POLITICAL AND CULTURAL APPROACHES FOR THE PROCUREMENT AND USE OF RAW MATERIALS CONCERNING GERMANIC GROUPS

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When it comes to Germanic peoples we are dealing with societies, who did not exploit non-ferrous metal resources on their own, although evidence suggests that mining took place maybe in the area of Brilon in the 1st century AD (Bode, 2008; Melzer and Capelle, 2007; Pfeffer, 2012, pp.155-164) and since the 3rd century AD at Düna (Brockner and Klappauf, 1993), close to the Harz Mountain. These possible exploitation attempts could not be confirmed for sure yet. It is rather proven that Germanic production of non-ferrous metal objects was based on the recycling of Roman metal imports. As a consequence the Roman metal items cannot be considered as just objects of prestige or daily use, but also as raw material for the production of native goods. Because of these reasons Germanic societies depended on the influx of metal goods from the Roman Empire.

This paper shall deal with matters of acquiring Roman imports with special respect on the question of the level of political determined import streams. Furthermore it shall be discussed who had access to Roman metal imports in Germanic societies and therefore had direct access to copper alloy raw materials. It also has to be considered how large the demand on copper alloy objects was and therefore how huge the dependence on the Roman Empire was.

The relation between imports and Roman politics

Many possibilities are discussed respective to the question how the Roman imports arrived into Germania Magna. The discussed possibillities for aquiring Roman goods are trade, looting, pay for mercenaries, diplomatic gifts, tributes and subsidies. Very often in research we can find a strong emphasis on intensive Germanic-Roman trade, which grows constantly, especially in the case of border regions (for example Berke, 1990; Haarnagel, 1979, pp.307-315; Kunow, 1983). In more recent research the idea of an intensive trade has been questioned. It has been frequently argued, that the rather on self-sustain based barbarian economies, which produced few surplus, had rather few goods to offer, which could have revealed them as lucrative business partners for the Romans. Following this hypothesis, which is expressed specifically by Michel Erdrich, the economic relations were rather minimal. Even a trade close to the borders is according to Michael Erdrich not verifiable, especially because at places, which existed very close to the Roman frontier, there have been found at current state of research very few Roman imports. As a consequence it is presumed, that these peoples were rather subjected to the political interest of the Roman Empire or its inner political situation, than an economic concern by the Romans (Burmeister, 2009, p.398; Erdrich, 2000, p.227; Erdrich, 2000a).

In the historical records evidence of Roman and Germanic trade, traders and exchange on markets are mainly known from the 1st century AD. With respect on the traded goods, which are named by the antique authors, they mostly consisted of organic material like agrarian- and forest products. There is no information about the scale of the exchange (Wolters, 1997). Although the historian Klaus Tausend classifies the Germanic goods, which were offered to the Romans, as rather marginal, he points out that on the other side the Germanic peoples had a large interest in trading relationships (Tausend, 1983, p.227).

In case of political or political related interactions between the Empire and its neighbours a lot of possibilities are mentioned in the historical records, which could have led to a transfer of Roman objects into the barbarian areas. The inner and external Roman conflicts, which have weakened the Roman borders, provided possibility for Germanic raids, but on the other hand gave the chance for Germanic mercenaries to fight in the Roman army. The Empire used its eco-

nomic potential to prevent incursions and to control the people living next to the Roman border more in a sense of foreign affairs by subsidies and by binding the barbaric elite with diplomatic gifts. Even trade had been influenced in a political sense by opening and closing border markets to Germanic groups or export-interdictions of certain goods into the barbarian area, like for example iron (Witthaker, 1994, pp.98-131; Wolters, 1997).

In the archaeological aspect it is harder to find one certain solution, which explains the attainment of Roman imports. Because goods, which were traded by the Germanic peoples to the Romans, which are mentioned by the antique authors, consisted all of organic materials, except of amber, trade stays invisible in the archaeological record (Wolters, 1997, pp.99-100). In contrast arguments for a rather political determined interaction seem easier to find. Roman metal hoards, in particular those of the late 3rd century AD, are mostly explained by hiding valuable objects in fear of incursions, lost booty by the intruders or a sign of a successful raid. (Künzl, 2009) Larger hoards consisting of silver coins in barbarian areas are sometimes explained by subsidies (Berger, 1992, pp.133-160). Equipment, which is mostly known from Roman military camps from the 2nd and 3rd century AD and parts of a certain type of Roman belts of the 4th and early 5th century, which appear in Germanic areas, are explained by returning mercenaries (Nicolay, 2009).

The most prominent example, which is interpreted in connection to political events, is the graves and settlements of the Haßleben-Leuna Horizon in middle Germany. In this certain area the imports rose massively in the second half of the 3rd century AD for only one generation. The influx of Roman goods seems to decline already at the early 4th century AD. This phenomenon is interpreted as a result of mercenaries, who fought in a Roman civil war for the Gallic Empire. Trade as a main factor of the acquired imports is mostly excluded because of the short-term increase of the Roman goods (Voß, 2001, pp.443-446; Bemmann, 2003, pp.64-67).

A similar phenomenon is the climax of settlement development and import stream in the Hellweg-zone, the area between Ruhr- and Lippe, in the 4th and early 5th century AD. In this area the most Roman imports, among them more than 1000 coins, belong to this time period. There are also several parts of late Roman belts, which seem to be connected to Germanic mercenaries. The occurrence of Roman imports could therefore partly be explained by Germanic ("Frankish") incursions and ("Frankish") mercenaries. Both possibilities are known from the historical records. (For an overview with further reading see Eggenstein, 2008).

Based on the Roman imports dating to the 1st until the 3rd century AD from the Northern Netherlands and the German federal states Lower Saxony and Schleswig-Holstein, Michael Erdrich developed the model that imports did not come to these areas in a constant stream, but in pulses. To identify these import pulses Michael Erdrich used especially coins, stamped Roman metal vessels and relief-decorated Terra Sigillata bowls, which have probably a short term chronology. He concludes that the pulses of Roman import streams encounter times, which are known from historical records, in which the Roman Empire had to deal with internal and external challenges. Especially in the time of the Marcomanian war there is a strong inward flow to these areas, among them 40 hoards of denariis, where the youngest coin dates 193/194 AD. As a conclusion Michael Erdrich negates an intensive trade. The scale of imports mirror according to him rather political developments (Erdrich, 2000a; 2001a; 2001b). As a consequence the absence of incoming Roman imports means also that no new raw material arrived in the cycle of resources.

Although a comparable comprehensive study is yet missing for the Hellweg-zone, in contrast to the North-Western parts of the barbarian area, imports seem to have reached this certain area more or less constantly since around the beginning of the 2nd century AD (For an overview of Roman imports of this area see especially Berke, 2009). The Roman Terra Sigillata arrived in the Hellweg-zone at least until 230 AD, maybe even until 250/260 AD, with a maximum in the second quarter of the 2nd century (Berke, 1990, pp.75-76; pp.97-98). During the last third of the 3rd century late Roman ceramics, especially the so called "Mayener-Ware" appeared in the find ensembles. As a consequence there is maybe a hiatus in the import stream around the middle of the 3rd century, but that is not yet assured. Metal vessels from this region, among them especially sieves and buckets of the Hemoorer type, belong mainly to forms, which have been produced in the Roman provinces from the 2nd until at least the middle of the 3rd century. In contrast to the observation of Michael Erdrich for his area of research (Erdrich 2000, p.227; Erdrich 2001a p.320; Erdrich 2001b, 103; Erdrich, 2009, p.165), who points out, that there are no Roman imports in the outland of the limes at the first half of the 2nd century, there are objects of this period in the Hellweg-zone, which occur in a smaller number. From the Westphalian part of the Hellweg-zone, there are at least 19 examples of Roman ceramics from different find spots, which date in the first half of the 2nd century, seven of

Fig. 1: Fragments of a Terra Sigillata bowl from Dortmund-Asseln. Photo: Denkmalbehörde, Stadtarchäologie Dortmund/ Patrick Könemann

these vessels or their fragments date from the end of the 1st to the beginning of the 2nd century. (Berke 1990, p.75-76; p.98; Berke, 2009: Lüdenscheid p.63; Lippstadt p.67; Soest p.74; 76; p.77; Holzwickede p.87; Kamen-Westick p.89; 90; Unna p.106; Castop-Rauxel, Erin p.213; p.215; Waltrop p.230.). In a grave of the cemetery of Dortmund-Asseln, there were fragments of a Terra Sigillata bowl, which had been manufactured in Hadrianic times (Fig. 1). The shards covered an urn of the Uslar I/II type. (Könemann in preparation) In Kamen-Westick a bottom of a skillet (Fig. 2) and a stamped handle of a sieve or dipper of the form Eggers 160 (Fig. 3) have been discovered, which date from the late 1st until the middle of the 2nd century, although both objects could have been used longer in the Roman provinces until they reached the Hellweg-zone. To conclude the Roman imports from the late 1st to the 2nd quarter of the 2nd century appeared in a rather sporadic way, but increased at least until the middle of the 3rd century. The imports from the 2nd and 3rd century consisted with a few exceptions rather of objects, which were produced in a larger scale in the Gallic provinces, like ceramics in particular but also copper-alloy metal vessels (Becker, 2003, p.281; Berke, 1990, pp.81-84). The quantity of Roman imports increased in this area especially in the late 3rd until the early 5th century, among them mostly goods of mass production, like Mayener ware pots. Therefore it has to be questioned if the more or less constant import stream in the Hellweg-zone, at least since the beginning of the 2nd century, which consists mainly of products, which were produced in a larger scale in the Gallic provinces, can just be explained by political circumstances.

The presented examples of the areas of middle Germany, the Hellweg-zone, the Northern Netherlands and Northern Germany show at least, that the Roman-Germanic interaction proceeded obviously on a regional level and cannot be explained with only one model.

Who had access to Roman metal objects? Who had access to non-ferrous metal resources?

Roman objects, especially Roman metal vessels, are considered very often as marker of status and as luxury items, because of their appearances in so called princely burials (Becker, 2003, pp.286-287). In this part of this paper it shall be discussed by examples of different areas, which parts of Germanic societies had access to resources of non-ferrous metals, and if the metal imports and the production of non-ferrous objects were centralized by an elite. The expression elite means, in this case a person or a group, which is distinguished from the rest of society in a social, economic or political way (Dick, 2009, p.321).

At several south-western hill sites dating to the 4th and 5th century, which are interpreted as domiciles of chieftains, Roman imports, metal-recycling and handicraft are concentrated often at the same place. Because of the current state of research there is no comparable concentration of these factors from lowland settlements, this circumstance has been interpreted as a form of centralization of non-ferrous and precious metal resources and specialized craft by the elite, which distributed finished objects to their following (Steuer, 1994, p.133; Steuer, 1997, pp.155-158).

In Northern Germany at the settlement of Feddersen-Wierde the model of Werner Haarnagel, who interpreted the largest hall house as a seat of a magnates family, a so called "Herrenhof" (magnates house), concentrated the most of the craft and Roman imports from the settlement (Haarnagel, 1979, p.296, p.305, pp.311-312, pp.319-321). This interpretation has been recently reconsidered by different researchers, who pointed out, that neither imports, nor specialized craft are directly connected to this certain farmstead (Burmeister und Wendowski-Schünemann, 2010, pp.38-41).

The Middle-German Haßleben-Leuna graves, which date to the late 3rd century, are the best examples of splendorous burials for this time. Discussions about real status objects and especially a better knowledge of the Roman imports from the settle-

ments question the exclusiveness of Roman metal objects. In settlements there are also a large number of Roman metals, which show a broader variation of types than in graves. As a consequence it is considered, that a larger part of the society had access to Roman metal objects and therefore also access to resources of non-ferrous metals (Becker, 2003; Voß, 2001). In this certain area there are places, where non-ferrous metal craft took place, which show a connection to elite, like Frienstedt (Schmidt, 2008), but also places where there is no evidence of a centralization, like Klein-Köris (Gustavs, 1994).

Concerning the Hellweg-zone there are still several questions unanswered. Although several prominent settlements from this area are known, the most sites are not published completely. Information about size, function and centralization of these settlements are still missing in a larger scale. Several settlements from this area produced a large amount of Roman imports, among them numerous non-ferrous metal objects, which are of interest as raw material. The most settlements reached their zenith in the 4th and early 5th century.

The oldest proof from the Roman Iron Age of a workshop from the 1st century AD, for iron and non-ferrous-metals in the Hellweg-zone has been found in Warburg-Daseburg. This farmstead produced rather decentralized and for self-supply (Günther, 1990).

In the younger Roman Iron Age metal vessels or their fragments and other Roman metal objects are known from several sites, but the most numerous proof of Roman metal goods seems to concentrate on certain places. A larger number of metal objects are known from Castrop-Rauxel, Ickern. This site seems to be mostly an agrarian settlement and shows so far no hint of casting of non-ferrous metal products, but that could also be a result of the partial excavation of the settlement. It has also been kept in mind that non-ferrous metal workshops are hard to detect. (Pape, Speckmann et al. 2011). At Bochum-Harpen, Soest-Ardey and Dortmund-Oespel a larger number of Roman imports has been found as well, among them several Roman metal objects. At Bochum-Harpen and Soest-Ardey there is also smaller evidence of recycling through metal scrap and crucibles. At Dortmund-Oespel a workshop for non-ferrous metalworking could be documented, including discarded metal, crucibles and smelting waste. The singular find of a chain-mail and a shield boss made of precious metals, which could be compared to Scandinavian examples, could be hinting at elite nearby (Bochum-Harpen: Brandt, 1997, pp.101-140; Dortmund-Oespel: Brink-Kloke and Meurers-Balke, 2003, pp.68-74; Soest-Ardey:

Fig. 2: Roman skillet-bottom from Kamen-Westick. Photo: Haus der Kamener Stadtgeschichte/Patrick Könemann

Halpaap, 1994, esp.pp.208-211; Pfeffer, 2012, pp.67-81). At the current state of research all these places seem to be outbalanced by the settlement of Kamen-Westick (Eggenstein, 2008). This place juts out by its large number and broader variation of native and Roman items, among them a larger number made of non-ferrous but also precious metal objects. There are brooches from different centuries, fragments of metal vessels and furniture fittings. The largest of the three known hall buildings measures obviously 48 m in length. Concerning non-ferrous metal craft, the documented and certain chain of production and recycling includes small metal fragments and chopped Roman metal vessels (raw material), crucible fragments and smelting waste. This place can maybe be considered as a place of central function or/and the domicile of a person or group of higher status. The non-permanent populated site of Castrop-Rauxel Erin seems to be a site of special function, which is interpreted as a seasonal used meeting and trading place. It has produced a large number of finds, among them such of Roman origin. Fragments of metal vessels and smelting waste are an argument for a local scrap metal trade and recycling. At Castrop-Rauxel Erin there is no direct evidence for a controlling or organizing authority (Dickmann, 1997).

These examples from the Hellweg-zone show, that the distribution of Roman metal goods is not limited to certain places, it appears also at smaller settlements, like the example of Castrop-Rauxel Ickern

indicates. The larger part of these metal objects is strongly concentrated, as the other Roman imports too, at obviously larger settlement sites, which are located at the area of the transit route Hellweg, which is known from the historical records since medieval times. Traces of recycling were documented in the younger Roman Iron Age just at a few settlements. If there is a connection of concentration of Roman metal goods, non-ferrous metal recycling and elite, which controlled the production, is hard to determine. There are hints of possible status markers, like in Kamen-Westick or Dortmund-Oespel. Another possibility is that the concentration of Roman imports and recycling is related to a specialization for non-ferrous metal recycling and craft at the larger settlement sites, without direct influence of an outstanding group. Compared to the area of the Haßleben-Leuna horizon there are just a few burials known from the area of the Ruhr, none of them could be described as a distinguished grave. In Dortmund-Asseln there is one cremation of the 2nd century, probably of a young man, whose grave furniture included at least three different Roman metal vessels. His brooch was made of iron. At the same burial place there is an early inhumation from the early 5th century, including a glass goblet. Both examples can maybe be considered as special, but none of them include objects made of precious metal or other objects, which can be considered as status markers of the leading part of the society (Könemann, 2011).

Finally it can be concluded from the different examples of different areas that non-ferrous- metal objects and craft seem not to be monopolized by a certain group in a strong way, but obviously concentrated in several cases at some specific places, which show partly evidence for a connection with the elite.

The Germanic demand for objects of non-ferrous metals and scale of production

Germanic people produced rather small objects of non-ferrous metal, as metal parts of horse harnesses or accessories like brooches, parts of belts, rings and hairpins. Larger objects, like tools, were made of iron, which could be produced by native resources, or were imported from the Empire, like copper alloy metal vessels.

The question about amplitude of demand for new metal objects from the Roman Empire, which arrived in the cycle of recycling, depends also on the question, how many people in these societies were using objects made of copper alloy.

Fig. 3: Stamped handle of a Roman sieve or dipper Type Eggers 160. Photo: Haus der Kamener Stadtgeschichte/Patrick Könemann

Mathias Becker calculated, based on graves of the whole Germanic area, that on average every second a person was wearing a brooch. According to the density of known settlement sites the yearly demand of non-ferrous metals would be 2.5 tonnes for the whole Germanic area. As a consequence these societies required a constant supply of Roman metal objects (Becker, 2011, pp.53-54).

In the Hellweg-zone cemeteries are rare, as pointed out before. In case of the cemetery of Dortmund-Asseln in half of the graves belonging to the 2nd and 3rd century cremation burials, there was an indicator of copper alloy objects, in three of these graves parts of metal vessels have been found. In the graves of the 4th and 5th century of the same necropolis, 16 of 20 graves indicated, that a copper alloy object was burned with the dead, 11 of them were recognizable objects. This example shows that objects made of copper alloy were common to a broader part of the society of this area as well (Könemann, 2011).

The numerous fragments, smelting waste and metal objects, which remained in the settlements, like at the Middle German sites or in the Hellweg-zone, imply also that at least at this certain locations the inhabitants had a surplus of non-ferrous raw material. Otherwise they would have collected the metal more carefully (Becker, 2006, p.17).

The broad variation of objects of the same type, for example in case of brooches or hairpins, lead to the conclusion, that they were most possibly casted in a small series. The places of production seem to have been smaller workshops, with storage of scrap in a pit

house (Brink-Kloke and Meurers-Balke, 2003, pp.68-74; Günther, 1990; Gustavs, 1994). The smelting of hacked metal fragments does not need huge technological constructions, already a fireplace or a hearth could be sufficient for melting down metal in a crucible to cast it into smaller items, like brooches or hairpins.

Conclusion

The different Germanic societies were based on recycling of Roman metal objects. The scale of imports at least measure the Roman-barbarian interaction. If the Roman goods really are especially connected to Roman politics, like Michael Erdrich points out, it cannot be confirmed, at least it cannot be generalized for distinctive areas. The Roman metal goods, and in several circumstances also the recycling of these objects, wer centralized especially at certain larger places, but not exclusively. Not all cases have a clear sign of elite, who could have distributed and organized the metal resources and non-ferrous-metal production. Obviously in several situations a larger part of the societies had access to Roman imports and was not monopolized by elite. The absolute scale of non-ferrous metal objects from the Roman provinces, which were needed to produce native objects, cannot be calculated for sure and has to be examined regionally. At least it seems that these cultures were not at the minimum relating to non-ferrous metals, because of that, it can be assumed that the scale of available metals could cover the demands for most areas. The production took place in smaller production units, which are known in some cases from larger settlements. The objects were manufactured in a smaller number without a larger standardization.

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