

MONEY, METAL AND THE SOCIAL CONSTRUCTION OF VALUE

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When discussing scrap bronze in Late Roman and Early Medieval Europe and its potential monetary function and values, it might be useful to reflect on how money functions more generally, and how its value is negotiated and embedded in a society. Within the fields of economic studies and economic anthropology, a rich literature on these topics exists. Furthermore, it could be informative to investigate the role and meaning of uncoined bronze in a different geographical and temporal setting in order

to find possible parallels. Although one could potentially look back to the Bronze Age, and the use of standardized bronze objects like neck-rings and axes, the second half of the first millennium BCE in Italy is a more suitable candidate. Here, the use of uncoined bronze would soon start to give way to coins proper. A discussion of if and how this uncoined bronze can be understood as money, might shed light on what scrap bronze in a society that also used coinage, or had until recently used it, could be or not be.

WHAT IS MONEY?

To start with the most obvious, but also the most difficult question, what is actually money? An all-compassing answer is not possible, as there are various ways to approach the question. Within economic studies, money is often defined by its functions, not by its substance. Usually four functions are discerned: a store of value, a unit of account, a means of exchange and a method of payment (Gilbert 2005, 358). To address briefly what these functions entail; if a money medium not only represents value today, but also can be reliably expected to retain this value in the future, it can function as a store of value. If the value of goods and services can be expressed in standardised units of the money medium, and thus measured and compared, the unit of account function is fulfilled. The most widely known and recognisable function of money as a means of exchange, which is enabled by its unit of account function, indicates that purchases of any kind can be made by handing over the required amount of money to the seller. This immediate reciprocity is absent from the payment function. It does not refer to market situation, but to the capacity of money to use it in

discharging debts or obligations (for a similar overview Murgan/Kemmers 2016, 278).

Another approach to money is through its materiality. Already Aristotle postulated that money was more than a token but rooted in its material characteristics, like durability and (trans)portability (Maurer 2006, 27). Furthermore, divisibility, homogeneity and restricted supply are also thought to be important for money media (Seaford 2004, 18). By extension, using money is a material practice, which requires the handling of objects – from cowry shells to coins, credit cards and smartphones.

Not often addressed in economic studies, but profuse in the anthropological debates about money is its inherent social character. These stress that money – its functions, uses and materiality – is always socially negotiated and constructed (Gilbert 2005 for a discussion on social theory and money; Maurer 2006 for a review on anthropological approaches to money). Moreover, the functions and use of money can also be expressed in social rather than economic terms. Thus, something can be understood as money if there is a general acceptability within a society or

among social groups to use this something for some or all of money's potential economic functions. At the same time, this 'something' is not arbitrary, but excludes other objects from being used in the same function. A further aspect is the power of the money medium to meet social obligations (Seaford 2004, 16; Murgan/Kemmers 2016, 279 for a similar overview).

In the past anthropologists tended to have an evolutionary perspective on money, arguing that money develops from being embedded in social structures and primarily in use for limited purposes only, to being disembedded, depersonalised and solely entangled in the economic market as general purpose money (Maurer 2006, 17–18; 20–21).

PRE-COINAGE SOCIETIES AND UNCOINED BRONZE

Against this background, the focus now turns to the use of uncoined bronze in Iron Age Italy. Coinage as a concept made its appearance in the urban centres along the coastline of Southern Italy in the mid to late sixth century BCE. From these centres, which defined themselves as Greek cities, the concept spread to larger and smaller political entities in the hinterland. In Rome and its surrounding regions (Latium) coinage started to be produced in the late fourth century BCE (Rutter 2001 for an overview of coin production in mainland Italy). The Romans had a tradition, that before they had coinage, they had used 'unformed' bronze – *aes rude*: [...] *Servius rex primus signavit aes. Antea rudi usos Romae Timaecus tradit* (= King Servius was the first to mark bronze. Before that unformed bronze had been used in Rome, as Timaecus conveys) (Plinius, Natural History 33.43). Indeed, lumps and chunks of this material are found in abundance in large parts of Iron Age Italy and Sicily, starting in the early first millennium BCE and increasing in the eighth and seventh centuries BCE (Domínguez-Arranz/Gran-Aymerich 2011, 622–623) (Figs. 1–2). The question is in how far this *aes rude* can indeed be considered to have been money, not only by looking at its economic uses, but also at its material and social characteristics. Furthermore, it is of interest to see what impact the introduction of coinage had on the uses and functions of this material.

The limited number of metal analyses conducted on pieces of *aes rude* show a copper alloy with low lead and tin contents, but often rich in iron, which is distinctively different from the alloy used for the earliest bronze coins in this region (Westner et al. 2020, Fig. 2A). The high iron levels would make this material rather brittle and

Nowadays, it is recognised that even in the modern world of high finance, money is always part of a social system (Gilbert 2005, 361). A way to reconcile the market and social functions and uses of money, is the concept of transactional orders as developed by Bloch and Parry (1989). In the short-term transactional order money circulates to satisfy individual needs, which echoes a market system as understood in economic terms. Within the long-term transactional order, transactions take place to stabilize or reproduce the social and cosmic order. Money belonging to the short-term sphere can not easily be transferred to the long-term sphere and vice versa, for this rituals are often necessary (Bloch/Parry 1989, 24; 26; 28–30).

unsuitable for reworking into other objects. Obviously, metal objects of any kind are durable, in the sense that the substance they are made of does not easily or swiftly decay. The transportability and divisibility of *aes rude* are impressively demonstrated by its wide distribution and the many shapes, weights and sizes of the individual pieces – sometimes with clear evidence of chopping and hacking (Domínguez-Arranz/Gran-Aymerich 2011, 624; Prins/Termeeer 2021, 64–68).

Turning to the economic functions of money, the use of *aes rude* as a unit of account can be deduced from the literary sources. From these it is evident, that the Romans used weighed out bronze as a means to express value. On the one hand this is clear from the etymology of Latin words like *stipendium* (= military pay) deriving from *stips pendere* (= to weigh out a donation or contribution) and *aes* meaning both bronze and money (Boren 1983, 428; Crawford 2015). On the other hand, references to a quantified amount of bronze expressed in terms of pounds predate the introduction of coinage in Rome. For example The Law of the Twelve Tables (c. 450 BCE), as quoted in the first century CE jurist Gaius (Institutiones III, 223) stipulates [...] *os vero fractum aut conlisum trecentorum assium poena erat...* (= The penalty for a broken or crushed bone was 300 *asses*). This should be read as 300 pounds of bronze, as *aes* would be referred to in terms of *as*, which from the third century BCE onward was a bronze coin originally weighing one pound.

That *aes rude* could be used as a store of value is evident from the large number of hoards containing this material (Murgan/Kemmers 2016, 284–285). Settlement finds in both Italy and on Sicily, where the *aes rude* fragments



Fig. 1. Piece of *aes rude*, 32.20 g; 27x36 mm, chopped off from larger cast lump. Münzkabinett der Staatlichen Museen zu Berlin, Inventory Number 18200876 (Photo: Dirk Sonnenwald, <https://ikmk.smb.museum/object?id=18200876>).



Fig. 2. Piece of *aes rude*, cast, 177.30 g; 40x64 mm. Originally part of a larger deposit with similar pieces. Münzkabinett der Staatlichen Museen zu Berlin, Inventory Number 18200877 (Photo: Dirk Sonnenwald, <https://ikmk.smb.museum/object?id=18200877>).

are present in considerable numbers in both public and private spaces indicate these objects could be used as a means of exchange to purchase goods or services (Domínguez-Arranz/Gran-Aymerich 2011, 624; Baitinger 2016, 33–40). In sanctuaries all over Italy and Sicily, such as that at Bitalemi near Gela (Tarditi 2016), or the temple of Mater Matuta in Satricum (Prins/Termeer 2021), *aes rude* is found in substantial numbers. In votive deposits without a clear link to a sanctuary, like that at Vicarello – a thermal spring – *aes rude* is regularly found too (Murgan/Kemmers 2016, 279–284; Prins/Termeer 2021, 64). In these cases, the material can be understood to have been used as a means of payment: discharging an obligation to the gods. This capacity of *aes rude* is also evident from the literary evidence, where – as in the quote from the Law of the Twelve Tables cited above – weighed out bronze could be used to pay fines or penalties.

Regarding the social aspects of money, *aes rude* appears to tick the boxes here too. Its presence in graves (Bergonzi/Piana Agostinetti 1987) and votive deposits all over the Italian Peninsula and on Sicily indicates that it could be used to meet social obligations – both related to the divine and the ancestral community. The occurrence of *aes rude* in manifold contexts across large regions and cultural landscapes speaks for its general acceptability. More difficult to grasp is the question whether *aes rude* was exclusively accepted in monetary capacities or in how far other things could fulfil similar functions. On Sicily, from the fifth century BCE onwards hoards and deposits of *aes rude* also contained bronze coinage, which was also the case in central Italy from the third century BCE onwards. From this, one gets the impression that at least

in a later period *aes rude* was to some extent interchangeable with coinage.

Given that uncoined bronze in Iron Age Italy seems to have met with all or most of the economic functions, material characteristics and social aspects of money as discussed in the previous paragraph, it is surprising that in the scholarly debate this material is often classified as pre-monetary. Even though the distinction between general-purpose money and single-purpose money is considered to be obsolete in economic anthropology, we find that *aes rude* could perform all the classic economic functions of money. Its potential use in both short-term and long-term transactional orders – as evidenced by its occurrence in market context and in votive and religious contexts – raises the question if and how this material underwent ritual practices to transfer it from one context to the other.

What is most surprising of *aes rude*, given its longevity, wide distribution and broad functionality, is the absence of a link to an authority. Perhaps that explains why the material is often regarded as not being a fully developed monetary system. Coinage always refers to an authority. Yet it is also clear, that coinage and *aes rude* functioned side by side for at least some generations after the former had been initiated. If one adheres to the state theory of money, which sees money developing from the fiscal needs of a central authority, the anonymity of *aes rude* is a puzzling factor (van Alfen 2017). If one rather advocates a more bottom-up development, than indeed social factors – of both the short term and long term nature – bring money about (van Alfen 2017, but explaining the bottom-up development entirely in economic terms).

POST-COINAGE SOCIETIES AND UNCOINED BRONZE

As is evident from the other chapters in this volume, scrap bronze is omnipresent in Late Roman and Early Medieval Europe. Even late Roman bronze coins occasionally seem to have been transferred into scrap bronze by melting and cutting (Kemmers 2019). Can these bits and pieces of uncoined bronze be understood in a similar way as *aes rude* in Iron Age Italy? As we have seen in the discussion of this material above, uncoined bronze potentially can fulfil all the material requirements and economic functions of money. But could and did this work in a society that was still using coins, or had until recently done so?

Before reflecting on this, it is necessary to take a brief look at the coinages available and produced in the late fourth to sixth centuries CE in Late Roman and Early Medieval Europe (for a recent overview with further literature see Kemmers 2022 and Lippok/Theuws 2023). Focussing on Northern and Central Gaul and the Rhineland, low value copper coins were produced in huge quantities in the official mints of the Western Roman Empire until around 400 CE – and are omnipresent as site finds, after which production largely ceased. Fifth century bronze coins from mints in Italy and further east only occur in very small numbers in the West. The copper coins of the fourth century are still found in archaeological contexts of the first half of the fifth century, but later contexts are far and few between. Late Roman gold coinage seems to have remained in circulation for much longer. Gold coins produced in the Italian and eastern mints of the fifth and sixth centuries reached the West in substantial numbers (see the up-to-date distribution maps in Lippok/Theuws 2023, 38–39). The successor states started to mint gold, and to a far lesser extent silver coinage in the later fifth century, but mainly in the sixth, largely modelled on the Byzantine gold coins. Copper coins were not produced in this region. Sixth-century Byzantine copper and bronze coins do turn up in Merovingian contexts in the Rhineland and Northern Gaul, but in numbers incomparably smaller than in the late fourth century (see the up-to-date distribution map in Lippok/Theuws 2023, 42). Thus, although the Late Roman to Early Medieval transition witnessed no abrupt break in the availability of coinage, small change in the form of coins almost disappeared in the course of the fifth century, whereas the inflow and production of especially gold coinage was still on a significant level. But did coinage still fulfil the same functions

and could scrap bronze take the place of the hardly available small change?

The answer must lie – or so it seems – in exploring the social embeddedness and value construction of this material. That coinage and uncoined bronze are used side by side, which might have been the case in the late fourth and early fifth century CE, is no contradiction. This is clear from the *aes rude* parallel. The question rather is, if coinage and scrap bronze fulfil the same economic and social functions. Especially since the coinage produced in the West at that time was exclusively made from precious metal, as sketched above, the long-term and short-term transactional orders might be relevant analytical lenses. One could reflect on how long the memory of small change and its possible uses and functions lasted in Early Medieval Europe. In Iron Age and Early Roman Italy, it seems to have taken a number of generations after the introduction of coinage, before *aes rude* was no longer used. Interestingly though, the most persistent use of *aes rude* seems to have been in votive contexts. Following Bloch and Parry (1989) one could argue that transactions aimed at maintaining the social and cosmic order are particularly conservative. Perhaps then, it is not too surprising, that silver and gold coins appear as grave goods in (very) Late Roman and Early Medieval graves much more frequently than in graves of the earlier Roman period (Duchemin 2020; Lippok/Theuws 2023, 41). In this scenario, scrap bronze might have been socially acceptable in transactions of the short-term order, mainly market exchanges. Only coinage, which had been a regularly feature of burial rites for centuries – albeit usually coins of low value – could meet the social obligations of the long-term order.

Italy in the fourth–third century BCE, when coinage was introduced in Rome, witnessed the increasing centralization and political unification of a previously fragmented landscape. The late fourth and fifth centuries CE in Western Europe saw a centralized Empire give way to a multitude of larger and smaller political entities, none of which issued bronze coins. Presumably they didn't have to, as their fiscal regimes did not require this. Scrap bronze – like *aes rude* a thousand years before – was not obviously linked to any of the new authorities. Its use in monetary functions would have been based entirely on social conventions and agreements on its value, making it adaptable for a variety of potential users and contexts.

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