The Disappearance of European Smiths' Burials

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Prestigious burials furnished with tools used in metalworking appear from the Eneolithic to the Early Middle Ages. The social status of the deceased has become a subject of a long-running discussion, one that typically ends with a statement on the prominent standing of individuals mastering the processing of metal in ancient societies. This notion is inspired by the ideas of V.G. Childe, and modern attempts to connect the Marxist–Leninist approach with the completely opposing phenomenologist approach result in a vicious circle. Obvious burials of rulers and children with forging tools document that an interpretation seeking highly respected craftsmen in 'smiths' burials' is flawed. The author sees the origin of the habit of equipping burials with forging tools in ritual metallurgy: the attributes of buried leaders who, through the use of forging tools, secured the prosperity of their community during rituals, became themselves symbols of elite standing. As in the case of burial furnishings, the performance of ritual metallurgy also depended on the organization of society, thus resulting in differences in the chrono-geographical distribution of burials with forging tools: in the period in which burials furnished with forging tools decline in the Mediterranean, their number peaks in central Europe; their occurrence ends in Viking Age Scandinavia.

Graves furnished with tools used in metalworking appear (not only) in Europe from the Eneolithic to the Early Middle Ages. This article focuses on the final phase of the occurrence of so-called 'smiths' burials' (or, more recently, 'metallurgists' burials'), which, however, help to shed light on the much older roots of the phenomenon. The burials often also contain indicators of the deceased individual's high social standing. The social status of such 'smiths' or 'goldsmiths' has therefore become a subject of discussion, one that typically ends with a general statement on the prominent standing of individuals mastering the metalwork process in ancient societies. Similarly popular are theories on the free status of gold/smiths (weapons are often found with forging or goldsmith's tools in the graves), on their high mobility or their travelling for work (graves are furnished with luxury artefacts of foreign origin) and their 'otherness', or even fear of these individuals (the burials are situated in isolated or exposed locations). Scholars have speculated whether the weapons, jewellery and other artefacts deposited in 'smiths' burials' were the products, articles of trade, models or raw material used by the buried individuals.

Attempts at broader interpretations of early medieval graves with forging or goldsmith's tools (e.g. Coatsworth & Pinder 2002, 227–46; Forbes 1964; Hinton 2003; Müller-Wille 1977; 1983; Pesch & Blankenfeldt 2012; Tobias 2009; Werner 1954; 1970; Wicker 1994) are based on hundreds of finds (e.g. Henning 1991; Ohlhaver 1939; Wallander 1988–89). Recently, Pleiner (2006, 72–4) attempted to divide individuals buried with 'symbols of their profession' into subcategories. Like other authors, he distinguished between 'smiths' burials' containing one, two, three, or more tools. The imaginary top of this type of pyramid would be graves that contain the broadest spectrum of craft tools (similarly, Rácz 2013). However, all of the studies with this type of orientation limit themselves to graves with forging or goldsmith's tools, regardless of the context of the particular cemetery. After all, a narrow focus on tools does not allow such

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finds to be placed in overall contexts, regardless of how well they are evaluated from a functional or archaeometallurgical perspective (e.g. Daim *et al.* 2005; Driehaus 1972; Kokowski 1981; Ódor & Rácz 2011; Rácz 2009).

Before dealing with so-called smiths' burials, the grounds of our approach will be clarified using an example of other artefacts deposited in numerous European prehistoric and early medieval burials. Although tools used in metalworking appear frequently in graves with tools for determining the value of metal and both were used in the treatment of metal, it would be misleading to search for a functional connection. In contrast to the world of the living, they are linked in graves exclusively by their function as a symbol, one which they share with other objects that were often exclusive in nature (weapons, jewellery, etc.). The composition of a funeral furnishing is nothing more than a reflection of the choice of the survivors from a wide range of symbols used at the moment they bid their final farewell. All of the variations reflected the positive wishes communicated by the survivors in general, regardless of whether or not they could provide an explanation for their choice. In other words, none of the symbols was directed toward the (posthumous) future.

On the limits of the professional classification of ancient burials

There are frequent deliberations in archaeological literature regarding both prehistoric and early medieval free, itinerant craftsmen and their role in the spreading of technological innovations, inspired by the ideas of V.G. Childe (e.g. 1930, 4–11; 1958, 169–73). The first reservations raised against such opinions were those of Preidel (1965, 14–22) and Rowlands (1971, 214–17), and thoughts involving such notions were put to an end by Gibson (1996). Neither their clear arguments, nor the comprehensive and in-depth processing of the topic by Neipert (2006), prevented the free and/or itinerant ancient craftsman from rising from the dead (e.g. Callmer 2002, 358–9; von Carnap-Bornheim 2001; Hedeager 2002, 8; 2011, 139–40; Heinrich-Tamaska 2008, 237–9; Henning 2004; Kienlin 1999, 31; Kristiansen & Larsson 2005, 54–60; Orengo 2003, 214; Quesada *et al.* 2000, 19; Sherratt 2000, 87–8).

'Itinerant gold/smiths' and 'armed merchants' also appear frequently in literature dealing with burials furnished with weapons and other exclusive objects and, at the same time, with tools for determining the value of metal. The conclusion seems self-evident: these rich individuals undertook distant expeditions and armed themselves accordingly. Likewise popular is speculation on whether weapons and/or jewellery in the graves of 'merchants' or 'goldsmiths' were articles of trade. However, numerous balance scales, weights and touchstones (usually classified as 'whetstones')[1] have also been found in female and children's burials, including burials of infants. In fact, they served during the burial rite as symbols of the social standing, its anticipation, or simply as expression of an affection of the survivors to the deceased, which, however, came in close contact with these objects mostly only after their passing. On the other hand, numerous aristocratic burials contained touchstones impressive on account of their dimensions or colour, which served as representative objects, or 'sceptres' during the lives of their users (Ježek 2013, 714–21; 2014, 428–9). Not even the Sutton Hoo sceptre represents the longest candidate: the 'whetstone' from Viking Age farm in Rangá, Iceland, near burial ground furnished with weapons, horses, etc., is 79 cm long (Friðriksson 2000, 602). In any case, the 'armed merchant' and 'itinerant craftsman' disappear from the scene, leaving behind elite burials.

Hundreds of thousands of touchstones have been found in early medieval metallurgical workshops, at trade centres, elite sites, etc. Although the huge number of damaged, discarded or lost touchstones testifies to their low value, these common tools fundamentally changed their importance on the occasion of a funeral ritual: the common tool became a symbol (Ježek 2013, 723–7). Many prestigious burials as well as countless simply furnished burials with typical stone artefacts also contained knives or scissors, and archaeologists had no doubts about the function of putative 'whetstones', even in graves without sharp iron. They believed that whetstones were tools useful even for children who had died at the age of several months. The presumed pair of a knife and a 'whetstone' collapsed; however, the age-old question of why tiny sharp objects were deposited in graves remains unanswered. The reasons could have changed over the centuries, differently from region to region. Nevertheless, some type of conclusion is possible: a common metallic blade acquired its symbolic meaning at the moment of burial.

Tools for determining the value of metal are sometimes accompanied in ancient burials by the tools used in metalworking, sometimes not. However, as is the case with the graves of numerous alleged 'armed merchants' or 'itinerant craftsmen', it is also time to ask a question of burials furnished with forging tools: is it correct to speak of 'smiths' burials'?

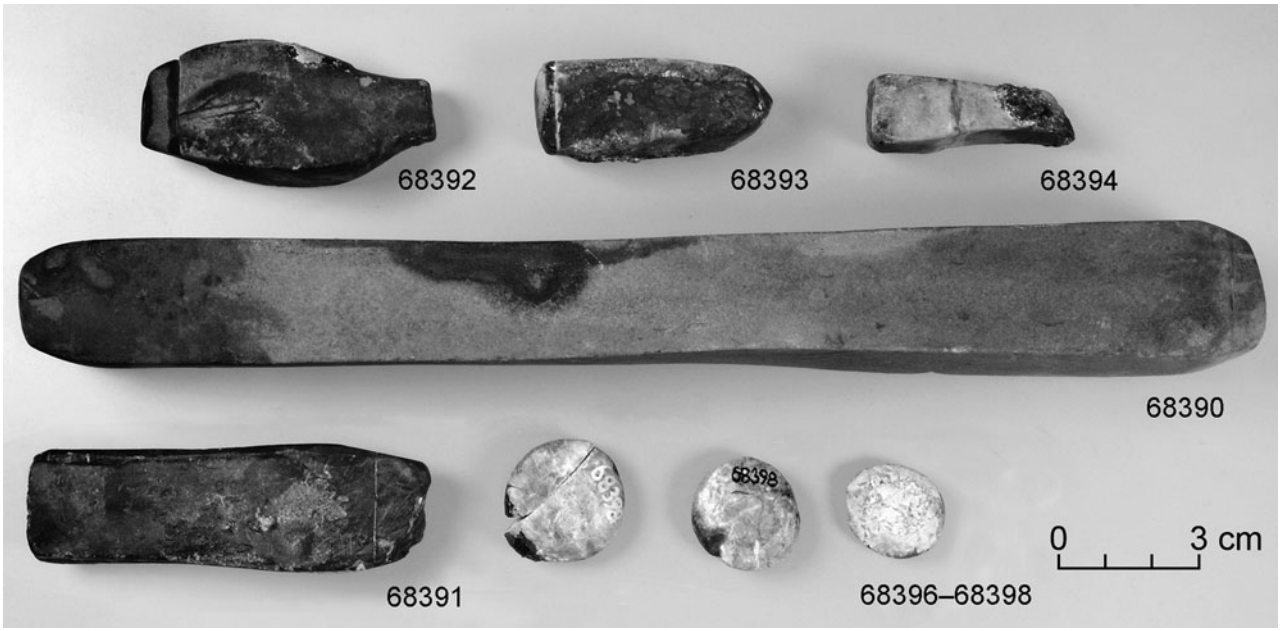

Figure 1. *Brno (Czech Republic), Kotlářská Street. Stone artefacts from the burial furnishing, the sixth century* AD*, inventory nos. after the catalogue of the Moravian Museum, Brno. Inv. no. 68390 beige siliceous siltstone; 68391 black siliceous siltstone; 68392–3 beige quartzite; 68394 beige fine-grained sandstone or siltstone; 68396–8 light grey limestone.*

Two Langobard burials as examples

Brno, Kotlářská Street (Czech Republic)

A male burial from the sixth century AD was discovered by chance in 1931. A complete publication came much later (Daim *et al.* 2005). Sheet metal shaped like a helmet was found on the deceased individual's head, and, among other things, the remnants of a spear, an anvil, tongs, two hammers, balance scales, a weight, five oblong four-sided 'whetstones', and three small stone disks (regarded as weights) were found next to the skeleton. The interpretation of the grave has changed over time. The warrior (Červinka 1936, 132, fig. 15; Skutil 1936, 161) simultaneously became a smith (Červinka 1936, 132; Ohlhaver 1939, 125), later a goldsmith (Menghin 1985, 69; Werner 1962, 155; 1970, 68–9), finally a smith again (Daim *et al.* 2005).

The stone artefacts were observed under a SEM (Figs. 1 & 2; Table 1; on the method, see Ježek & Zavřel 2011, 127). The 26 cm-long artefact with rectangular cross-section (inv. no. 68390) bore streaks of lead, gold, silver and copper. Preserved on the surface of the oblong, four-sided artefact (68391) are linear streaks of lead and tin as well as grains of silver with an admixture of tin, gold and zinc. Numerous streaks of lead were observed on all the additional stone artefacts, four-sided as well as round.

Table 1. *Brno, Kotlářská Street. Results of chemical microanalyses of traces of metal survived on the surface of four-sided stone artefacts. Each analysis number (An.) belongs to another streak. The data are given in weight per cent and calculated at 100 per cent; the data are semiquantitative (on the presence of Cl and S, see Ježek & Zavřel 2011, 150–51).*

Inv. no.	An.	Ag	Au	Cl	Cu	Pb	S	Sn	Zn	Σ
68390	1	75		25						100
	2	2	98							100
	3			2	96		2			100
	4					100				100
68391	1					100				100
	2						2	98		100
	3	47	15	1			13	17	7	100
68392	1					100				100
68393	1					100				100
	2					74		26		100
68394	1					100				100

Poysdorf, burial 6 (Lower Austria)

A total of eight burials were excavated in the 1930s. Gold artefacts were found in one female grave, while three male graves contained weapons, gear and other objects. One of the male burials was grave 6. Although looted probably shortly after being covered with soil, it still contained the remnants of a shield, a scramasax and other objects, including

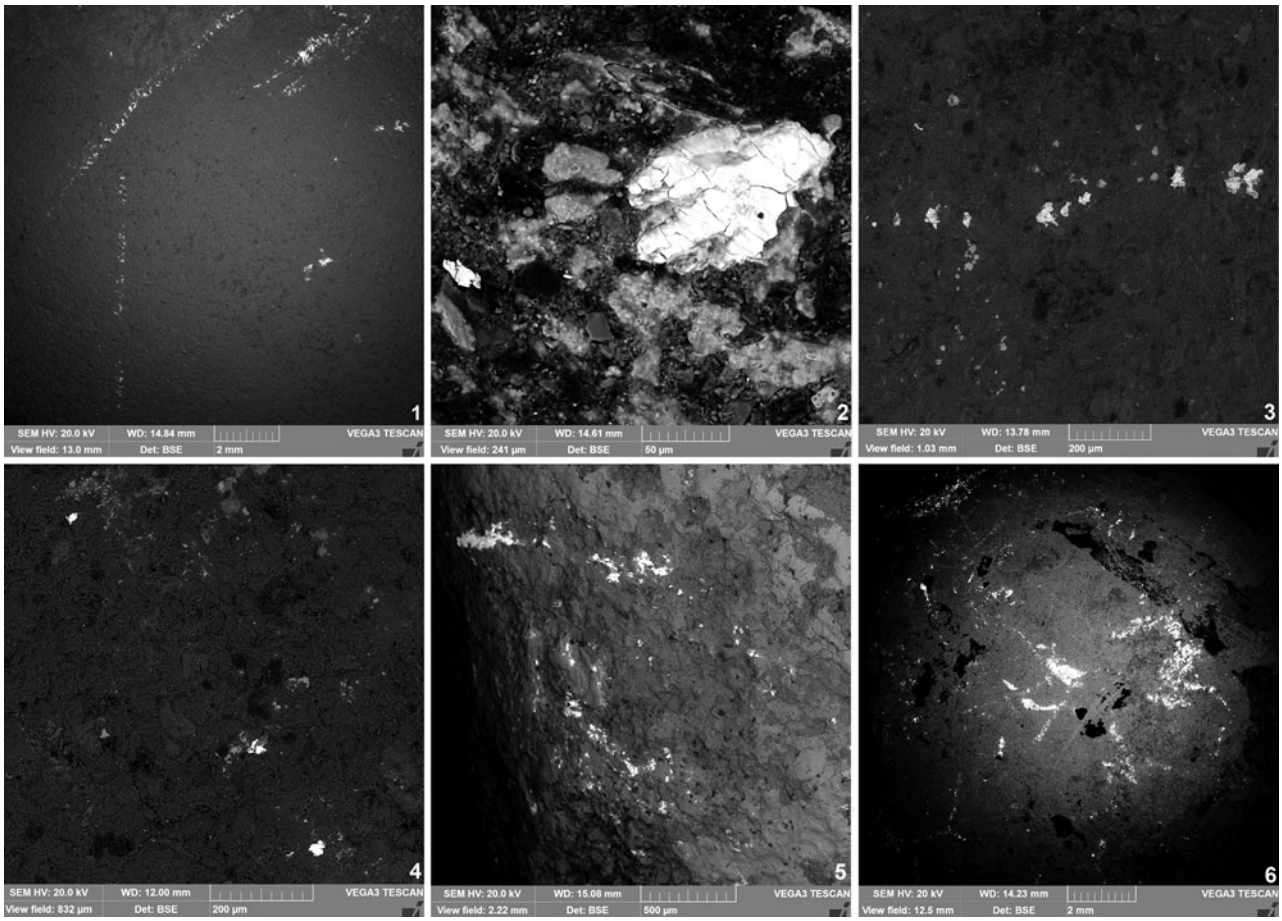

Figure 2. *Brno, Kotlářská Street. Examples of metal traces on the surface of stone artefacts. 1 – inv. no. 68390, lead; 2 – 68391, silver with admixture of tin, gold and zinc; 3 – 68391, tin; 4 – 68390, gold; 5 – 68394, lead; 6 – 68398, lead.*

two forging tongs, an anvil, three jeweller's and/or smith's hammers, a file, two semi-finished bronze fibulae (or their models), and two stone artefacts (Daim *et al.* 2005, 205). Thanks to an interpretation as the grave of a goldsmith (Beninger 1934, 108–12; Beninger & Mitscha-Mährheim 1966), the burial received far greater attention than other elite graves at the same cemetery (e.g. Daim *et al.* 2005; Ohlhaver 1939, 123–4; Werner 1962, 65). Mitscha-Mährheim (Beninger & Mitscha-Mährheim 1966, 181) had already opposed the opinion that the grave belonged to an itinerant craftsman, a theory that had taken hold (e.g. Driehaus 1972; Menghin 1985, 69; Werner 1970, 70).

One of the stones, 14 cm long and with a rectangular cross-section, was classified by Beninger as a 'whetstone' (Fig. 3:28; recently, this artefact could not be subjected to SEM analysis). He identified the other, which was spherical, had a diameter around 4 cm and was made of a hard, black material (Fig. 3:29), as 'perhaps a smoothing stone'. Daim and colleagues even found 'small' traces of silver on its surface. They classified the artefact as a touchstone before eventually interpreting it as a smoothing stone (Daim *et al.* 2005, 205, 211–12). While even this interpretation appears plausible owing to the shape of the artefact, it is not supported by linear streaks of precious metals that were identified on the surface of the stone (Fig. 4).

As a result, the oblong four-sided specimens and the spherical artefact are regarded as touchstones, the small disks as tools used to smooth metal products. This division is also based on the divergent materials of the artefacts: limestone discs covered with streaks of lead differ in all regards from oblong artefacts made of hard material with streaks of various non-ferrous metals. In any case, additional furnishings from graves in Brno and Poysdorf testify to the high social standing of buried individuals.

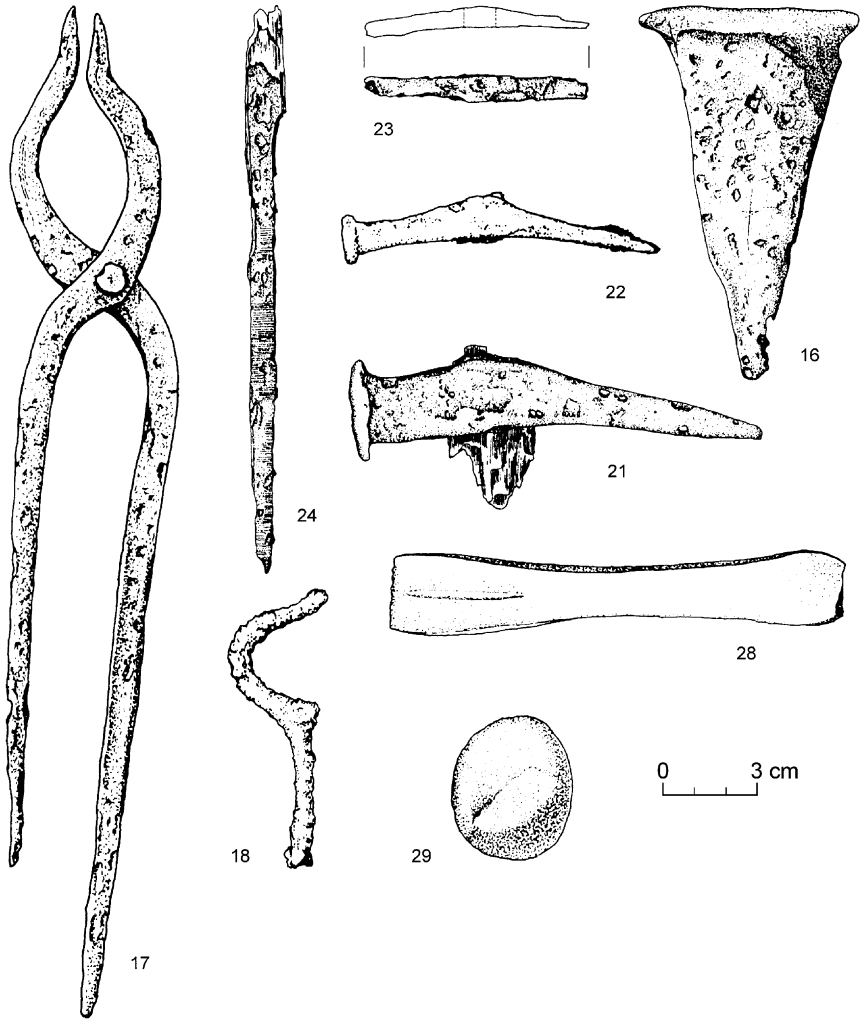

Figure 3. *Poysdorf (Lower Austria), grave 6, sixth century* AD. *Selected artefacts from burial furnishing (after Daim* et al. *2005, fig. 5; nos. correspond to their catalogue). Nos. 28 and 29 – stone.*

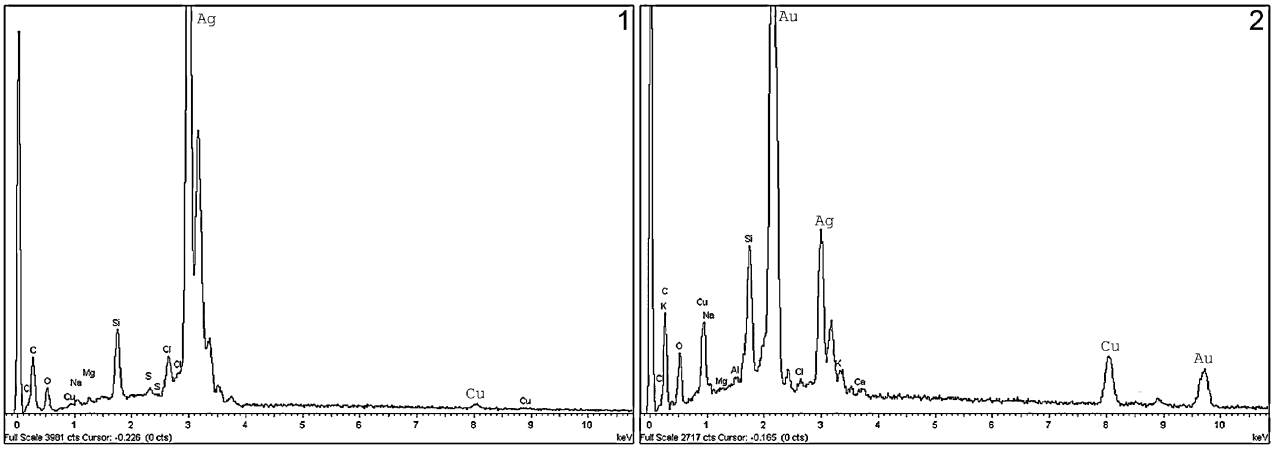

Figure 4. *Poysdorf, grave 6. Spectra of the linear streaks of metal observed on the surface of the spherical touchstone (see Fig. 3:29). (Measurement: M. Mehofer, VIAS.)*

Metal beginnings

Burials furnished with tools used in metalworking appear in the Eneolithic (e.g. Bertemes & Šebela 1998; Bertemes *et al*. 2000; Müller 1987; Moucha 1989). Their number increased in the Bronze Age, and additional furnishings or the construction of graves often testify to the high social standing of buried individuals (e.g. Bartelheim 2002, 35–7; 2010, 872–3; Bátora 2002, 179–213; Bertemes 2010; Brandherm 2009; Freudenberg 2009). Although such burials appear on the Iberian Peninsula, in the Netherlands, England and the eastern Mediterranean, on a European scale there are two concentrations of such Eneolithic and Early Bronze Age burials: central Europe and the sphere of Catacomb and Timber Grave cultures in southeastern Ukraine and the neighbouring part of Russia (Bátora 2002, 180–93; Kaiser 2005). The earliest 'smiths' burials' include prestigious graves such as Novosvobodnaya barrow 25, Baturinskoe barrow 1 and Inozemtsevo; traces of gold and silver were even found on stone artefacts with the shape typical for touchstones, but which, however, are regarded as 'stone anvils' (Korobkova & Scharovskaja 1983, 88–94).

At least hundreds of 'whetstones', usually without any indications of sharpening, are known from rich Scythian–Sarmatian and Cimmerian graves from the Crimea to central Ukraine, at least dozens from the Carpathian Basin and many other areas in eastern Europe of the Late Bronze Age and Early Iron Age (Burghardt 2012, with refs.). Similarly as touchstones with silver rings or a gold-plated forging from early medieval Vendel, Birka and Hedeby (for references see Ježek 2013, 714), also elegant 'whetstones' with gold forgings have been found in Early Iron Age prestige burials in southeast European steppes (Fig. 5).

Dozens of 'whetstones' are known from the royal cemetery in Ur (Woolley 1934, 412–595) as well as from other sites of ancient Mesopotamia. Four stone hammers and around one hundred other artefacts, including five or six typical stone artefacts, accompanied a man buried in Pyrgos, Cyprus, in the Early Bronze Age (Belgiorno 1997). An even greater number of grave goods were found in the grave of an individual buried in Megiddo, Israel, including 31 weights, four scale pans and three 'whetstones' (Guy 1938, 69–72, pls. 124–32). The list of prestigious burials containing touchstone candidates from the Bronze Age (and later) eastern Mediterranean would be very long (e.g. Benac & Čović 1957, 95; Blegen 1952, 290; Evans 1914, 41; Graziadio 1991, 413; Schuster Keswani 2005, 356, 365–6).

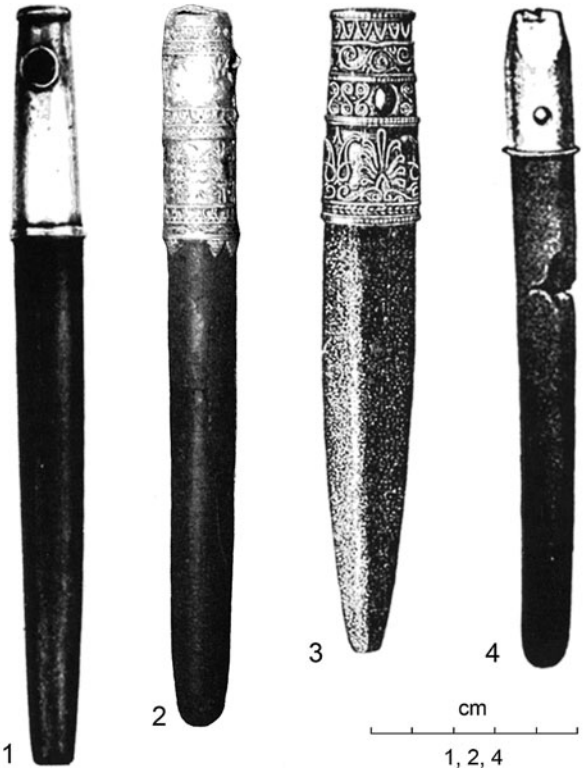

Figure 5. *Examples of touchstone candidates from Early Iron Age prestigious burials from Ukraine (1–3) and a hoard (4) from eastern Poland. The forgings are made of gold. 1 – Tchertomlyk; 2 – Kul'-Oba; 3 – Talajevskij kurgan (without scale); 4 – Witaszkowo. (After Burghardt 2012, pl. 1, as 'whetstones'.)*

Prestigious burials furnished also with forging tools and/or touchstone candidates are found throughout the whole of Bronze Age Europe, e.g. Amesbury and Hove in England, Soest and Lunteren grave 1 in the Netherlands, Leubingen, Poing, Puls, Zwenkau and Sachsenburg mound 3 in Germany, Gemeinlebarn grave 532 in Austria, Prosiměřice and Ludéřov in Czech Republic, Nižná Myšľa grave 280 in Slovakia (Barber 2003, 125–6; Bertemes 2010; Butler & van der Waals 1966; Kersten 1935, 91, pl. IX; Kuna & Matoušek 1978; Neugebauer *et al*. 1994, 298, fig. 29:3, 4; Olexa 1987; Pernička 1961; Steffen 2010; Winghart 1999). The list of less spectacular examples would be much longer (for example, Bartelheim 2010, fig. 6a–c; Nessel 2012a,b; Neugebauer & Neugebauer 1997, graves 30, 409, 725, 853, 868, 933). The Late Bronze Age 'smith's burial' from Lachen-Speyerdorf (Germany) is emphasized here because Sperber perceptively drew attention to the fact that the frequency of forging tools was much lower in Urnfield culture burials than in Lusatian culture graves. Instead of testimony on the varied degree to which the professional craft was

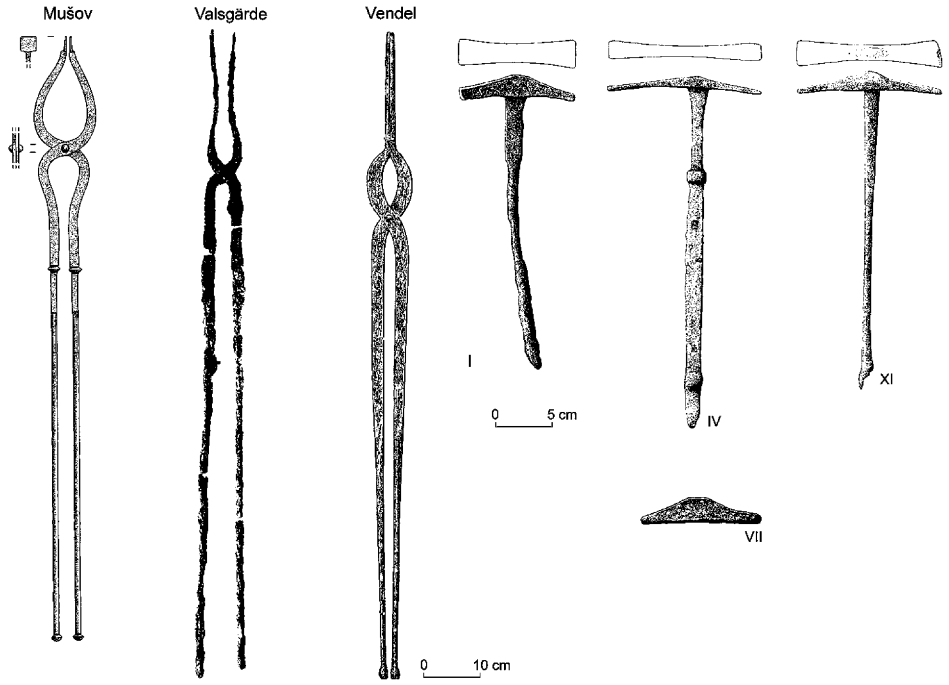

Figure 6. *Forging tools from the 'royal' burial in Mušov (Czech Republic, second century* AD*), boat burial 7 in Valsgärde and boat burials I, IV, VII and XI in Vendel (Sweden, seventh–ninth centuries* AD*). (After Arwidsson 1977, pl. 33; Feugère 2002, 561; Ohlhaver 1939, pl. 18:4; Stolpe & Arne 1927.)*

practised in the two cultural spheres (Sperber 2000, 395), we find the reasons of the different image in divergent cultural patterns (see below).

Casting moulds, clay nozzles from bellows used on smelting furnaces, casting crucibles and other artefacts were found in a large number of Bronze Age graves across the whole of Europe (e.g. Bátora 2002; Bertemes 2010; Clarke 1970, 264; Jockenhövel 1982). Based on the extraordinarily rich furnishings of four graves with fragments of ores in Volders (Austria), Jockenhövel (1982, 295) does not doubt the high social standing of the buried individuals, whom he regards as ore prospectors, although the individual buried with fragments of metal ingots in Marzoll (Germany) was a woman 18–20 years of age. A woman from Aksay (Ukraine) regarded as an individual processing metals died at the same age (Vlaskin 1999, 65), and a girl in Erfurth-Gispersleben (Germany) was furnished with metallurgical nozzles (Müller 1982, 176, fig. 5:2). The latest example from numerous female burials furnished with objects used in metalworking comes from an Early Bronze Age grave in Geitzendorf (Austria: Lauermann & Pany-Kucera 2013).

Much effort was put into explaining the evident disproportion between the number of Bronze Age smiths or metallurgists and a much smaller number of 'smiths' burials'. This gave rise to an entire range of varying opinions, including the 'caste-related' standing of smiths, often migrants, who had no right to be buried in the regular manner (Childe); the profession of secretive metallurgists was often not known to others, and for this reason their graves were not furnished with the respective tools (Chernyh); smithing tools were placed in the graves of smiths due the absence of children (Dąbrowski); the consequence of the termination of the inherited profession due to the fact that no male descendants remained in the smith's family (Nessel 2012b, 428–9, with refs. and discussion). The current state of knowledge can be summarized in the words of Kristiansen and Larsson (2005, 52–3): 'In ranked society chiefly aristocracies, skilled artisans and specialists occupy a special, often sacred role ... Smiths often enjoy a privileged position linked to the role of the smith as a Culture Hero ...'. Rowlands (1971) had already expressed a quite different, well-supported conclusion years earlier.

Below is an attempt to investigate whether 'a Cultural Hero' is merely an adage documenting the futility of the traditional method. It is clear that by disregarding ritual aspects archaeology will never move beyond being a discipline dealing with material culture (e.g. Barndon 2006; Bergstøl 2002; Blakely 2006; Blakely Westover 1999; Budd & Taylor 1995; Doonan *et al.* 2012; Goldhahn 2007; 2009; Haaland 2004; 2006;

2007/2008; Helms 1993; Lund 2006; Melheim 2006; Østigård 2007; Prescott 2000). It should be pointed out that in contrast to many works addressing this subject, the author of this text regards the application of ethnographic knowledge of the symbolic aspects of iron (!) metallurgy in present-day Africa or South Asia to European archaeological material from the Eneolithic up to the Early Middle Ages as a dead-end.

Across ages and archaeological classifications

Files, rasps, chisels and other tools are known from Etruscan burials (e.g. Veio, Vetulonia) and from contemporary and later graves in the eastern subalpine areas, including prestigious Early Iron Age burials from Hallstatt, Kleinklein, Este, Stična, Sanski Most, among others. Recognizing that the tools were for metalworking, Teržan (1994, 659–60) deduced that graves from between the eighth and sixth centuries BC furnished with forging tools belonged to smiths. As the tools in question appear exclusively in extraordinarily rich graves, she classified the deceased in the majority of cases as 'princeps' or 'primus inter pares'. Teržan (1994, 664–5) found the answer to her own question of whether the relevant tools in graves indicate the dominance of the deceased over craftsmen or the practice of the craft by the deceased individuals in the traditional interpretation: the burials belonged to craftsmen, who were members of a higher, if the not the highest, social class. The idea of a symbol of supremacy over craftsmen also appears in literature dealing with other periods and regions (e.g. Arrhenius 1993; Capelle 2012; Kristoffersen 2009).

As is the case in thousands of early medieval burials, numerous touchstone candidates are known from Iron Age burials. While they are less frequent, their occurrence is clearly limited to the social elite. For example, only a few typical stone artefacts are known from the Iron Age graveyard in Dürrnberg bei Hallein (Austria) — from burials 24/2, 29 and 44/2 (Penninger 1972); grave 44/2 actually contained three specimens (Pauli 1978, 259–60). The richness of this burial on a wagon is unrivalled in Dürrnberg (Penninger 1972, 76–81, pls. 43–8). Graves 24/2 and 44/2 were the only ones in the entire cemetery to contain 'razors', with grave 44/2 actually containing three specimens (Pauli 1978, 259–60). Rich grave 29 is also remarkable in the cemetery owing to the extraordinary dimensions of a shield.

Touchstone candidates were found in three (graves 48, 520, 1005) of the twenty-five inhumation graves at the La Tène period cemetery in Pottenbrunn (Austria: Ramsl 2002, 88–9). Two of these burials are among the six local graves containing a combination of a sword and a lance, or, in the case of burial 520, probably a standard. This grave also contained a metal artefact interpreted as a surgical tool; a unique bone object led to speculation on the individual's occult involvement (a druid: Ramsl 2002, 131, 142–3, 152). On the other hand, grave 48 has been interpreted as the burial of a craftsman or smith on the basis of the presence of bronze discard, semi-finished forms (Ramsl 2002, 139, 152, 154). As yet unanswered is whether all three graves belong to individuals with a similar social standing despite being furnished with various artefacts. At least four surgical tools have been found in late La Tène period cremation burial 41 in Żukowice, also furnished with numerous weapons, including a 'whetstone' (Poland: Demidziuk & Kokowski 2003).

Typical stone artefacts have been found in numerous La Tène period graves, particularly in those furnished with weapons, elsewhere in Austria and Slovakia (e.g. Benadík 1957; Lorenz 1978, 102–3; Ratimorská 1981). One of these burials in Chotín (Slovakia) also contained three files, gold and silver artefacts (Ratimorská 1981, pl. XXIV:B). The graves also contained iron artefacts, thousands of which are found throughout Europe, and which are uniformly interpreted as razors. As was shown by an analysis of the find inventory of cutlasses (e.g. from Dürrnberg and Pottenbrunn), which are an enlargement of the 'razors', the interpretation of such artefacts can change quickly: in the case of the cutlasses to ritual tools (Čižmář & Kruta 2011). Depictions of boats, the sun and animals (including fantastic renderings) on 'razors' from the Nordic Bronze Age are explicit expressions of mythological symbolism (Kaul 2004, 241–56). In regard to (Bronze Age) metal anvils, Needham (1993, 131) documented that these tools 'were important in the production of intricate and presumably highly symbolic gold ornaments'. Nevertheless, the notion that razors were placed in graves should not be criticized, even if the classification of these artefacts is based exclusively on the faith of archaeologists: these artefacts are linked by their blades to an endless range of knives and scissors from prehistoric and early medieval burials.

There are also numerous La Tène period graves with forging tools, often also with weapons; usually, a relationship between the buried 'craftsmen' and the local elite is tentatively indicated (e.g. Nebehay 1973, pls. X–XIII; Orengo 2003, 211; Stead 1991, 63, 71, 79–80, 197–9, 205–6; Taus 1963; for additional examples, see Brumlich 2005, 202–4; Henning 1991, 77–8; Kokowski 1981). An anvil found in Boddin (Germany: Keiling 1972) was part of the grave inventory of an individual determined to be 'probably female' by anthropological analysis, despite the clear archaeological

anticipation of the individual being male (for additional examples of Iron Age female burials, see Brumlich 2005, 206–7). We expect a far greater number of individuals buried in the final millennium BC with a symbol that need not in any way be linked to activities conducted during their lifetime but instead to their social standing. The number of such cases from the following millennium is great. For example, in Viking Age burials in Birka (Sweden), the touchstones were found in 59 per cent male burials and 41 per cent female burials; the weights are divided evenly among the two groups (cf. Ringstedt 1997, 78, 81). Any efforts involving gender aspects would be clearly irrelevant: even children's burials with tools for determining the value of precious metal are frequent in Europe (Ježek 2013, 720).

Forging tools also appear in children's graves dated to the Early Middle Ages as well as from the Roman period (e.g. Wederath-Belginum grave 115, Germany: Haffner 1971, 31, pl. 24; Krefeld-Gellep grave 6294, Germany: Pirling 2002, 518, fig. 24:5). The unusual size of the grave pit of a Frankish burial of a year-old child from Saffig-Wannenköpfen grave 110 indicates that the individual belonged among members of the local elite (Germany: Melzer 1993, 79–82, 162, pl. 25:66).[2] An example of female graves furnished with forging tools from the Roman period is Stengade grave 10 (Denmark: Albrectsen 1956, 83, pl. 29:37); from the Early Middle Ages, Westheim-Mehlbuck grave 60 (Germany; Reiß 1994, 277–8, pl. 37:10). Female 'smith's burial' 405 excavated in the early medieval graveyard in Tauberbischofsheim-Dittigheim (Germany) was also furnished with a touchstone; traces of gold were preserved on the file from another of the four local 'smiths' burials' (von Freeden 2003, 5–6, fig. 1:1,4). A whole range of rich La Tène period burials contained objects interpreted as files (e.g. Bujna 1995, 90–91, pls. 44–5; Sankot *et al.* 2007: the unusually oriented grave of a teenager). The finds from La Gorge-Meillet, Marne, or Celles, Auvergne (France: Fourdrignier 1878; Pagés-Allary *et al.* 1903), for example, represent aristocratic burials that contained such objects, among other forging tools.

Numerous cremation burials furnished with forging tools make it impossible to determine the gender of the deceased. In addition to weapons, Roman period cremation grave 324 in Husby (Germany) contained four files and a nozzle from a bellows. In addition to a stirrup, another local grave contained, among other objects, a 'whetstone' (Hingst 1984–85, 64–5, with additional examples). As a result, doubts about the social standing of the deceased hang over the Roman period 'cemetery of metallurgists' in Zethlingen (Germany: Leineweber 1989, 114; with additional examples). The number of Iron Age graves with fragments of iron ore and/or slag in the northern part of Europe (Brumlich 2005, 192–200; for later periods, e.g. Haaland 2006, 83–4; Shepherd 1997; Williams 2010) calls to mind the richly furnished Bronze Age burials containing such objects.

Extraordinary forging tongs were found in the Germanic 'royal' burial in Mušov (Czech Republic) from the second century AD (Fig. 6; Feugère 2002; Peška & Tejral 2002). The geographic distribution of aristocratic Roman period graves also furnished with forging tools is illustrated by burials in central France (Ferdière & Villard 1993, 27, 63, 113, 127)[3] or Normandy (Coutil 1921) and the burials excavated near the eastern border of Poland (Hadaczek 1909, 11, fig. D:VIII; Malinowski 1950–53, 259). However, hundreds of more or less rich burials with forging tools are known from Europe at the time (e.g. Henning 1991, 78–80; Kokowski 1981; Müller-Wille 1977, 160–65, 194–5).

In addition to the tools used in metalworking and/or valuable objects, numerous European graves from different periods contained hunting and fishing tools as well as the skeletons of dogs and birds. Among early medieval (or Late Iron Age) examples are 'smiths' burials' from Loffos and Eltdalen (Norway: Müller-Wille 1977, 166), however, dozens of elite graves without forging tools also contained hunting and fishing tools. Harpoons and fishing hooks were placed in the extraordinary burial (70) of a young person from the eleventh century in Sowinki (Poland: Krzyszowski 1997), the grave inventory also included balance scales, 18 weights and two touchstones (Ježek & Zavřel 2011, fig. 1). Even among Viking Age burials in Iceland are fishing hooks known exclusively from three graves, furnished also with weapons and, simultaneously, with horses and/or boats (Friðriksson 2000, 607). Fishing hooks were also present in male and female burials at the eponymous Hallstatt and at other Iron Age sites, mainly in rich graves (Stöllner 2007, 237, 246), as well as in prestigious Aegean Bronze Age burials (e.g. Graziadio 1991, 413). A copper harpoon has been found, for example, in the extraordinary burial 67 in el-Gerzeh, Egypt, 3200 BC (Petrie *et al.* 1912).[4] Like game stones or evidence of falconry and gaze hounds, fishing and other tools connected with free-time activities belong to the *longue durée* indicators of elite status.

Deconstruction of selected early medieval 'smiths' burials'

Interpreting obvious aristocratic graves also furnished with forging tools as 'smiths' burials' would

apparently be senseless. Finds of this kind from Sweden alone include Gamla Uppsala boat burial 1 (Nordahl 2001, 20), Vendel boat burials I, IV, VII, XI, and Valsgärde boat burials 3, 6, 7. Forging tools were also found in three Birka burials (644, 750, 872: Arbman 1943) — in all cases with at least two touchstones: all three burials were among the '20 most high-ranking graves', designated among 1100 analysed burials in Birka by Ringstedt (1997, 148). Nevertheless, less-rich graves with similar goods, the find contexts of which allow for even a small amount of conjecture, provide substantial room for the expression of archaeologists' faith in the possibility of a 'professional' interpretation.

During a dark period in European modern history, early medieval northern burials with forging tools led to an emphasis on the importance of iron processing in ancient Germanic society (Ohlhaver 1939). After World War II, the habit of highlighting the significance of these 'Germanic' finds came to an end (with only several exceptions, especially in Norway). Partly unjustly: the frequency of forging tools in Germanic burials has been confirmed by modern research (e.g. Henning 1991; Müller-Wille 1983, 253–4; Wallander 1988–89).

Early medieval graves with tools used in metalworking also occur outside regions settled by Germanic populations;[5] however, an unanswered question is the extent to which the elite from the Avar environment, for example, adopted the behavioural patterns of Germanic (Gepidic) society, with which they were in continual contact (for dozens of the Avar period 'gold/smiths' burials', including the prestigious burial from Kunszentmárton (Csallány 1933; see also Rácz 2009; 2013; Turčan 1984). For that matter, the number of graves with tools used in metalworking in the Carpathian Basin is the highest after the settlement of nomads among the Gepids, in the later part of the sixth century and in the early seventh century (Rácz 2013, 377); later, their numbers decline significantly in Avar environment.

In any case, forging tools appear frequently in graves as far back as the Bronze Age. The occurrence of burials of this kind is not related to the ethnic affiliation of the deceased. Furthermore, no culturally uniform Germanic society existed from the first centuries AD to the Viking Age between the Danube region and Scandinavia. In light of the burials with tools for determining the value of metal or with forging tools, there are also significant differences in the expressions of behaviour by contemporary Germans from the early medieval Empire and Germans from the northern part of Europe. On the other hand, the burial customs of the northern Germans of the Viking Age resemble the traditions not only of the long-lost Langobards, Gepids, etc., but also the population of central European Germania Libera in the first centuries AD.

This clearly no longer concerned only the Germans, although ancient archetypes survived the longest in the culture of the inhabitants of Scandinavia. The burial rite, conditioned particularly by belief, is reflected distinctly in the relevant matter. However, our aim is not to explain the role of Christianity in building state forms, since transalpine Europe in the Early Middle Ages went through these processes hand in hand. Similarly, the influence of Christianity on the appearance of grave inventories is beyond the scope of our possibilities: period Church sources contain no ban on placing goods in graves or any sanctions for doing so. What is important is that grave furnishings disappear in hierarchically organized (or state-forming) societies of Europe much earlier than in areas resisting the efforts of missionaries, regardless of whether this concerned a population classified as Germanic, Baltic, Finno-Ugric or Slavic.

More noteworthy in this sense is a comparison of the find situation in today's Norway and Sweden: the image of early medieval burials with forging tools has entirely different parameters. Unlike hundreds of similar graves from Norway (Blindheim 1963; Straume 1986; Wallander 1988–89), incomparably fewer of them are known in Sweden. Müller-Wille (1977, 193) sees a reflection of the intensity of iron extraction and processing in the divergent regional image. However, central Sweden in particular provides a great deal of evidence of the mining and processing of iron ore. Furthermore, while with finds from Norway it is often difficult to establish a social description of the grave using additional finds, in Sweden forging tools are components of clear burials of the highest aristocracy. A comparison of the find inventory from the two neighbouring, but geomorphologically distinct lands opens a broader view: while Swedish examples come from the Roman, Migration and Vendel periods, and Viking Age finds are few, in Norway graves furnished with forging tools appear beginning in the Migration period, with numbers peaking in the Viking Age (see Müller-Wille 1983, fig. 15). Prestigious Vendel period burials in Swedish flatlands indicate a substantially higher concentration of power than the far more numerous, albeit isolated and geographically and socially scattered finds from the mountainous territory of Norway at the time and later.

Returning to the sixth century, examples of putative 'blacksmiths'', 'goldsmiths'' or 'jewellers'' burials could be numerous prestigious graves in Scandinavia, England, Germany, Romania,[6] France, etc. (Decaens 1971, 12–17; Evison 1975, 77; von Freeden

2003, 5; Kovács 1913, 284–96; Müller-Wille 1977, 149, 196–7). The last of these in particular illustrates that the reinterpretations of 'old' finds do not always produce a deeper understanding: in the original publication of the find in Hérouvillette, Normandy, Decaens (1971, 83–90) legitimately speculated on the basis of an evaluation of the cemetery as a whole that the prestigious grave 10 (also with a container for mercury, etc.) involved the burial of a local 'chef'. Coatsworth and Pinder (2002, 41–2) 'correct' his opinion (which has been ignored by other authors): they do not doubt that the burial belongs to a smith.

Grave 39 in Hovgårdsberg, Vendel (Sweden) is one of the approximately 150 recorded cremation graves at the site (Arne 1932, 7). Arrhenius (1979) identified it as a 'goldsmith's grave' based on the presence of tongs, a 'whetstone' and two files. Unlike Arrhenius, the author of this text regards as specious the question of whether silver artefacts found in this grave were raw material used by this assumed 'goldsmith', or whether the axe-like tool served to divide bars, as well as a conclusion on the high social standing of gold/smiths in Scandinavia (Arrhenius 1979, 413–44). Likewise, no evidence of any kind is found for similar conjecture by Arrhenius (1980, 258) on prestigious burial from the sixth century in Tuna in Alsike (Ježek 2014).

Of the 72 graves from the sixth and seventh centuries in Beckum (Germany), 15 contained horse skeletons. Other local elite burial contained weapons, balance scales, tongs, a hammer, among other artefacts (Winkelmann 1977, 97–104).[7] A tenth-century cremation burial in Bygland (Norway) was furnished with 25 forging tools, four swords, two shields, seven axes, four lances, of which three had silver and copper inlays (Blindheim 1963).[8] Forging and other tools, including two 'whetstones', were supposed to be evidence that the person buried in a ninth-century grave in Elgnes (Norway) had mastered the smith craft (Müller-Wille 1977, 177). An individual buried in the fifth century in a 4 × 1 m stone sarcophagus in Vestly mound 14 (Norway" e.g. Kristoffersen 2009, with refs.) was furnished with numerous weapons, gold, silver, a forging tool and three touchstone candidates.[9]

Aside from numerous weapons, riding gear, gold and silver jewellery, game stones, 'whetstones', etc., a Viking Age ship burial in Île de Groix (Brittany) was also furnished with forging tools (Müller-Wille 1979). A whole line of boat burials in Scandinavia and a few in the British Isles also contained forging tools, which are regarded as tools for repairing ships and boats (Müller-Wille 1977, 177; 1979, 63). Why no interpretation of forging tools as implements for repairing boats has been applied to the apparently prestigious boat burials in Vendel or Valsgärde (Sweden) and elsewhere remains unexplained. In light of prestigious graves also furnished with forging tools from the east European flatlands, Pannonia and the foothills of the Alps, even this question loses its meaning.

Although a discussion of the shaky support of works on 'smiths' burials' could go on for many pages, this section will end with the relatively recent opportunity to review the prevailing paradigm. During the excavation of a Neolithic site in Tattershall Thorpe (England), a single early medieval feature was identified: a burial from the seventh century. Three hammers, an anvil, tongs and dozens of other objects, a large number of which were forging or jeweller's tools, balance pans, bars, silver strips, garnets, silk, etc., were found in the grave. Hinton (2000, 105–9) points out the absence of heavy 'sets' and many other objects used in the work of a blacksmith or a jeweller. Valuable materials such as garnets are regarded as intended parts of high-quality products made by the smith/jeweller, whereas gold was not found in the grave because an assumed patron of the craftsman kept it. There were no obviously unfinished copper-alloy and lead pieces; instead, the author justifiably looks to the continent for the source of some of the artefacts. The fragments of bones excavated in Tattershall Thorpe did not permit an anthropological investigation, however, 'at 1.70 m the grave was a little short for a normal adult' (Hinton 2000, 4–5, 101). The find situation led to the conclusion that 'the smith was a total stranger, moving between patrons ... he was disposed of where his troublesome soul would not affect the community' (Hinton 2000, 113; cf. Coatsworth & Pinder 2002, 234; Hinton 2003). The author of this text therefore submits a different interpretation of the Tattershall Thorpe burial: the grave belongs to a member of the local elite, probably not of adult age. The isolated location corresponds to many other Anglo-Saxon high-elite burials.[10]

From ritual metallurgy to symbols of social standing

Mainly focused on socioeconomic aspects or technological development, archaeology on only rare occasions asks the question that is of far greater importance for understanding ancient (and even recent) societies: what bound entire cultural complexes together? Each society lives according to its own ideology, which gives it order and upholds its internal structure. The responsibilities of the highest elite always included the performance of rituals to secure the prosperity (in the understanding of ancient society), or stability (in our understanding) of the relevant community. In

archaic societies, the highest power was in the hands of individuals, who secured only the most significant, periodically repeated rituals (e.g. Green 1998, 199–202; Krausse 1999, 344, 355; Kristiansen & Larsson 2005, 355), including those dividing periods of several years (for pre-Christian Sweden: de Vries 1957, 427). All the while, the privileged standing of those that performed the ritual was legitimized at the same time (Claessen & Oosten 1996, 379–85; Kristiansen 1998, 54–5).

Metallurgical workshops in Bronze Age shrines or in their close vicinity are recorded on the east Mediterranean islands (e.g. Enkomi and Kition, Cyprus, Phylakopi, Melos: Albers 1994, 88; Blakely Westover 1999, with additional refs.; Doonan *et al.* 2012; Hagg 1992; Karageorghis 1976, 88–94; Karageorghis & Kassianidou 1999; Matthäus & Schumacher-Matthäus 1986; Muhly 1976, 91; Risberg 1992). Also found is continental evidence of Bronze Age metalworking in fortified aristocratic residences (e.g. Kunst 1998; Prescott 2000) and chieftain's halls (e.g. Ethelberg 2000; Nilsson 1994; for early medieval analogies, see Hed Jakobsson 2003, 112–15).[11] Ritual metallurgy played an important role beginning from the period when uses for metal were being discovered (e.g. Budd & Taylor 1995; Marinatos 1962), and 'ritual leaders represented the highest authority' (Kristiansen 2012, 382). The burials of these individuals naturally required symbols of their social standing.

Tools used in metalworking occur in numerous obvious burials of ancient rulers in Europe, and also outside Europe, e.g. the royal mound from around AD 600 in Ballana, Nubia. Along with other individuals, a king with royal insignia was buried inside mound 80 with a diameter of 62 m and a height of 12 m; forging tools were among the rich grave goods of a person buried in one of the adjacent chambers (Emery & Kirwan 1938, 123–31). When fulfilling their social roles, ancient leaders also used specialized tools made intentionally for ritual purposes. The best examples are forging tongs with a length of 108 cm from the Roman period 'royal' burial in Mušov, tongs with a length of 117 cm from the most prestigious burial (7) in Valsgärde (the eighth century: Arwidsson 1977, 77) and tongs with a length of 116 cm from the richest burial (I) in eponymous Vendel (the seventh century: Stolpe & Arne 1927). Both the Vendel period burials were also furnished with typical helmets, a pair of magnificent swords and many other exclusive objects. The latest case from Vendel is the ninth-century boat burial IV with a hammer (and an impressive touchstone; Fig. 7).

This does not mean that these leaders had mastered the art of metallurgy. Experts were undoubtedly in control of the performance, which was not allowed to fail, and the (ritual) leader probably performed only a small operation, regardless of its position in the sequence of the performance. However, it has become customary in archaeology to transfer the ritual role to craftsmen, using esoteric references to their esoteric knowledge.[12] These notions are linked to the ideas of Eliade (1956). Nevertheless, ethnographic analogies from various corners of the world do not permit an uncritical generalization and 'we very much run the risk of applying examples from cultural contexts that have little in common with the Bronze Age' in Europe (Kuijpers 2012, 417). It is all the more true for the later periods, especially the Early Middle Ages.

Attempts to connect the completely opposing legacies of Eliade (magic power of early metallurgy) and Childe (economic significance of metallurgy, itinerant craftsmen, etc.) result in a vicious circle. Many prestigious graves were furnished with tools used in metalworking, which form the grounds for the professional identification of the deceased. And, as just one example out of many for the Early Middle Ages: 'Because of the secret knowledge inherent in such activities, smiths were both powerful and feared ... The smith has magical powers, often holding a high position in society' (Hedeager 2011, 139, with refs.). The notion of the high standing of revered craftsmen then retroactively provides arguments for an explanation of the rich grave goods or extraordinary construction of the relevant burials.

An interpretation of this kind can seem logical for the period of the beginnings of metallurgy, but seems quite the opposite for the following millennia, when metal served as a regular manufacturing material. The fact that even the lowest estimate of the number of smiths active in Europe over the course of four millennia far exceeds the number of discovered 'smiths' burials' can be interminably attributed to the 'state of knowledge'.[13] Naturally playing an important role here is the (repeatedly disproved) Marxist–Leninist idea of the free status of craftsmen in ancient societies. Nevertheless, the Burgundian code from *c.* AD 517 speaks clearly; the punishment for killing a blacksmith was a fine of fifty solidi, whereas killing a free man was punishable by death (Drew 1972, 23, 30–31).

Thanks to the tools used in metalworking and other symbols of elite standing, members of ancient elite are found in burials throughout Europe from the Eneolithic up to the Early Middle Ages, however, with substantial differences in chrono-geographical distribution. In the period in which burials furnished with forging tools decline in the Mediterranean, their number peaks in central Europe. Their occurrence peaks — and ends — in the western part of Viking Age

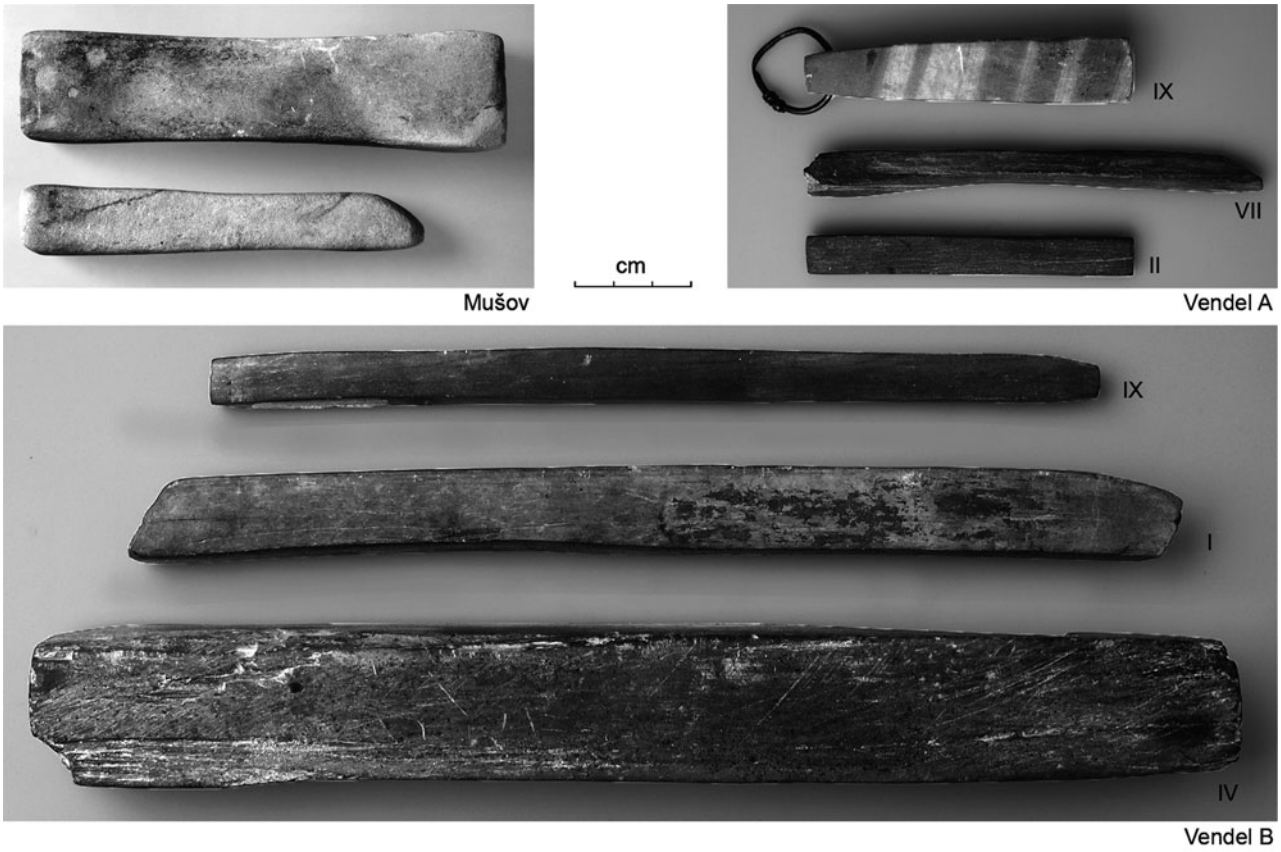

Figure 7. *Touchstones from the 'royal' burial in Mušov and from the boat burials in Vendel: A – analytically confirmed specimens from burials II, VII and IX (the ring is made of silver (96 per cent) with an admixture of copper (4 per cent)); B – specimens from burials I, IV and IX, too long for the available SEM chamber.*

Scandinavia. However, in connection with cultural transformations, migrations, the organization of society, local myths and similar matters, the same phenomena could repeatedly appear in the same area in different periods.

Moreover, as was the case in other spheres of human culture, a phenomenon connected with the leaders also spread to the lower level of society. The appearance of tools used in metalworking from both richly and simply furnished graves as well as from female burials indicates that these tools had become a universal symbol. As symbols of unfulfilled wishes or ambitions, or simply as an expression of affection, parents placed forging tools in the graves of their children, along with tools for determining the value of metal, weapons, bronze bowls, etc., or even axes without holes for handgrips and miniature spurs, with which the children's legs could not reach the flanks of the horse (Klápště 2009, 533–4; Ottinger 1974).

While the extraordinary forging tongs found in the aristocratic Roman period burials testify to the practice of ritual metallurgy in central Europe during the first centuries AD, common forging tools also occur in children's burials in the same cultural sphere. Beginning at a certain time that differed in various cultural spheres, forging tools might have been deposited in elite burials simply because it was 'befitting'. Not even Christianity was omnipotent: one of just two burials excavated in the Basilica of San Gervasio in Centallo-Fossano (Italy) from the seventh century, directly in front of the apse of a side aisle, contained forging tools (Micheletto & Pejrani Baricco 1997, 334–5). Only one grave with a hammer is known from ninth-century (Great) Moravia, in contrast to several elite graves containing scraps of sheet gold from the local church cemeteries — in one case directly from a church (Galuška 2013, 175–9). Therefore, the occurrence of forging tools in northern Viking Age burials does not automatically mean that ritual metallurgy was still being practised there at the time. Nevertheless, the continuation of ancient behavioural patterns in the non-Christian parts of medieval Europe is probable, particularly in the Germanic environment, and especially in politically unconsolidated regions.

It will never be clear whether metalworking tools as grave goods were imbued with distinct meaning on a secondary basis. They offered the best prerequisites to serve for the transcendence of natural material through man, more so than iron knives or scissors laid into graves, which were frequently interpreted as symbols for mastery of the elements. Furthermore, meaning may also have been attributed to such grave goods in various societies that had modified into a meaning totally different to the original, long-forgotten motivations, depending on the myths and beliefs at the time.

Also remaining unknown is the meaning of fine artefacts termed by archaeologists as 'Thor's hammers' (cf. Davidson 1964, 80–84; Schröder 1965). Not only iron, also silver, gold and amber specimens are known. The cult significance of these pendants cannot be doubted, regardless of whether the Vikings also linked them to Thor, or to completely different concepts.[14] Even the first possibility can be true for the Viking environment, in which (and not only there) the local myths gave commonly used objects a new meaning. While also the Lithuanians still had their divine smith in the fourteenth century, who hammered up a new sun (Rabikauskas 1989, 219–23), they revered the hammer because the signs of zodiac helped free the imprisoned sun using a hammer (Hirsch *et al.* 1870, 237–9). Moreover, even the early Christian environment did not have the need to reject traditional symbols of good luck.[15] In any case, northern 'Thor's hammers' seem to be miniatures of forging hammers.[16] Clear miniatures of hammers, tongs, anvils and other forging tools, hanging as as pendants on the Migration period gold necklace from Szilágysomlöyó, Romania (Capelle 2012, fig. 10), were hardly connected with Thor.

Conclusion

Many of the deceased furnished with indicators of a high social position in ancient Europe were also accompanied by forging tools. Along with fragments of ore, casting moulds, clay nozzles from bellows, etc., such objects were placed in graves beginning in the period when uses for metal were being discovered. As was the case with adults of both genders, forging tools also occur in children's graves: the subject of the elite raises the question of the formation of the European nobility. Burials of rulers and children furnished with tools used in metalworking document that the interpretation seeking highly respected craftsmen in countless graves from various epochs is flawed: the original attributes of buried leaders became themselves a symbol of social standing. As symbols of this kind they were thereafter used in funereal contexts that did not have any connection with ritual metallurgy. The continuity of graves with tools used in metalworking over the course of four millennia is indeed a *longue durée* phenomenon, however, it basically does not differ from the custom of furnishing the deceased with other symbols of the same meaning — weapons, riding gear, jewellery, animals, etc.

As was the case with other categories of grave goods, the occurrence of forging tools in European graves continued until the custom of furnishing burials was abandoned. Although the change in ritual behaviour could be connected to the adoption of Christianity, the disappearance of symbols of social standing from graves might also be related to the establishment of hierarchical societies. The form of the reciprocity of these two processes will probably remain a perennial question of historical scholarship, despite the fact that the new ideology in the hands of the elite became an important tool against the limitation of power by traditional local institutions (Claessen & Oosten 1996, 391–2, with refs.). The best possibilities for addressing the matter are territories where ancient behavioural patterns, long abandoned elsewhere, encountered written testimony. Norway is this type of land, regardless of whether the local heterarchical society survived longer than in countries that pursued the building of state forms.[17] In any case, the greatest number of graves with forging tools from the final phase of their occurrence appears in Norway.

Designating individuals buried with symbols of exclusive social standing and with tools used in metalworking as smiths or metallurgists originates from notions of the social independence of ancient craftsmen. This approach is in line with Marxist–Leninist theory on the division of work and the social order of prehistoric societies. However, not even V.G. Childe is the author of thoughts on 'smiths' burials': he merely attached his notion of free craftsmen to another widespread error, based on the simple, professional interpretation of burials according to artefacts from their grave goods, popular as early in the nineteenth century. Applying the same logic to identify an individual buried with arrows (arrowheads) as the producer of these artefacts might appear ludicrous if such interpretations had not in fact appeared in the literature (e.g. Bátora 2002, 207–11, with refs.). Burials furnished with swords, lances, etc., were occasionaly interpreted in this manner, too.

Not even the revelation of a critical error of the Marxist–Leninist (or, better, Morganist–Engelsist) approach (Budd & Taylor 1995; Chapman 1996; Gibson 1996; Gilman 1996; Rowlands 1971) led to the proper interpretation of burials furnished with metalworking

Tools. The result thus far is the prevailing concept of the free craftsmen who enjoyed enormous social prestige. Although an interpretation of this type causes unsolvable discrepancies (e.g. the contradiction of historical sources and archaeological deliberations on the social in/dependence of ancient craftsmen, or the disproportion between the number of anticipated smiths and the related furnishing of graves), archaeology does manage to constantly find new reasons for the petrification of its ideologically conditioned paradigm. Naturally, the same approach can be taken towards countless European Bronze Age (and later) hoards of metal (which sometimes contain also forging tools). The frequent considerations regarding craftsmen's or traders' deposits document the dependency of today's archaeology on the ideological basis of the first half of the nineteenth century, when the discipline was established.

Various tools used in metalworking represented the same function during the burial ritual, in the same way that the symbolic significance of a lance, sword or a shield placed in a grave did not differ. We regard as unsound any speculation on the specialization of a 'smith', 'goldsmith' or 'jeweller' based on the composition of a grave inventory, or on the multifaceted skills of the alleged craftsman in the case of the simultaneous occurrence of various tools. Questions as to why a specific tool used in metalworking (or any other symbol) is missing from an extraordinary furnished grave are likewise irrelevant. Like us, ancient societies also did not need to justify traditional burial customs.[18] This made the turning point represented by the discovery of the possibility to work metal all the more distinct: its impact on the formation of European culture was truly all-encompassing. Finally, we recommend that the actual term 'smith's burial' ('jeweller's burial', 'metallurgist's burial', etc.) as well as the related notion of the prominent standing of craftsmen in ancient societies, popular only among archaeologists, be assigned to the trash heap of the history of archaeology.

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Notes

1. A sophisticated attempt to explain the presence of the whetstones in aristocratic burials on the basis of Old Norse written sources was produced by Mitchell (1985).
2. According to Melzer, the child was to assume a new identity in the kingdom of the dead (i.e. the identity of father-smith); at the same time, the presence of the hammer in the grave was to document the father's freedom (in treatment with his tools). Two graves from this graveyard also contained touchstones (Melzer 1993, 86, pl. 16:5; 23:17; 63:4,11).
3. The authors consider graves of the nobility, the status of which was based on control of local ore deposits and production of iron (Ferdière & Villard 1993, 283–5).
4. This burial also provided the earliest known objects made from iron in the world (Rehren *et al.* 2013); from our perspective (see below), the meteoritic source of their raw material is not surprising (cf. Eliade 1956; Ježek 2014).
5. However, e.g. the cultural identity of a man buried in the Early Middle Ages in Redikar, Northern Ural (Lunegov 1955, fig. 41:5,6), remains unknown, despite several 'Viking' objects from his furnishing.
6. Among weapons and gear, the burial 10 in Bandul de Câmpie contained a helmet — only one of which has been found in local two hundred graves.
7. Winkelmann (1977, 103) reached the conclusion that warriors were furnished with forging tools due to their extraordinary ability to take on new roles in their new life.
8. In deciding between the possibilities of a 'merchant' or a 'smith', Blindheim (1963, 30–31) leaned toward a producer of weapons who was also involved in their decoration.
9. Müller-Wille (1977, 167) raises the question of whether a buried 'Feinschmied' made some of the metal artefacts in his grave inventory: the author regards other metal artefacts as heirlooms from his predecessors.
10. Setting aside the question of whether the deceased was intentionally buried at a Neolithic and Roman period site.
11. At least five of the nine investigated chapels from the period of the Christianizing of Iceland were built on the place of a forge (Hed Jakobsson 2003, 31–2). The same situation has been documented in southern Sweden (Heimer 2010).
12. For example, see the citation on the Bronze Age (Kristiansen & Larsson 2005, 52–3) above; typical examples from the opposite (early medieval) end: 'The smith as a privileged specialist holding a high-status position . . . ' (Barndon 2006, 102); 'To be a specialist of this kind demands not only superb skills, but often also the possession of magical power . . . The smith's work requires the esoteric kind of knowledge enabling him to manipulate the dangerous forces' (Hedeager 2002, 7; cf. Hed Jakobsson 2003, 157–75). With regard to the number of

blacksmiths over the course of several millennia, it is doubtful that ancient Europe was abounding with esoteric experts.

13. The interpretative possibilities have no limits: 'During the whole early medieval period these crafts were further developed and carried on by a numerically rather small group of people who nevertheless occupied a key position in society of those days' (Callmer 2002, 358; cf. Hinton 2003).
14. Around the middle of the twelfth century, Danish prince Magnus brought back with him, as a trophy from Sweden, unusually heavy hammers taken from the shrines of the highest god (Saxo Grammaticus 1886, 421).
15. See e.g. the Karlevi rune stone, with runic and Latin text and a depiction of a cross and a hammer, or a mould serving for the casting of pendants in the shape of a cross and so-called Thor's hammer from Trendgården (Sweden: Fuglesang 1989, 18).
16. A great deal of eighteenth-century evidence that a hammer used in the wedding ceremony ensured newlyweds prosperity was collected (exclusively) in southern rural Sweden (Elgquist 1934).
17. Pre-Christian Lithuania, which tended towards the orthodoxy in its supreme form of government in the fourteenth century, is an absolute exception.
18. For example, ethnographers described a wide variety of explanations for the placing of coins in graves in nineteenthtwentieth-century east European rural environments. Nevertheless, in the majority of cases studied by modern ethnography in recent Poland, the survivors could not explain why they furnished 'their' deceased with money (Miechowicz 2007, 90–95).

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