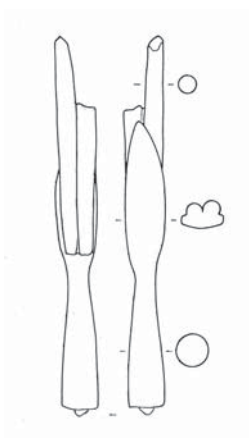


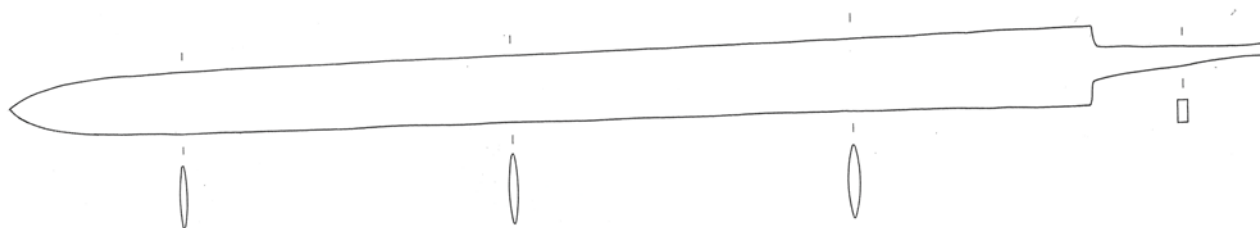
Figure 85: Arrowheads/sword
1:2



1680-3



1501-3

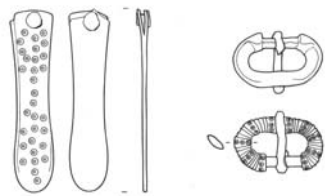


1838-263

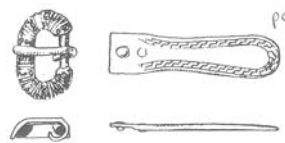


555-3

Figure 86: Shoes
1:2



1497-1,2



missing
1496-1,2*



1795-1



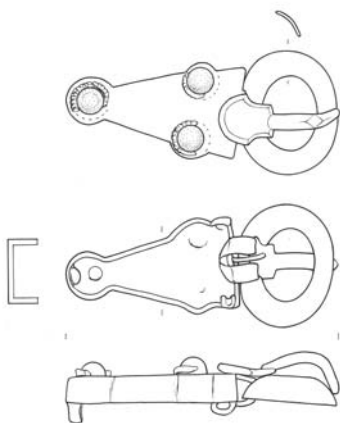
49-1



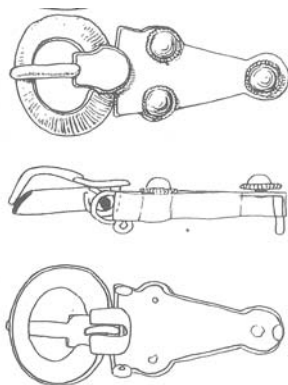
1493-3



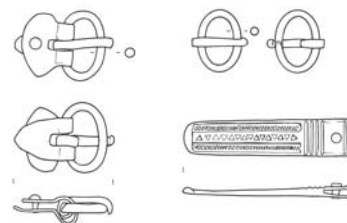
185-1



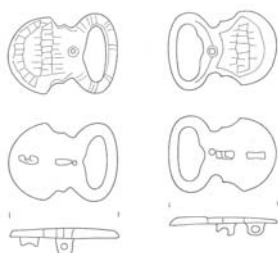
1596-1



missing
1568-1*



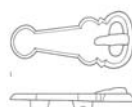
1739-1,2,3



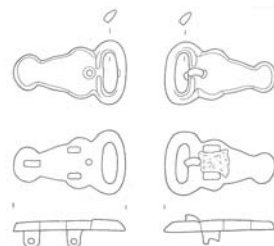
27-1,2,3,4



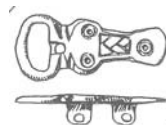
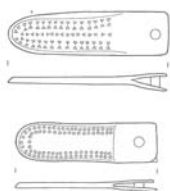
1495-1,2,6*,7*



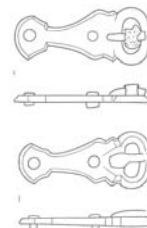
571-2



324-1,2

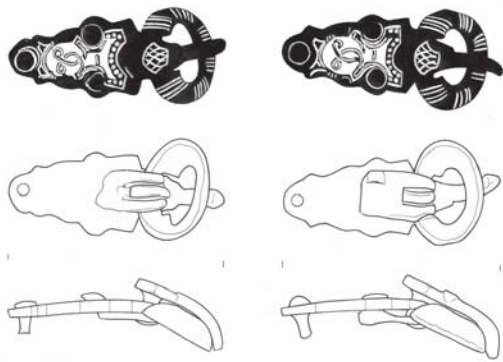


missing
1547-1*

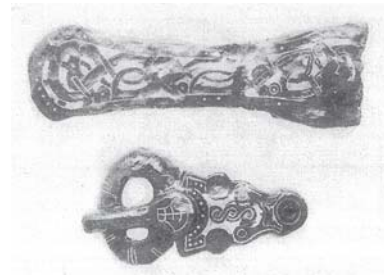


59-3,4

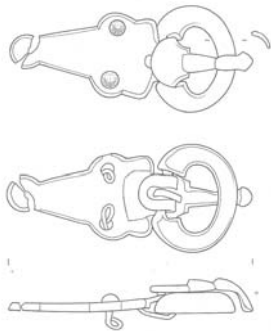
Figure 87: Shoes
1 : 2



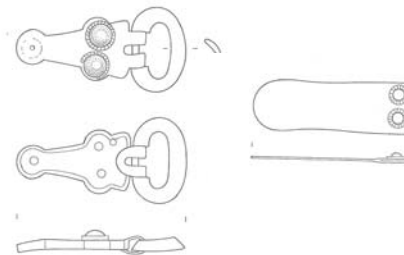
1470-1,2



missing
1572-1*,2*

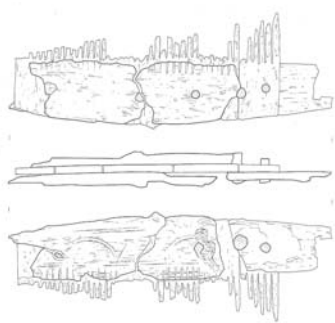


549-1

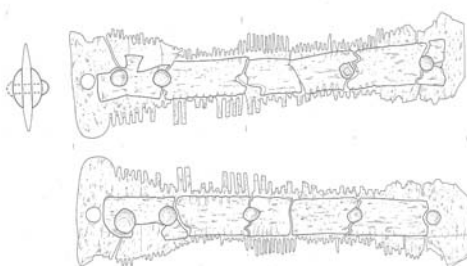


433-1,2

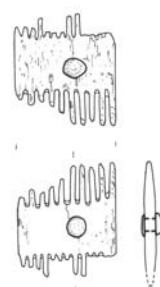
Figure 88: Combs
1 : 2



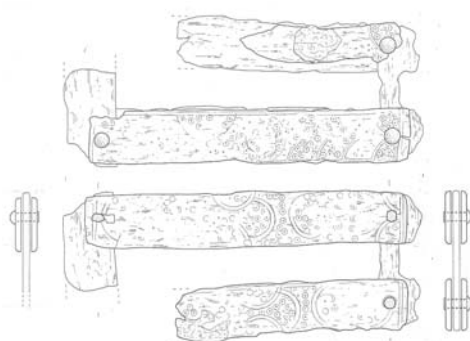
1019-1



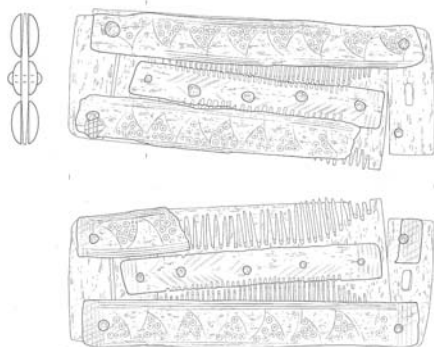
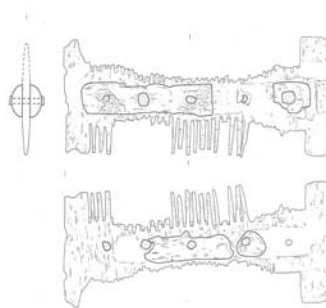
1530-1



1406-1

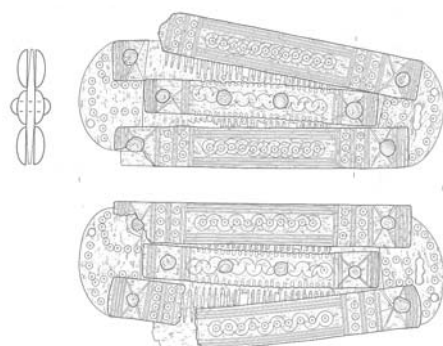


1767-3,4

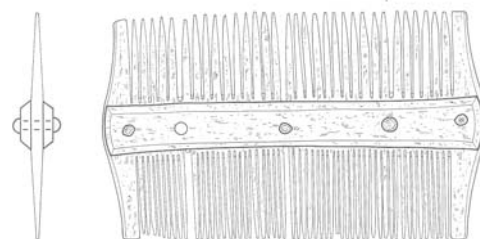


22-3,4

40-1

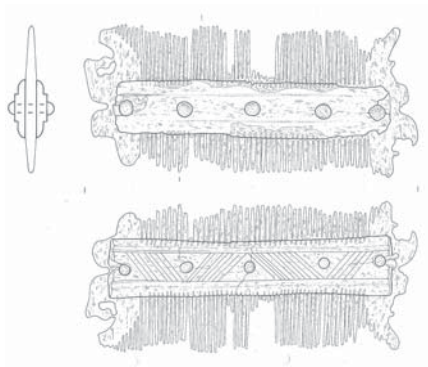


341-3,4

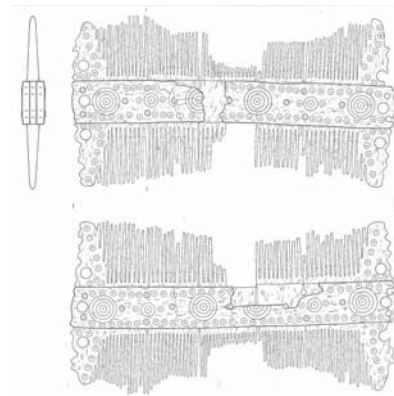


466-1

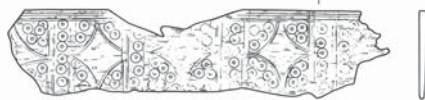
Figure 89: Combs
1 : 2



502-1



380-1



1498-1



8888-1



405-1

Figure 90: Knives
1:2

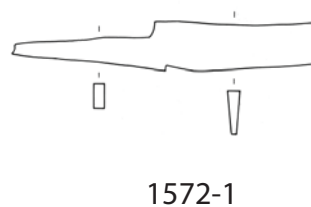
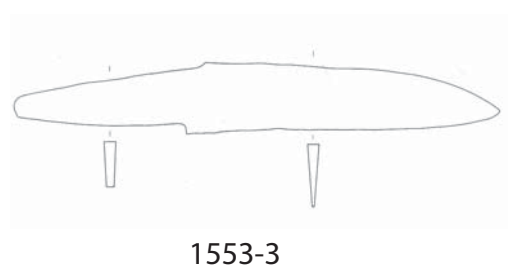
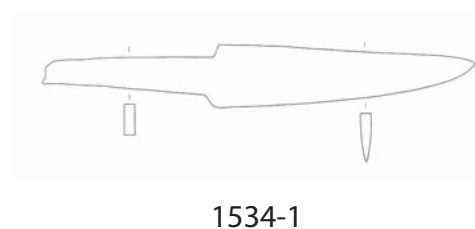
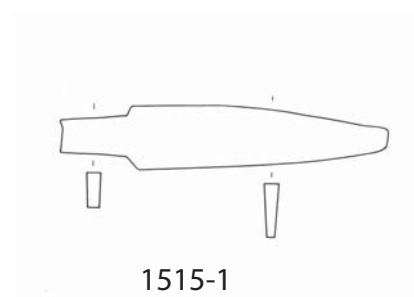
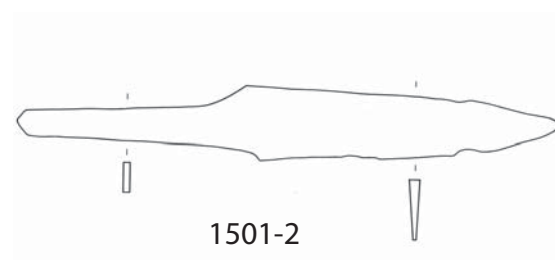
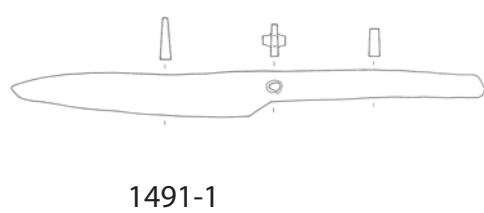
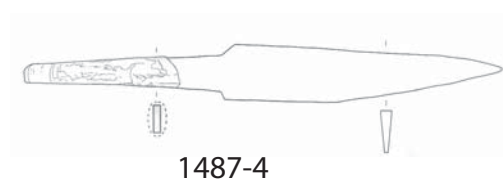
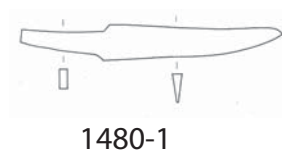
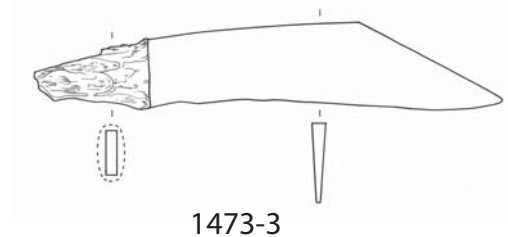
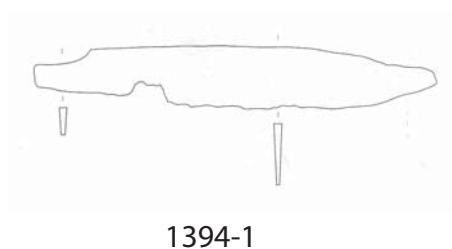
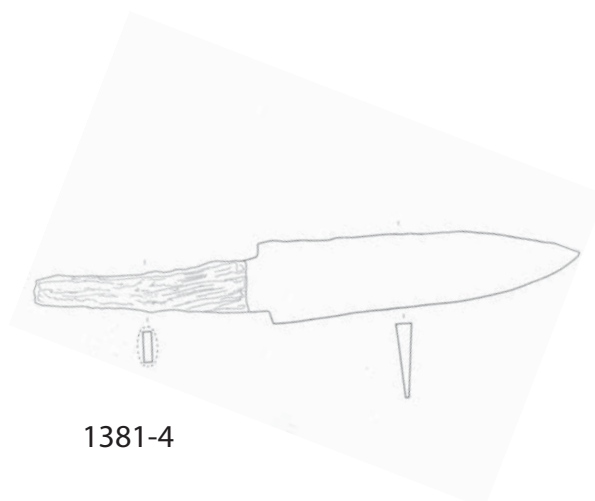
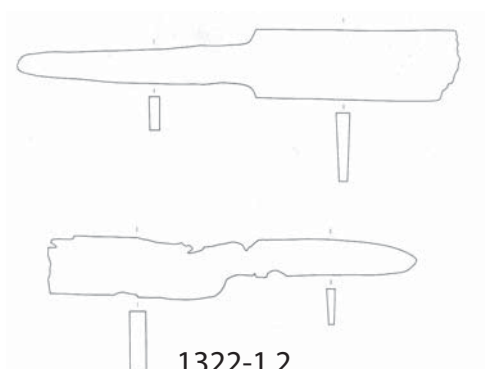
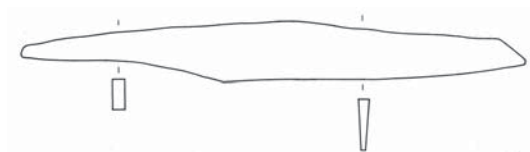
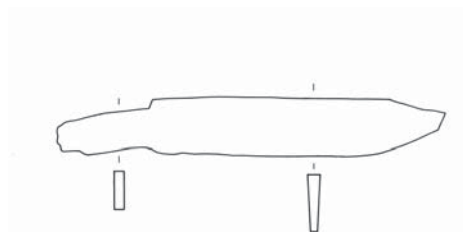


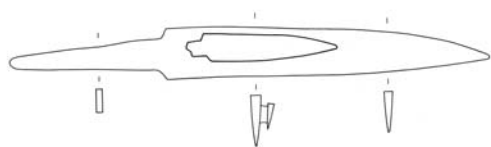
Figure 91: Knives
1 : 2



1584-5



1630-7



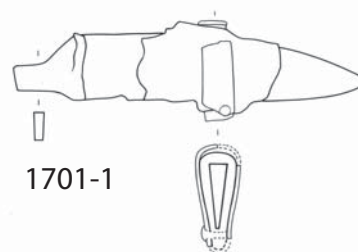
1634-4



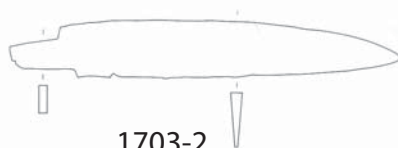
1659-1



1680-1



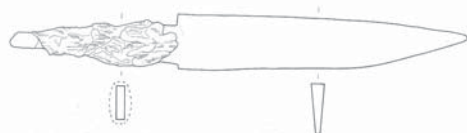
1701-1



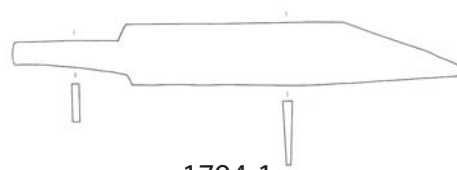
1703-2



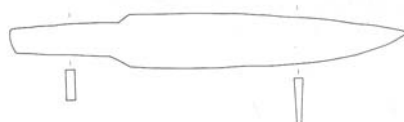
1755-7



1767-6



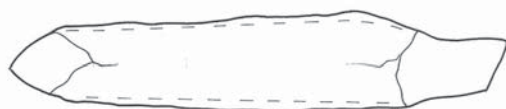
1794-1



1797-2



1817-9



1744-6

Figure 92: Knives
1: 2

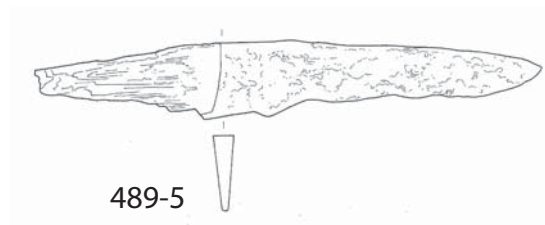
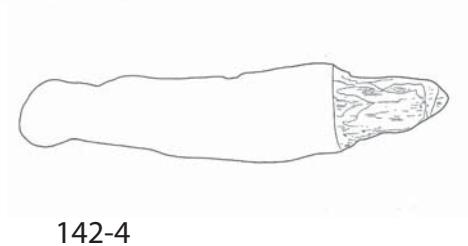
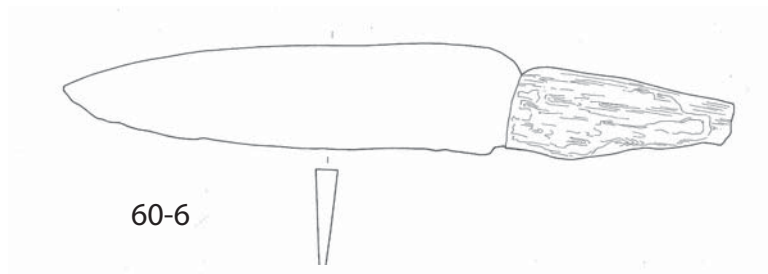
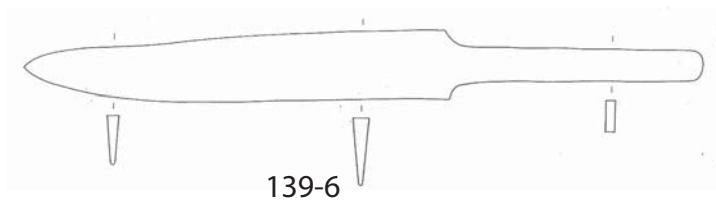
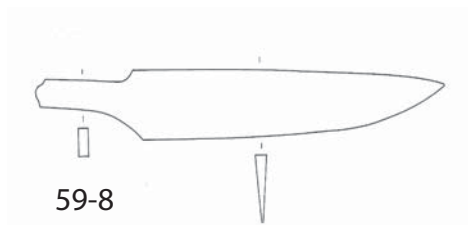
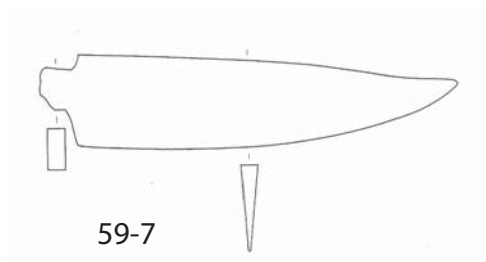
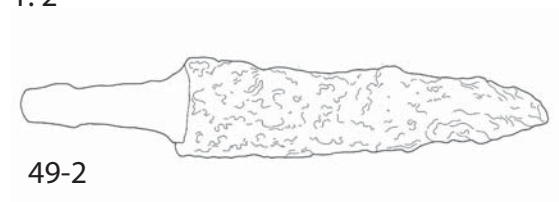


Figure 93: Firesteel and flint
1:2

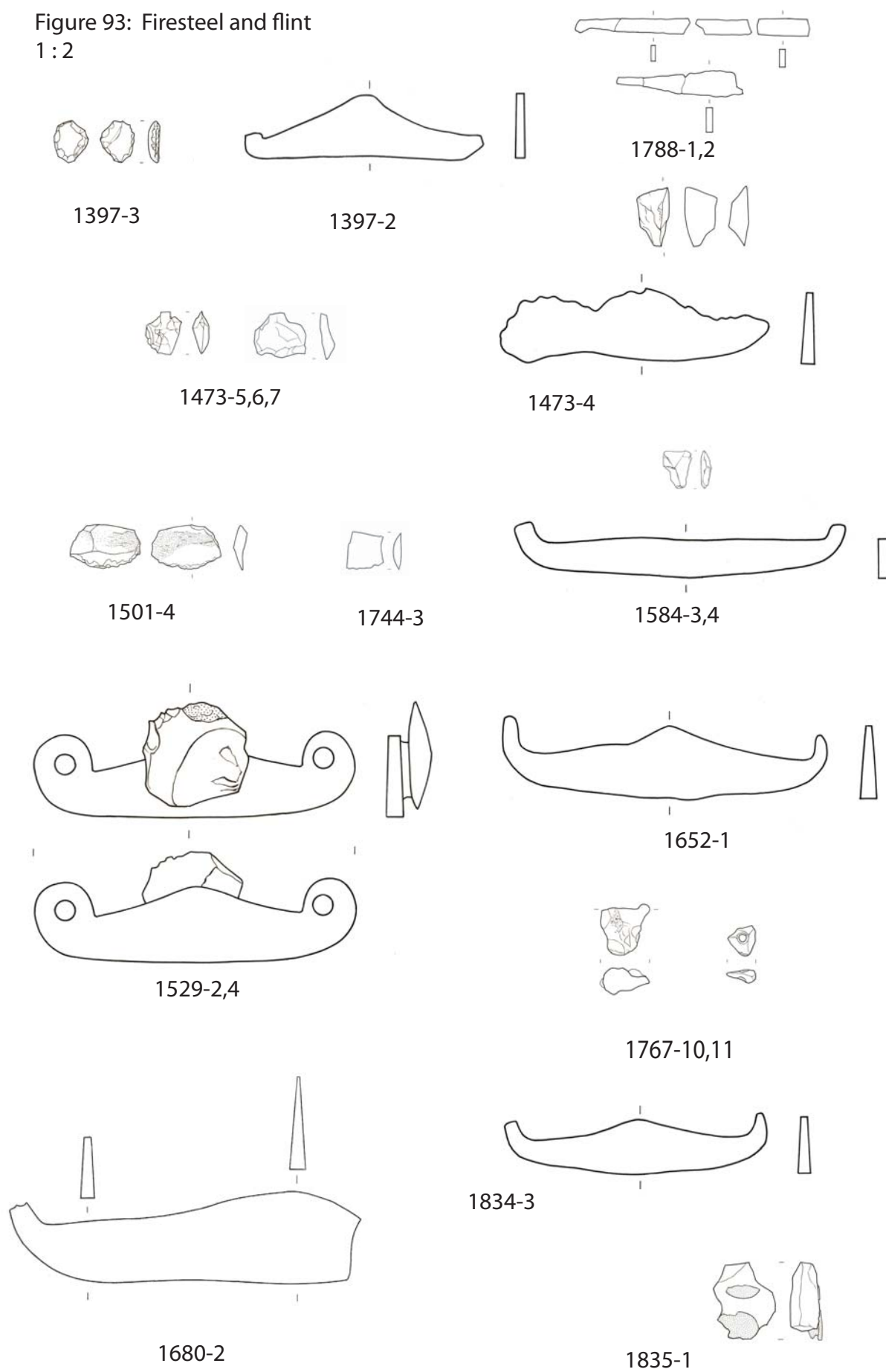
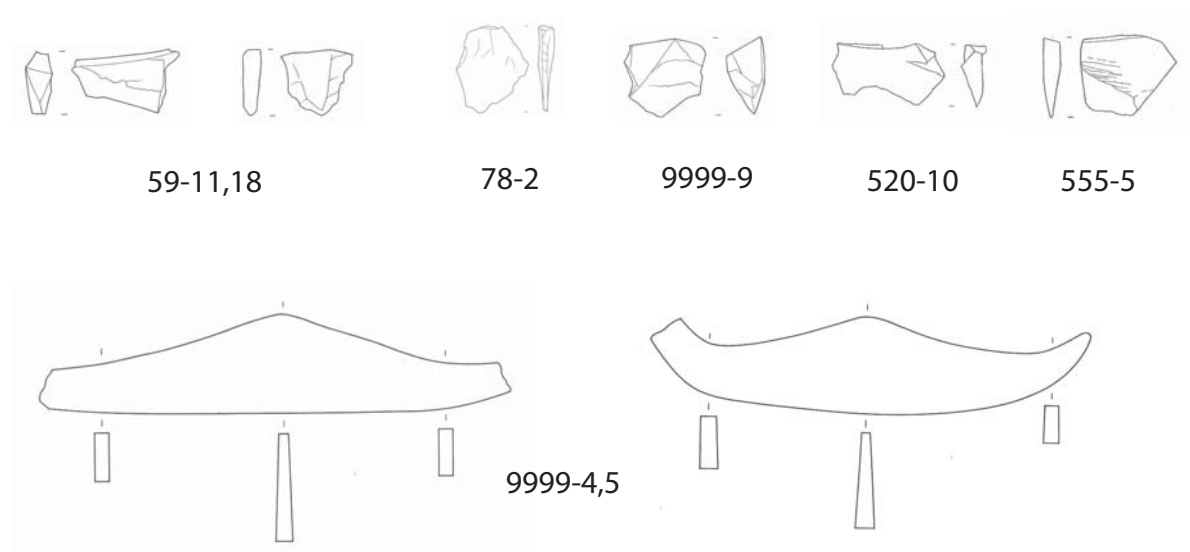


Figure 94: Firesteel and flint
1: 2



Tweezers and shears

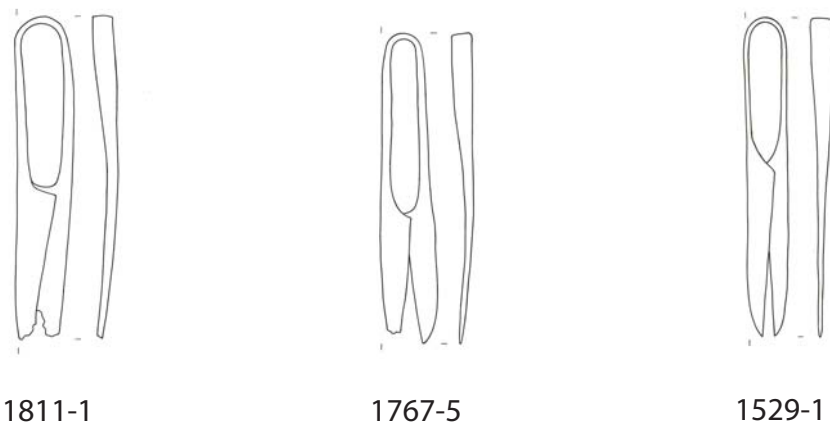
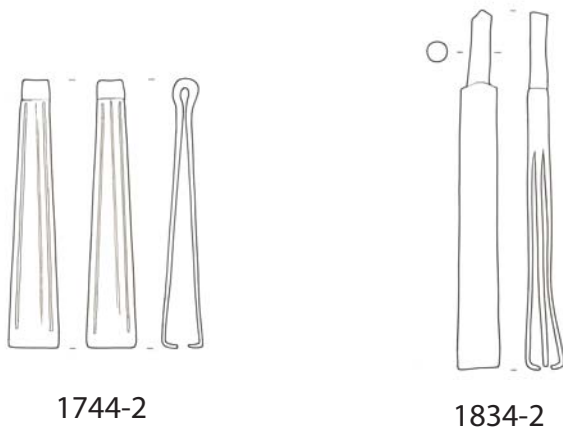


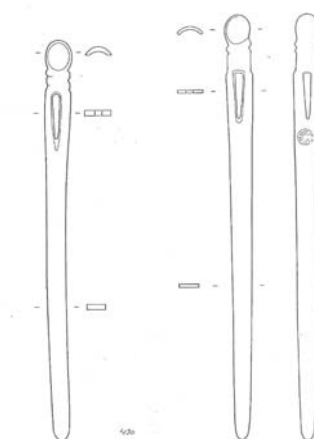
Figure 95 : Utensils
1 : 2



261-2

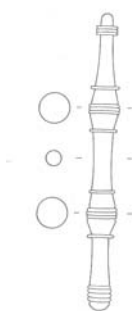


2-1

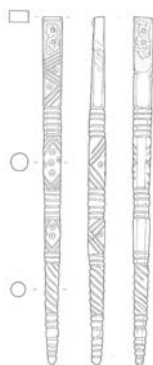


430-1

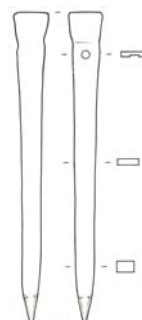
3-1



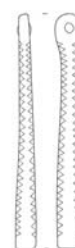
452-3



1565-1



1221-1

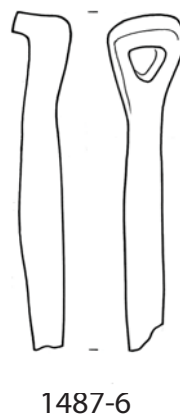
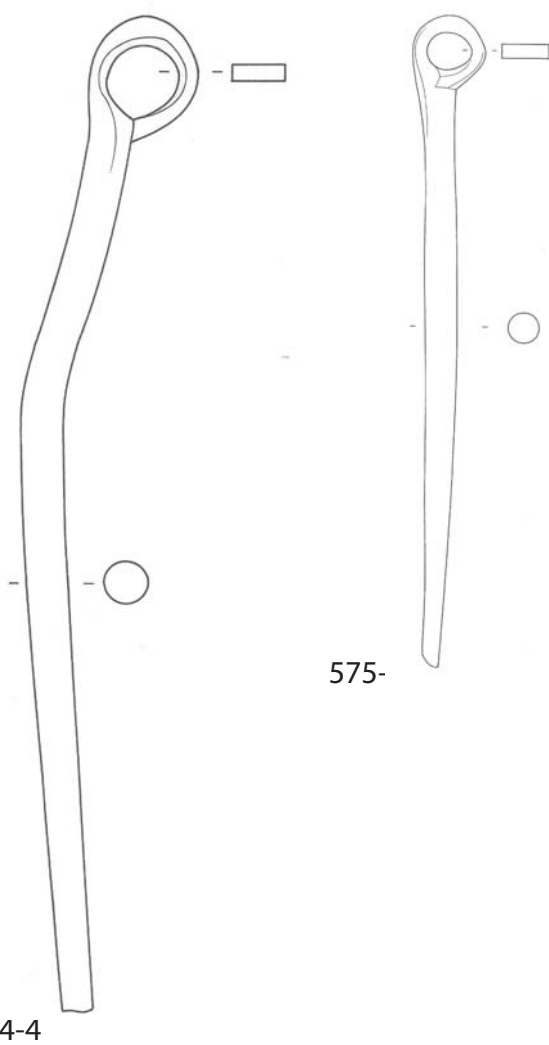
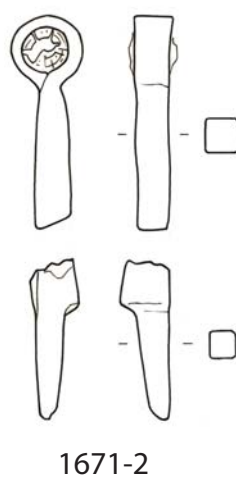
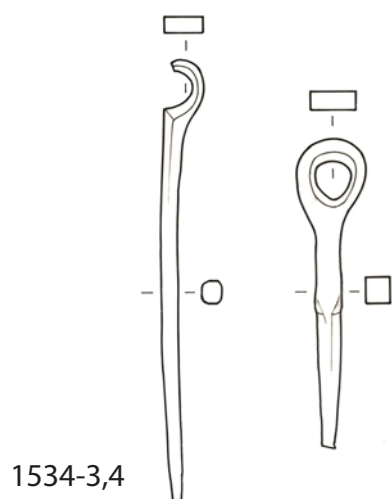


547-1



1403-10

Figure 96: Iron ring rods / various
1 : 2



Appendix 2

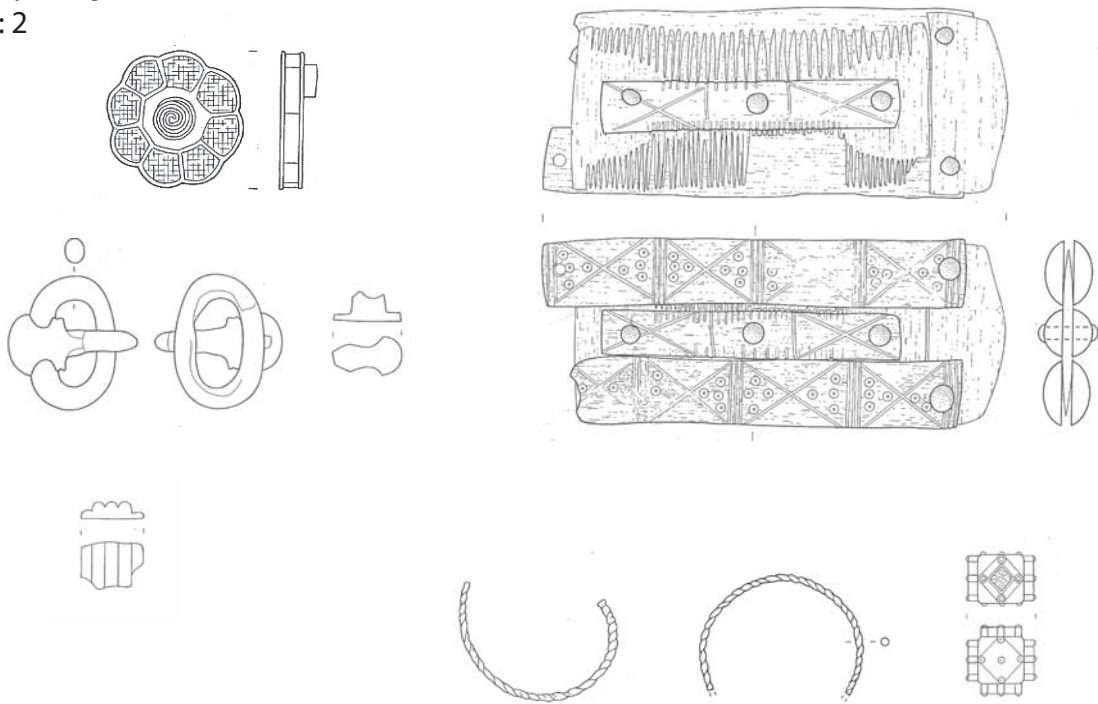
The circulation span of various grave goods assemblages from Vrijthof and Pandhof graves

- 1: Vrijthof grave 95
- 2: Vrijthof grave 166
- 3: Pandhof graves 11220 and 11321
- 4: Pandhof grave 10365
- 5: Vrijthof grave 194 and Pandhof grave 10799

1

Vrijthof grave 95

1:2

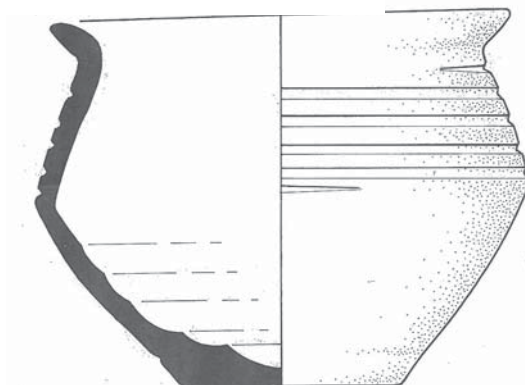
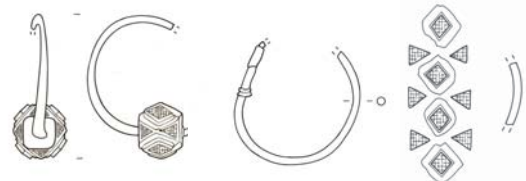
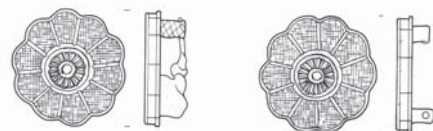


2

Vrijthof grave 166
1 : 2



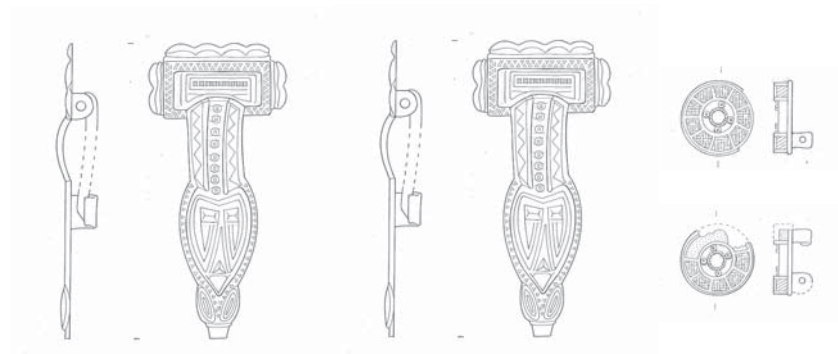
Vrijthof grave 187



3

Pandhof grave 11220

1:2



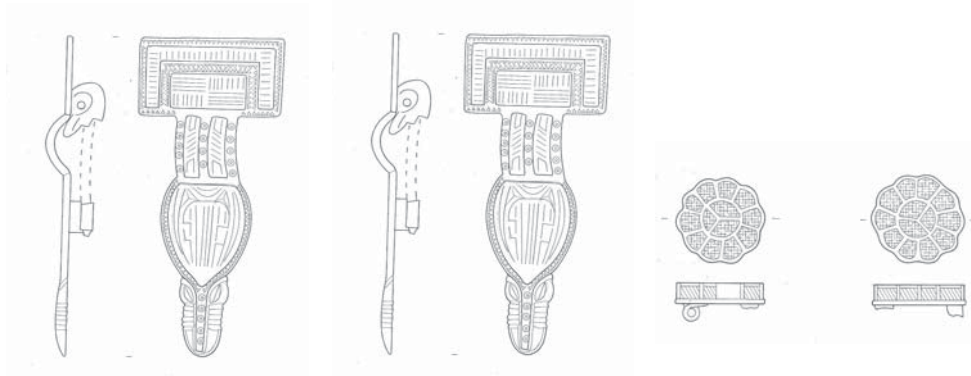
Pandhof grave 11321



4

Pandhof grave 10365

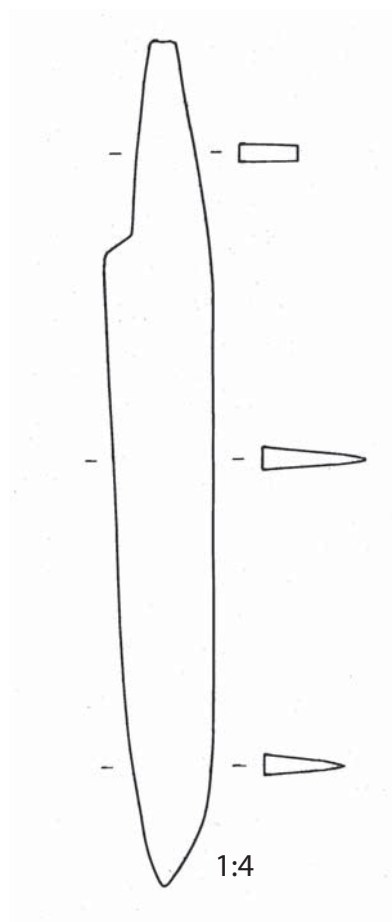
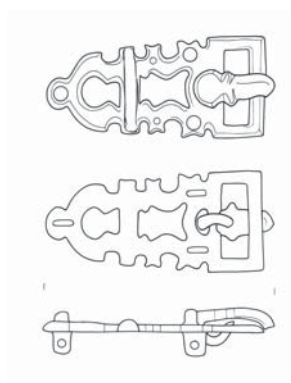
1:2



5

Vrijthof grave 194

1:2



Pandhof grave 10799

