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## “FROM MINTS TO MARKETS: THE MECHANISMS OF COIN TRANSFORMATION IN ANCIENT TIMES”

JOURNÉE D'ÉTUDE INTERNATIONALE ORGANISÉE LE 13 JUIN 2008  
À LA BIBLIOTHÈQUE ROYALE DE BELGIQUE

La première journée d'étude internationale, organisée par le Cabinet des Médailles de la Bibliothèque royale de Belgique le 17 mai 2005, eut pour thème «The transport of coins through the ages». Les actes en ont été publiés un an plus tard dans la *Revue belge de Numismatique* (152, 2006, p. 1-94), ce dont nous sommes très redevables envers la *Société royale de Numismatique de Belgique*.

Suivant le projet annoncé de tenir désormais une réunion internationale de ce type tous les trois ans, une seconde journée d'étude s'est tenue au Cabinet des Médailles le vendredi 13 juin 2008 sur le thème «From mints to markets: the mechanisms of coin transformation in ancient times». Ce thème est une nouvelle illustration d'un parti pris auquel nous tenons: choisir des sujets proprement historiques et les traiter sur la longue durée.

Les études numismatiques ont considérablement amélioré notre connaissance de la production monétaire dans l'antiquité gréco-romaine, prise ici de c. 600 av. J.-C. jusqu'à c. 400 ap. J.-C. Des centaines d'études de coins, des dizaines de monographies permettent de mieux répondre aux questions de la date et de l'importance des monnayages émis, avec une prédilection particulière pour les émissions d'or et d'argent. D'un autre côté, les fouilles archéologiques ont généré un riche matériel monétaire tout autour de la mer Méditerranée, dont une bonne partie a été publiée. C'est le bronze ici qui prévaut. Les monnaies d'or et d'argent y sont en moyenne représentées par moins d'un pourcent.

Cette conférence s'est donnée pour but d'articuler ces deux types de données en se posant la question: qu'est-ce qu'un légionnaire romain ou un mercenaire hellénistique faisait de sa paie en monnaies d'or et d'argent? Il est très probable qu'ils furent rapides à dépenser une bonne partie de leurs salaires. Mais par quels canaux la grosse monnaie d'or et d'argent, impropre à régler les transactions quotidiennes, s'est-elle transformée dans ces monnaies de bronzes que l'archéologie découvre aujourd'hui?

Neuf conférenciers furent invités à en débattre, dont on retrouvera ci-après les textes pour huit d'entre eux. C'est un plaisir pour nous de remercier les institutions et les personnes qui ont facilité la tenue d'un tel événement scientifique: la *Bibliothèque royale de Belgique* qui a financé cette

journée en mettant, entre autres, la belle salle Lucien de Hirsch à notre disposition. Que son Directeur général, M. Patrick Lefèvre, qui a tenu à accueillir personnellement les participants, en soit vivement remercié. Notre gratitude va également à la *Politique Scientifique Fédérale*, à son Président, M. Philippe Mettens, et à M. Pierre Demoitié, qui ont accordé un généreux subside pour la tenue de cette manifestation. Enfin, nous sommes redevables à nouveau envers la *Société royale de Numismatique de Belgique* d'avoir bien voulu accueillir le fruit de ces réflexions au sein de la *Revue belge de Numismatique*.

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## FROM BRONZE TO SILVER: COIN CIRCULATION IN THE EARLY THIRD CENTURY AD\*\*

*Abstract:* Based on a contextualized inventory of Severan coin finds in the north-western provinces of the Roman empire, it is argued that the impact of the Severan army pay rise on coin supply to the army in the early third century seems to have been profound. Furthermore it is demonstrated that the civilian and military spheres of coin use and circulation were not fully integrated in this period. On top of that, the supply of silver coins seems to have been differentiated over the various provinces. Using this results, a model is presented of the mechanisms which brought early third century silver and bronze coins from the mint to the market.

### I. Introduction

Although the manifestations of ancient coins – their iconographies, dates and values – are presently known in broad outlines, the way these coins were actually used in the past is still relatively unexplored territory. One of the most pertinent questions is how Roman imperial coins, until the mid-third century AD generally minted at Rome, ended up in the most remote corners of the empire. In this paper I will try to start answering that question for the early third century AD, as this period is particularly suited for a study on the circulation of silver coins. Methodologically, this paper will rely exclusively on coins as found, rather than on coins as minted, for the study of coins in their contexts of use offers the closest possible insight in the realities of the past.

In order to better understand the suitability of the early third century for this kind of research, I will first summarize the general debate on the circulation of coins in the first and second centuries AD. Then I will proceed to the theme proper and discuss the situation in the Severan period (AD 193-235). This will be done by quantifying and contextualizing Severan coin finds in the north-western Roman provinces. To conclude, I will try to extrapolate the results to general observations on mints, markets, supply and circulation.

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## II. The situation in the first and second centuries AD in the north-western Roman provinces

Any excavation of a random Roman settlement in the north-western provinces, be it rural, urban or military, of the first and second centuries AD will yield a coin assemblage consisting of, on average, ninety to ninety-five percent bronze coins and five to ten percent silver coins.<sup>1</sup> Gold coinage is almost always absent. This state of affairs has led to a debate on the possible bias in the archaeological record and the role of small change in Roman society. On the one hand, it seems a logical assumption that low-value coins changed hands more frequently than precious metal coins and thus would have had more chance of getting lost in the process. Furthermore, once a low-value coin was lost, its owner would have put less effort in retrieving it than he would have done for retrieving a more valuable coin.<sup>2</sup> Thus the ratio of the various denominations present in the archaeological record bears no direct relationship to their ratio in antiquity. Coin finds from such unique sites as the battlefield of Kalkriese, thought to be the location of the defeat of Varus in AD 9, and ancient Pompeii, where precious metal coins are far more frequent than at “normal” sites, confirm this idea.<sup>3</sup> Undisputable though this is, it has led scholars to assume that bronze coinage was of no importance to the Roman state. After minting the coinage, the state officials would no longer have cared about the distribution of the coins, which was left to private entrepreneurs, most notably money-changers. The military stipend, by far the largest item in the imperial budget, is thought to have been paid exclusively in gold and silver coins, as the transport of the bulky bronze coins across the empire would have been too troublesome.<sup>4</sup> On the other hand, various scholars argue that the Roman government did care about small change and that it was used to pay the army. Not

(Brussels) for access to unpublished data on Belgian coin finds, drs. J. Pelsdonk (Utrecht) for access to unpublished data on Dutch coin finds and dr. S. Moorhead (London) for access to unpublished data on British coin finds.

<sup>1</sup> Bronze coins is the generic term used throughout this paper to refer to all copper and copper-alloy coinages.

<sup>2</sup> This is a rather rationalized assumption. Although casual loss will undoubtedly have played a part, intentional deposition of coins is a factor to be seriously reckoned with. Choices made as to which coins to deposit might (but not necessarily must) have been dictated by non-financial considerations.

<sup>3</sup> H.-M. VON KAENEL, *Zum Münzumschlag im augusteischen Rom anhand der Funde aus dem Tiber – mit einem Nachtrag zur geldgeschichtlichen Bedeutung der Münzfunde in Kalkriese*, in W. SCHLÜTER & R. WIEGELS (eds.), *Rom, Germanien und die Ausgrabungen von Kalkriese*, Osnabrück, 1999, p. 363-379.

<sup>4</sup> R. WOLTERS, *Bronze, Silver or Gold? Coin Finds and the Pay of the Roman Army*, in *Zephyrus*, 53/54, 2001, p. 579-588; ID., *Geldverkehr, Geldtransporte und Gelddbuchungen in römischer Republik und Kaiserzeit: das Zeugnis der schriftlichen Quellen*, in *RBN*, 152, 2006, p. 23-49.

only the abundance of bronze coins on military sites, but especially the composition of these coins forms a crucial argument: in the series of chronologically consecutive, short-lived Augustan military camps along the Rhine and Lippe, the bronze coin assemblage is very distinct for each phase. Every few years there was a complete turnover of the dominant bronze coin pool. This is thought to be too consistent a picture to have been solely brought about by money-changers.<sup>5</sup> Probably middle ground in this debate can be reached by arguing that the soldiers along the frontier were partly paid in bronze coins, partly in silver (and gold) coins. An analysis of the coin assemblage of the *canabae legionis* of the Tenth Legion Gemina at Nijmegen has shown, that, here too the – in this case Flavian – bronze coin composition is characterised by distinctive batches of coins, too homogeneous by far to have been exclusively created by money-changers. On the other hand, it is clearly visible in this coin assemblage, that new silver coins were distributed to the army on the occasion of donatives.<sup>6</sup> In all probability, the cash-in-hand part of the normal stipend of the soldiers was actually quite modest. A large part of their pay would have been “virtual” money, as it was deducted for food, equipment and the like, prior to pay-out. Furthermore large parts would have gone into the soldier’s saving account, only to be paid out on occasional request. Only upon discharge was the balance settled.<sup>7</sup> Donatives, on the other hand, were not subject to deductions and would have been most effective when paid in brand new coins.

But what happened with the coins after their initial supply to the army? And how did coinage reach the non-military population in the hinterland? Usually, the answers to these questions are combined in the theory, that both the military at large and the individual soldier bought supplies, utensils, equipment and entertainment from civilians. These in turn used the coins for their own purchases and thus coins trickled slowly down the scale. In some cases bronze coin finds seem to support this theory, whereas in others the evidence is against it. In the *civitas*

<sup>5</sup> For an overview D. WIGG-WOLF, *Dating Kalkriese : the Numismatic Evidence*, in G.A. LEHMANN & R. WIEGELS (eds.), *Römische Präsenz und Herrschaft im Germanien der augusteischen Zeit. Der Fundplatz von Kalkriese im Kontext neuerer Forschungen und Ausgrabungsbefunde* (Abhandlungen der Akademie der Wissenschaften zu Göttingen, Philologisch-Historische Klasse Dritte Folge, 279), Göttingen, 2007, p. 119-134.

<sup>6</sup> F. KEMMERS, *Coins for a Legion. An Analysis of the Coin Finds from the Augustan Legionary Fortress and Flavian canabae legionis at Nijmegen* (Studien zu Fundmünzen der Antike, 21), Mainz, 2006, in particular p. 199-219.

<sup>7</sup> R.O. FINK, *Roman Military Records on Papyrus* (Philological Monographs of the American Philological Association, 26), Cleveland, 1971; deductions seem to have gradually diminished from the mid-second century onward: M.A. SPEIDEL, *Sold und Wirtschaftslage der römischen Soldaten*, in G. ALFÖLDY *et al.* (eds.), *Kaiser, Heer und Gesellschaft in der Römischen Kaiserzeit. Gedenkschrift für Eric Birley* (Heidelberger althistorische Beiträge und epigrafische Studien, 31), Stuttgart, 2000, p. 65-94.

*Balavorum*, located in the Dutch Eastern River Area, bronze coin finds in rural settlements show strong peaks in the Augustan and Flavian period, during which a large body of troops was present in the area.<sup>8</sup> However, in the neighbouring *civitas Cananefatium* the presence of a large number of troops in the area in the mid-first century AD did not result in the appearance of contemporary bronze coins in the rural settlements. Only after the foundation of the *civitas* capital did bronze coins become a part of the material culture of the native population.<sup>9</sup> Typically, both these areas are located in the immediate hinterland of the *limes*, and yet these already show a disparate picture. By which mechanisms Roman bronze coins ended up in areas far removed from the military, like Inner Gaul, is even less clear, although there are indications that Roman coins started to arrive there at a later date.<sup>10</sup>

Regardless of how bronze coins first entered an area, their circulation was strongly regionalised: types and issues ubiquitous in one particular region are a rarity in the next.<sup>11</sup> For silver coins this is thought not to be the case, as precious metal coinage would have been unsuited for local daily shopping but ideal for large-scale transactions involving the long-distance trafficking of goods. So far, the evidence from site finds is not large enough to confirm this idea.<sup>12</sup>

Looking at our current state of knowledge on the use and circulation of coins in the first and second centuries AD, the small change bias (whether this was caused by depositional processes or not) complicates our understanding of how Roman silver and bronze coins travelled from the centre to the periphery of the empire, and what happened once they got there. One possible solution to this problem is to study the circulation of coins in a period, when small change supply from the centre is almost absent: the Severan period.

<sup>8</sup> J.G. AARTS, *Coins or Money? Exploring the Monetization and Functions of Roman Coinage in Belgic Gaul and Lower Germany 50 BC-AD 450*, Amsterdam, 2000, in particular p. 56, 208.

<sup>9</sup> F. KEMMERS, *Interaction or Indifference? The Roman Coin Finds from the Lower Rhine Delta*, in A. BURSCHE *et al.* (eds.), *Roman Coins outside the Empire. Ways and Phases, Contexts and Functions* (Collection Moneta, 82), Wetteren, 2008, p. 93-103.

<sup>10</sup> D. NASH, *Plus ça change...*, *Currency in Central Gaul from Julius Caesar to Nero*, in R. CARSON & C. KRAAY (eds.), *Scripta Nummaria Romana. Essays presented to Humphrey Sutherland*, London, 1978, p. 12-31.

<sup>11</sup> F. KEMMERS, *op. cit.* [n. 6], p. 223-240; A.S. HOBLEY, *An Examination of Roman Bronze Coin Distribution in the Western Empire AD 81-192* (BAR Int. Series, 688), Oxford, 1998.

<sup>12</sup> Duncan-Jones tried to demonstrate regional variation in silver coin supply on the basis of coin hoards: R.P. DUNCAN-JONES, *The Monetization of the Roman Empire: Regional Variations in the Supply of Coin Types*, in G.M. PAUL & M. IERARDI (eds.), *Roman Coins and Public Life under the Empire* (E. Togo Salmon papers, 2), Ann Arbor, 1999, p. 61-68; R.P. DUNCAN-JONES, *Implications of Roman Coinage: Debates and Differences*, in *Klio*, 87/2, 2005, p. 459-487 from p. 471 onward.

### III. Coin circulation in the Severan period (AD 193–235)

#### 1. Contextualizing Severan coin finds to reconstruct coin circulation

In order to analyze the supply, use and circulation of Severan coins in the north-western provinces of the Roman Empire, an inventory was made of all published coin finds of these emperors, be it in hoards or as site-finds, in the provinces of *Germania Inferior*, *Germania Superior*, *Gallia Belgica*, *Raetia* and *Britannia*.<sup>13</sup> An attempt was made to register coin finds from *Gallia Lugdunensis* and *Gallia Aquitania* as well, but due to the general poor state of publication, it proved impossible to assemble a representative dataset for these areas. The inventory resulted in a database comprising slightly under 34,000 coins, two-thirds of which were found in hoards.<sup>14</sup>

Of the 11,435 single finds 85.4% were precious metal coins, which is almost the exact opposite of the situation in the first and second centuries AD. This strange phenomenon has been observed before,<sup>15</sup> albeit not on such a firm quantitative basis, and is not solely related to a decrease in bronze coin production in the Severan period, as Severan bronze coins are frequently found in the Mediterranean. Somehow, however, bronze coins minted in the period AD 193–235 never crossed the Alps in any great quantity. Importantly, it should not be assumed that the use of small change had ended. As Antonine bronze coins are often much worn and are repeatedly found in firm third century contexts, they most likely filled in the gap. However, for the Severan period the movement of coins from the mint to the market is clearly not obscured by a bias in small change.

To reconstruct this movement, where possible the functional context in which the coins were found was registered. These contexts can be

<sup>13</sup> The author is aware that sometime in the early third century the Roman province of *Britannia* was subdivided into two provinces (*Britannia Superior* and *Inferior*). As the exact date of this event, nor the boundaries between the two provinces are presently known, all the coin finds from Britain south of Hadrian's Wall were grouped together (as well as the coin finds from the Scottish sites thought to be associated with Septimius' campaigns in AD 208–211).

<sup>14</sup> Severan coins in post-Severan hoards were included if the youngest coin in the hoard had been issued by Gordian III or earlier. As discussed below, Severan coins in later hoards were thought not to represent circulation hoards but savings hoards and thus not representative for studying circulation and supply in the Severan period.

<sup>15</sup> Among others: R.A. ABDY, *Worn sestertii in Roman Britain and the Longhorsley Hoard*, in *NC*, 163, 2003, p. 137–146; T.V. BUTTREY, *A Hoard of sestertii from Bordeaux and the Problem of Bronze Circulation in the Third Century A.D.*, in *ANSMN*, 18, 1972, p. 33–58; *Id.*, *Monetary Circulation at Lyons in the Third Century A.D.*, in *BSFN*, 36/10, 1981, p. 125–126; R. REECE, *Roman Coinage in the Western Empire*, in *Britannia*, 4, 1973, p. 227–251.

broadly divided in three categories: military contexts, civilian contexts and ritual contexts.<sup>16</sup> Obviously these categories can be broken down further to distinguish between e.g. urban civilian contexts (towns and *vici*) and rural civilian contexts (villas and rural settlements). The usefulness of this contextualisation of Severan coin finds is immediately apparent when applied to the proportion of precious metal coinage versus bronze coinage (Fig. 1).

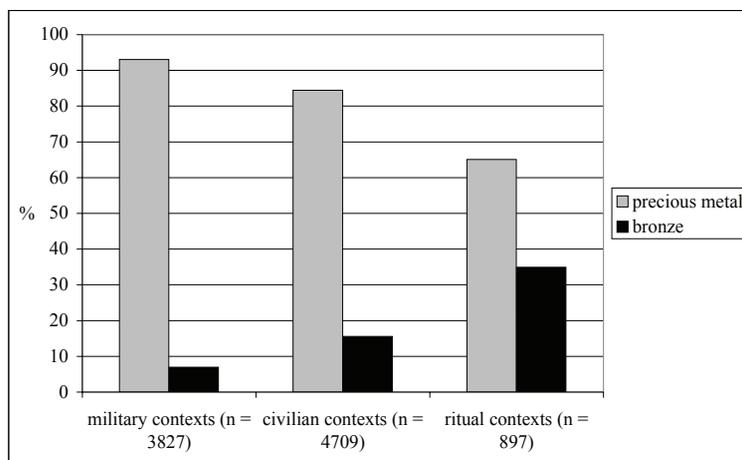


Fig. 1. The ratio of Severan bronze coins and precious metal coinage over various contexts (hoards excluded).

In military contexts Severan bronze coins augment up to hardly seven percent of all the Severan coins; in civilian contexts this percentage has more than doubled (15.5%); in ritual contexts the ratio more than doubles again to reach 34.9%. Theoretically this could be related to the geographical location of these various categories of sites. But as is made clear in Fig. 2 this pattern can be observed in all provinces, although it has to be admitted that the proportion of bronze coins increases the further one is removed from the military zone. Nevertheless, this contextualisation clearly shows that Severan bronze coins are not at all absent in the north-western provinces. Rather, their presence on sites bears a correlation to the functional character of a particular site. Especially in the ritual context, a conscious selection by the dedicators is to be assumed. Whether the preference for bronze coins over silver coins was purely financially inspired, or was dictated by less profane motivations is of course hard to discern.

<sup>16</sup> Military contexts included auxiliary forts, legionary fortresses, military *vici* and *canabae legionis*. Civilian contexts included towns, *vici* (or small towns), *villae* and rural settlements. Ritual contexts included temples, ritual deposits and cemeteries.

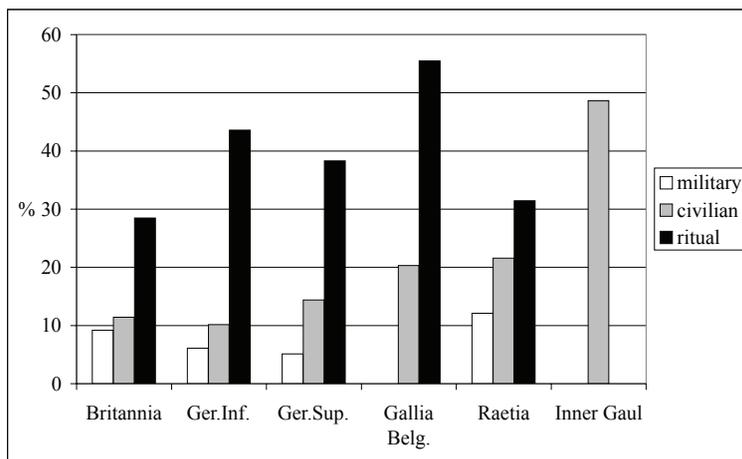


Fig. 2. The ratio of Severan bronze coins (compared to silver coins) over various contexts in different provinces of the Roman Empire (hoards excluded).

## ***2. Silver and bronze coins and the impact of the Severan army pay rise***

This complete change-over in the composition of site finds for Severan coins, and particularly their sheer absence in military contexts (including the military *vici* and *canabae* adjacent to the camps), most likely marks an important change in the way the Roman government dealt with silver and bronze coins. Until the end of the second century the troops along the frontier had been paid both in silver and bronze coins. All the evidence assembled so far points in the direction that from the reign of Septimius Severus onward the military stipend was exclusively paid in precious metal coinage. Surely, it can be no coincidence that this emperor was the first one in over a hundred years to raise military pay, followed by a further increase several years later under Caracalla. Instead of 300 *denarii* a year, the common legionary soldier now received 900 *denarii* a year.<sup>17</sup> This might indeed mark the point, when shipping bronze coins in order to make payments was no longer really an option: from bronze to silver. Again, this does not imply bronze coins were no longer used, but that the Roman state no longer supplied new bronze coins from the mint to the military in the north-western provinces.

<sup>17</sup> M.A. SPEIDEL, *op. cit.* [n. 7], p. 72-73 and 84; *contra* P. SOUTHERN, *The Roman Army. A Social and Institutional History*, Oxford, 2006, p. 108, who seems to be unaware of the newest evidence provided by Speidel.

In relation to the topic of the dissemination of coinage from the mint to the market, three observations might be of importance. First, although common enough in the Mediterranean and the eastern provinces, epigraphic evidence for *nummularii* and *argentarii* is extremely scarce in the Germanies, Britain and Northern Gaul. The earliest inscriptions mentioning moneychangers in these areas all date to the beginning of the third century.<sup>18</sup> A connection with a changed payment-policy seems most likely. Secondly, the relatively large proportion of Severan bronze coins in civilian contexts, even within military provinces, shows that civilians had a different access to bronze coins than the soldiers. For if soldiers had had the same access to these coins, and given the observed bias towards small change in site finds, one would expect to find comparable ratios of Severan bronze coinage in the commercial settlements surrounding the forts and fortresses. Lastly, the rather haphazard publications of site finds in Inner Gaul and the more consistently published hoards from this area have one thing in common: Severan coins are quite rare altogether. The typical site list (and hoard) will have a continuous series of Roman bronze and silver coins from sometime in the first century AD up to Commodus. Usually the series will then show a gap and will only start off again with Gallienus or Postumus. If Severan coins do turn up, bronze is almost as common as silver (as can be seen in Fig. 2). However stratigraphic evidence and associated finds seem to indicate that an important proportion of the Severan bronze coins in Inner Gaul were part of a late-third-century coin circulation.<sup>19</sup> This could be an important indicator that coins minted in the early third century did not arrive in Inner Gaul straight away, but slowly drifted in from the Mediterranean. Potentially, the lack of Severan silver could be explained by an interruption in the official supply of newly minted *denarii*. With three times as much money needed as previously in the army zone, ensuring a supply of new coins to Gaul was not the priority of the financial administrators in Rome.

<sup>18</sup> B. GALSTERER & G. GALSTERER, *Die römischen Steininschriften aus Köln* (Wissenschaftliche Kataloge des Römisch-Germanischen Museums Köln, 2), Cologne, 1975, catalogue numbers 327 (= *CIL* XIII, 8353) and 330 (= *AE* 1927, 67). For a larger discussion: J. ANDREAU, *La vie financière dans le monde romain : les métiers de manieurs d'argent (IV<sup>e</sup> siècle av. J.-C.-III<sup>e</sup> siècle ap. J.-C.)* (Bibliothèque de l'École française de Rome, 265), Rome, 1987.

<sup>19</sup> J. VAN HEESCH, *De muntcirculatie tijdens de Romeinse tijd in het Noordwesten van Gallia Belgica. De civitates van de Nerviers en de Menapiërs (ca. 50 v.C.-450 n.C.)* (Monografie van Nationale Archeologie, 11), Brussels, 1998, p. 102-104; T.V. BUTREY, *art. cit.* [n. 15].

### 3. *The circulation of Severan silver coins from the mint to the market*

The impact of the Severan army pay rise on coin supply to the army seems to have been profound. An interesting consequence of this for scholarly research is that it enables us to study the distribution and circulation of silver coins in this period, without disturbances by the bronze coins. Equally beneficial to this study is the sharp decrease in the silver content of *denarii* early in Septimius' reign and the rapidly declining importance of the *denarius* in favour of the *antoninianus* from the reign of Gordian III onward.<sup>20</sup> Pre-Severan coins were driven rapidly out of circulation, while Severan coins in their turn quickly made way for later emissions.<sup>21</sup> Thus it can be safely assumed that state payments in the Severan period were not made in old coins and that residual coin circulation of Severan coins was not a major factor to be reckoned with.

Based on hoards, it is usually assumed that silver coins do not show regional circulation patterns and that the supply of new silver coins to the military was dictated by production levels at the mint and thus fairly homogeneous across the Roman Empire. As mentioned before, coinage is thought to have subsequently spread from the army to the civilian sphere. Based on the inventory of Severan coin finds both these assumptions can be tested on a firm empirical basis. As functional context was found to be crucial in the correct interpretation of the dataset, this is the discriminating factor in the analyses that follow.

Fig. 3 shows the relative frequency of the number of coins per year in military context in Britain, the German provinces and Raetia. Clearly these frequencies differ per province. Coins minted in the years AD 200-210 are far more frequent in military contexts in Britain than in military contexts elsewhere, whereas in Raetian forts coins issued very early in Septimius' reign are very common. Forts in the German provinces are particularly low in coins minted in the period AD 206-211. In the later years of Severus Alexander's reign the chronological profile of the various provinces show much similarity again. On the basis of this graph it can be demonstrated that the initial supply of Severan *denarii* to the army

<sup>20</sup> H. GITLER & M. PONTING, *The Silver Coinage of Septimius Severus and his Family (193-211 AD). A Study on the Chemical Composition of the Roman and Eastern Issues* (Glaux, 16), Milan, 2003; D. HOLLARD, *La crise de la monnaie dans l'Empire romain au 3<sup>e</sup> siècle après J.-C. Synthèse des recherches et résultats nouveaux*, in *Annales*, 50/5, 1995, p. 1045-1078 (in particular p. 1057-1058).

<sup>21</sup> However Severan *denarii* keep turning up in considerable numbers in hoards up to the reign of Postumus: J. VAN HEESCH, *op. cit.* [n. 19], p. 127-134 for a discussion of this phenomenon. Because of their relatively high silver content, they will have been saved and withdrawn from circulation. The late hoards with Severan *denarii* are therefore to be understood most likely as savings hoards.

was differentiated per province and that apparently coins did not circulate to any great extent between forts in different provinces.

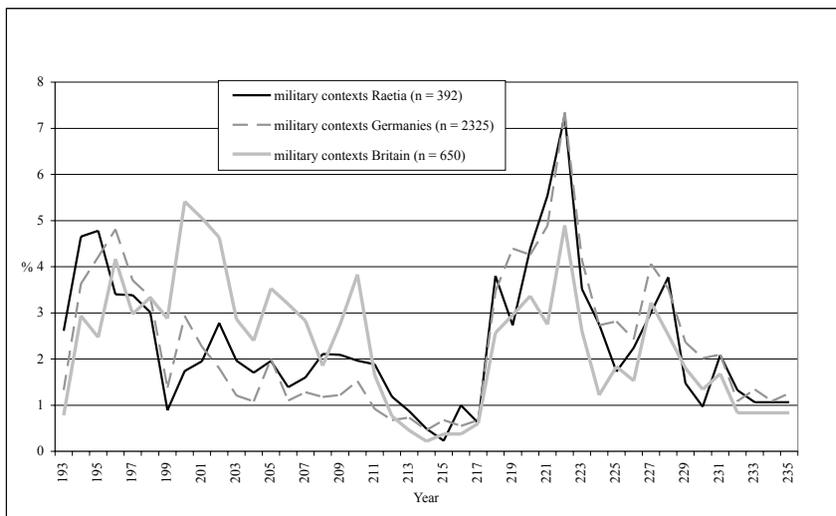


Fig. 3. The proportion of Severan coins per year in military contexts in Britain, the German provinces and Raetia (hoards excluded).

Zooming in on one particular province, fig. 4 displays the relative frequency of the number of coins per year in Britain in military context on the one hand and civilian contexts on the other. Again, these are not the same: coins of the years AD 200-202 and AD 210-211 are more frequently found in military settlements than in civilian settlements; throughout the period smaller deviations occur. If we assume, that the ultimate source of all the coins found in civilian settlements in Britain is the army, the chronological profiles in fig. 4 should have been identical. Apparently, a part of the coins ended up in the civilian sphere by means of a different mechanism.

On a first glance, the situation is different in the German provinces (Fig. 5). Here the chronological profiles of Severan coin finds are very similar for both kinds of contexts. That the coins found in military and civilian settlements are not identical, can be deduced from fig. 6. Although alike in chronological composition, the relative frequency of the types depicted on the reverse of the coins is quite distinct. Certainly, types depicting *Victoria*, *Fortuna* or the emperor himself are equally common in both contexts. Yet for types like *Pax*, *Pietas* or *Hercules* differences are clearly visible. Again, this seems to point to a separate access to coins for soldiers and civilians in the German provinces.

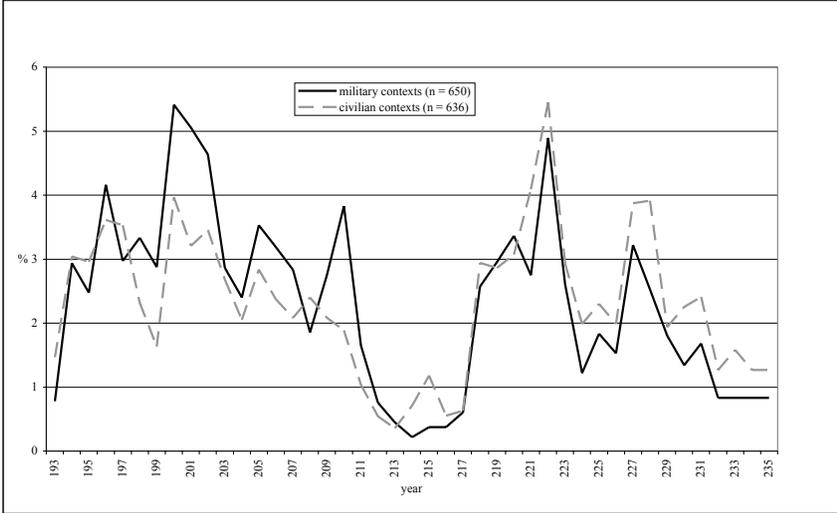


Fig. 4. The proportion of Severan coins per year in military and civilian contexts in Britain (hoards excluded).

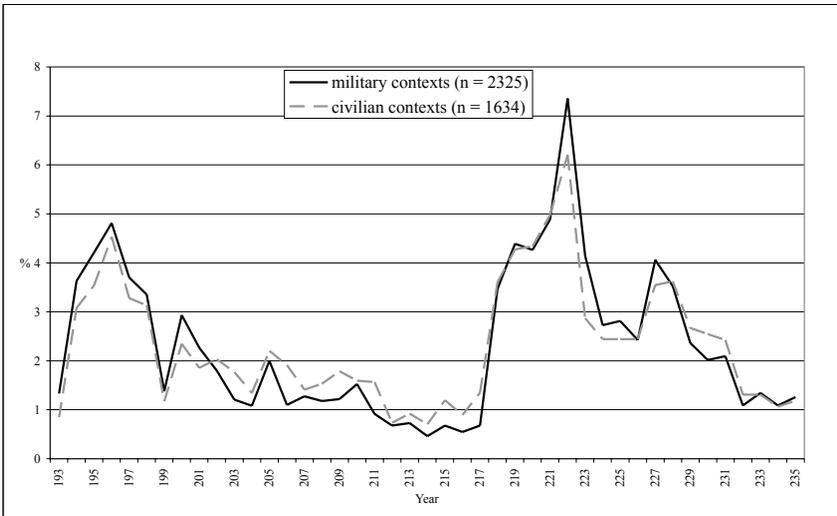


Fig. 5. The proportion of Severan coins per year in military and civilian contexts in the German provinces (hoards excluded).

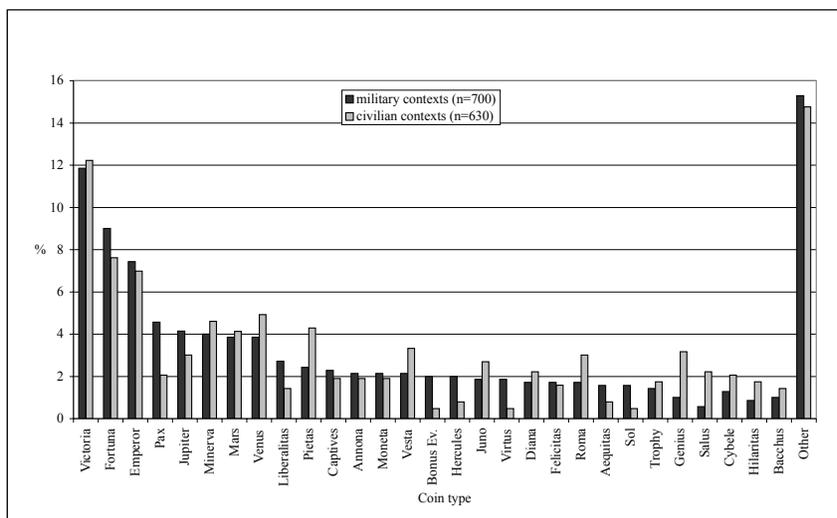


Fig. 6. The relative frequency of coin types issued by Septimius Severus in military and civilian contexts in the German provinces (hoards excluded).

The Roman province of *Gallia Belgica* was truly civilian in character, as no soldiers were stationed there on any substantial scale. The nearest troops, and a potential source of coinage, were to be found along the limes in Upper and Lower Germany. Comparing the chronological distribution of Severan coins found in Belgic Gaul with the ones for military and civilian contexts in the German provinces reveals a very comparable composition (Fig. 7), with the exception of a small peak in Caracalla's sole reign. Looking at the typological distribution significant differences can be observed however, both from the civilian and the military coin finds in the Germanies (Fig. 8). Once more, it is quite clear that coins arrived in Belgic Gaul not only by means of the army.

Returning to the two general opinions on silver coin supply and circulation mentioned at the beginning of this paragraph, two conclusions can be drawn. First, on the basis of the observations made above the theory that the supply of (Severan) silver coins to the army was undifferentiated is no longer tenable. Furthermore, it was also shown that silver coinage not necessarily reached the civilian market through the military.

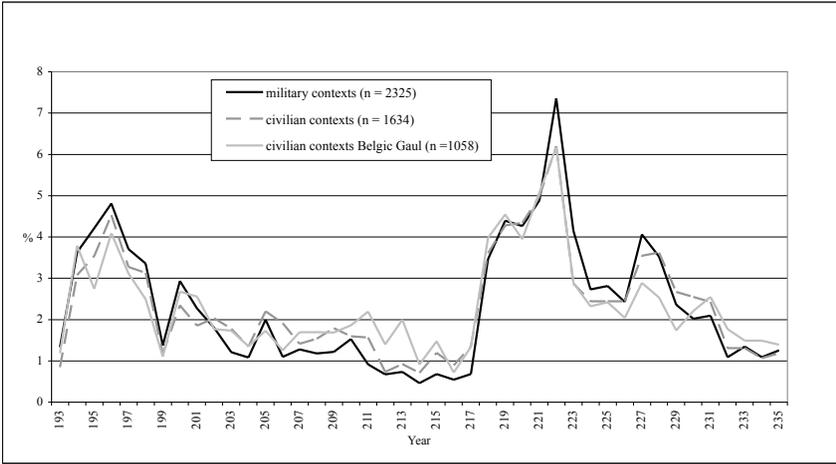


Fig. 7. The proportion of Severan coins per year in military contexts in the German provinces and civilian contexts in the German provinces and Belgic Gaul (hoards excluded).

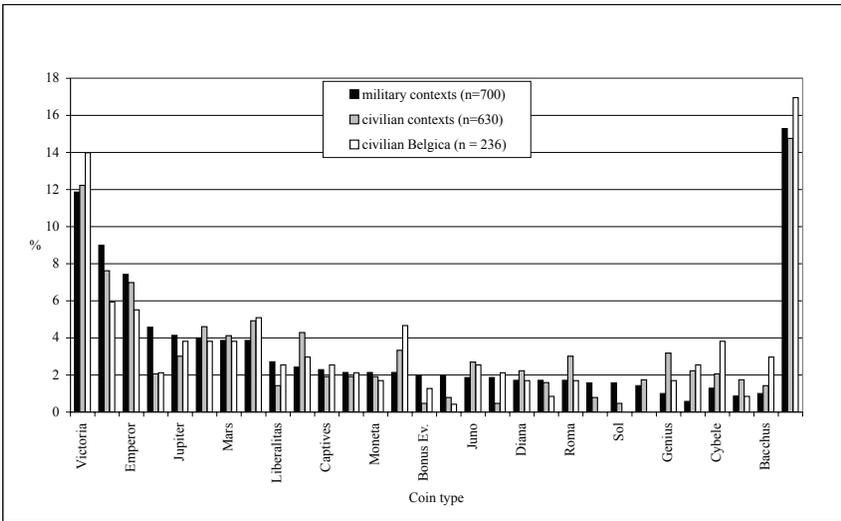


Fig. 8. The relative frequency of coin types issued by Septimius Severus in military contexts in the German provinces and civilian contexts in the German provinces and Belgic Gaul (hoards excluded).

#### IV. Mints, markets, supply and circulation

How should the evidence presented so far be interpreted, and how is this related to the central theme of this paper, which is concerned with the mechanisms by which coins minted in Rome ended up in the far corners of the Empire? Given the chronological and typological variations in

Severan coin finds both between provinces and between various contexts within a single province, it looks like two separate mechanisms were at work. On the one hand there was the supply of silver coins to the army; on the other hand there was a stream of silver coins flowing into the civilian community. After this initial arrival these two pools of coinage did not mix entirely, nor did a homogeneous coin pool across the empire develop. Possibly, this could be taken to indicate that – monetarily speaking – the civilian and the military sphere were not fully integrated at this particular point in time. Such a situation would not have been unlike to what was observed for the Lower Rhine delta in the first century AD. Another option, however, could be that there was simply not enough time for the Severan silver coins to become thoroughly mixed through, as the take-over of the *antoninianus* led to the untimely removal from circulation of the Severan *denarii*.<sup>22</sup> If this was what happened, it can nevertheless be concluded that, a) civilian and military spheres of coin circulation were initially differentiated and, b) three to four decades did not suffice for both coin pools to fully integrate (the period of time between the emission of Septimius' debased *denarii* and the large scale introduction of the *antoninianus*). Either way, large-scale and long-distance commerce and tax collecting did not rapidly alter the coin assemblages within provinces and spheres of use. As both taxes and commerce were a very real part of everyday life in the Roman provinces, the sophistication of banking and credit-systems, which could enable the virtual transfer of money, would require further study.

If in the Severan period the Roman army was not the (only) source of precious metal coinage for civilians, we should look for other provenances. One way for new coins to arrive in the civilian sphere would be through state payments for civic building programmes and endowments for civil servants. It should be noted, that the number of equestrian officials receiving an annual income rapidly increased in the early third century.<sup>23</sup> An alternative, or complementary, way might be found in private initiatives, like loans of the Rome-based aristocracy to their counterparts in the provinces.<sup>24</sup> As the chronological profiles for Belgic Gaul and the German provinces were so similar, we might suspect that all new coins – be it for military or civic expenses – first went to the financial procurator of a province. In the case of *Gallia Belgica*, *Germania Superior* and *Germania Inferior* this was one and the same man, resid-

<sup>22</sup> The author expresses her gratitude to the participants of the “From Mints to Markets” colloquium held in Brussels for suggesting this possibility.

<sup>23</sup> E. LO CASCIO, *The Emperor and his Administration: the Age of the Severans*, in *CAH XII* (2nd edition), Cambridge, 2005, p. 137-155.

<sup>24</sup> Chr. HOWGEGO, *The Supply and Use of Money in the Roman World 200 BC to AD 300*, in *JRS*, 82, 1992, p. 1-31 (in particular p. 27-28).

ing at Trier.<sup>25</sup> The varying chronological profiles for military contexts in Britain, the Germanies and *Raetia* seem to indicate that the supply from the mint to the procurator was not indiscriminate. Particular years saw larger numbers of coins going to region X than to region Y. At the same time, apparently varying demands for either military or civic expenses created the dissimilar chronological compositions encountered in military and civilian contexts within a single province like Britain.<sup>26</sup> Variations in the typological composition, as shown in fig. 6 and 8, indicate that separate batches of coins were destined for military and civic payments. Provinces (and procurators) far removed from the frontiers of the Roman Empire probably did not receive regular consignments of new coins from the mint, at least not in the Severan period. As in these provinces civic expenses most definitely had to be met as well, even if this was financially a much smaller burden than maintaining a large body of troops, presumably these had to be entirely covered by tax revenues.

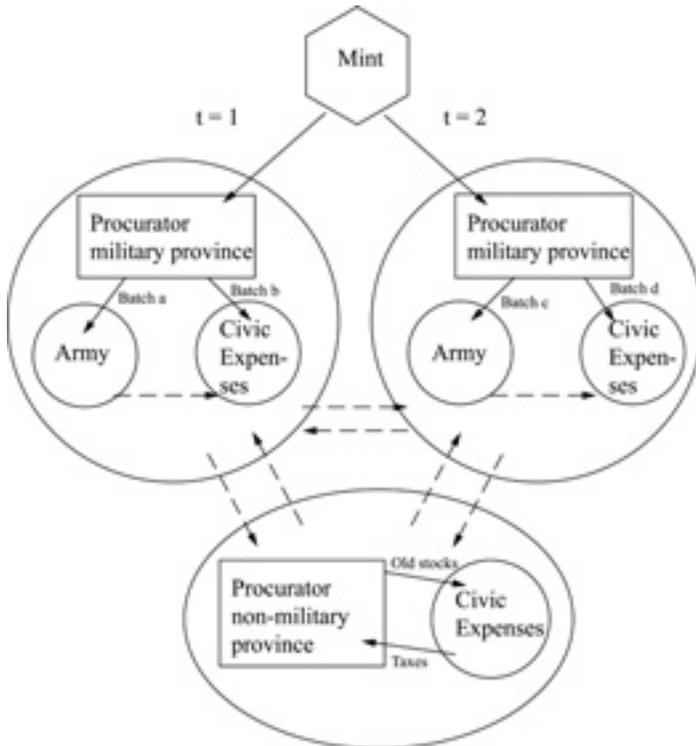


Fig. 9. A model for the distribution of Severan silver coins from the mint to the market.

<sup>25</sup> R. HAENSCH, *Capita Provinciarum: Statthaltersitze und Provinzialverwaltung in der römischen Kaiserzeit* (Kölner Forschungen, 7), Mainz, 1997, p. 74-75.

<sup>26</sup> Cf. *supra* [n. 13].

A tentative model, although certainly not comprehensive, of how coins might have circulated from the mint to the market in the Severan period is presented in fig 9. Still, one particular aspect of coin transformation has not yet been completely accounted for. Little has been said on if and how the Severan silver coins were actually broken down into smaller fractions to facilitate daily shopping for soldiers and civilians alike. Large-scale inflation, making smaller change obsolete, is mainly attested for the later third century.<sup>27</sup> Therefore, the money-changers certainly played a part, relying heavily on old Antonine bronzes (which did not have to be transported all the way from the mint, as the Roman State had seen to that). Perhaps, however, we should re-evaluate the role of plated and cast *denarii*, both of which rose to previously unknown heights in the early to mid-third century. These might have functioned as the small change of the day.

<sup>27</sup> D. RATHBONE, *Monetisation, not Price-inflation, in Third Century AD Egypt?*, in C.E. KING & D.G. WIGG (eds.), *Coin Finds and Coin Use in the Roman World* (Studien zu Fundmünzen der Antike, 10), Berlin, 1996, p. 321-339.