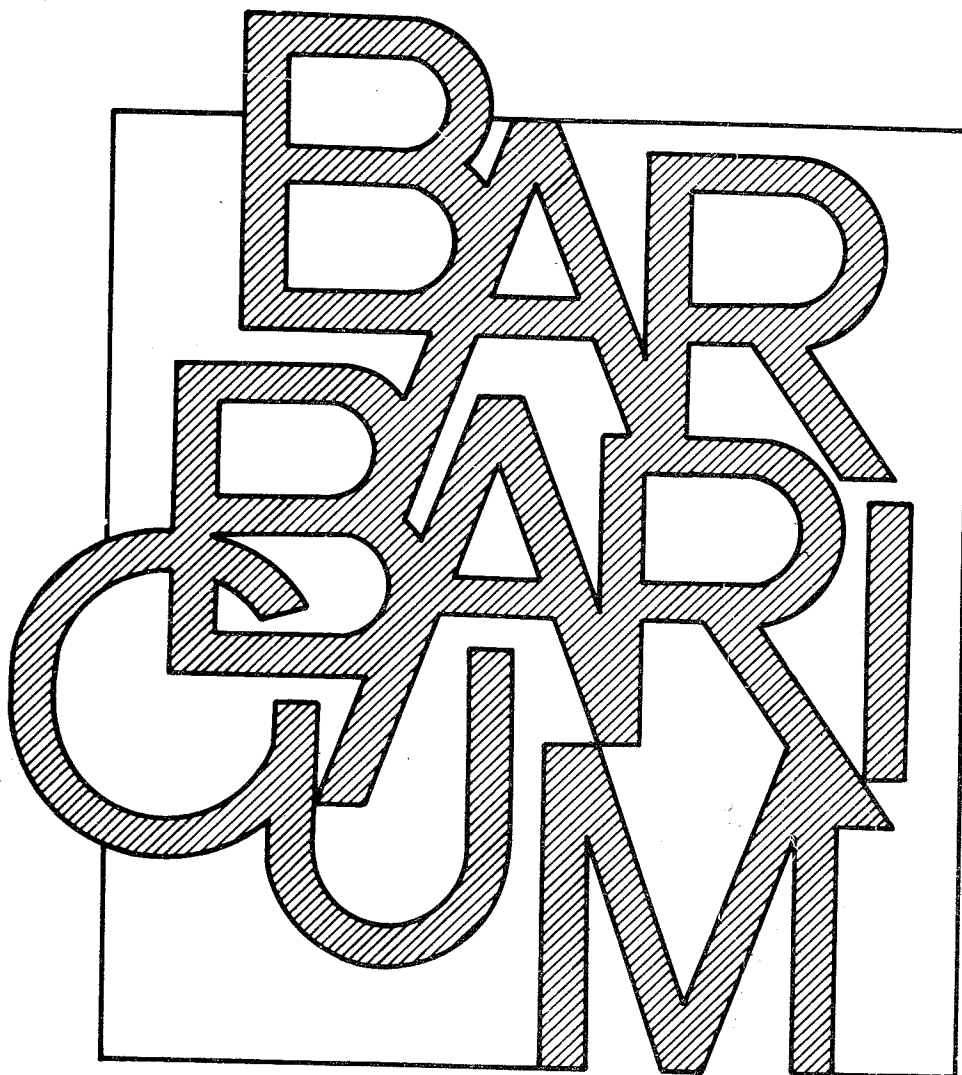


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Roman Coinage in the Westbalt Circle.

Introduction.

It was already recognized, early in this century, that Roman coinage found between the Pasłęka (Passarge) river and lower and central Neman (map 1) differed from that representing the rest of *Barbaricum* (Bezenberger 1904, Hollack 1908). The difference was due to the essential dominance of sestertii minted in the second and first half of the third century A.D., mostly represented in graves¹. This phenomenon can be associated with a single cultural area, here referred to as "the Westbalt circle"².

Relevant publications so far mainly attempted to explain this dominance of "bronze" coinage³ and its function in the local societies (e.g. Bezenberger 1904, Michelbertas 1972, 49-64). But this paper focuses primarily on the provenance of coinage from the Westbalt circle finds and on the time of its flow from the Roman Empire to the south Baltic coast.

Territory and Chronology.

The area under discussion covers the sites of the Bogaczewo, Sudovian and Sambian cultures, as well as those of the Lower Neman and West-Lithuanian groups⁴. In addition to distinct connections in archaeological material, they share in common the occurrence of bronze coinage in graves (least so in Sudovian culture). Considering remarkable differences in the coinage find structures, the so-called Central-Lithuanian group (Kaunas group) has been excluded, this being additionally confirmed by other archaeological sources somewhat transitory in character between Eastbalt and Westbalt circles (Šturms 1950, Tautavičius 1980, 81, fig.2).

The ranges of a circle have been assumed for the period when bronze coinage occurred "en masse" in graves and hoards, that is, for the Late Roman Period, ca between the end of the 2nd and late 4th centuries A.D. (Godłowski 1974, 43-92). The territory under discussion, therefore, covered the Sambian Peninsula, Mazurian Lake District, Suwałki region and lower Neman river-basin. South and west, the Westbalt circle was almost entirely separated from the Germanic tribes (the Wielbark culture) by a broad strip of no man's land ("mutual fear" zone). This zone shrunk perceptibly only in the Olsztyn Lake District and, more importantly, at the mouth of the Pasłęka river. In the Migration Period the Westbalt circle gradually shifted west of the Pasłęka river (Godłowski 1980, 1981, 104-109).

Representativeness.

It is not simply the occurrence of coins in graves which distinguishes the Westbalt circle from other *Barbaricum* cultural groups⁵. Another major point of difference is that they were mostly sestertii from the 2nd and the first half of the 3rd century A.D. Similarly, the few hoards recorded in the discussed area in fact include also only this group of coins.

¹ This distinction connected with the necessity to use a sophisticated system of sources description led Sture Bolin to set apart the Ostpreussen area (corresponding largely to the territory under discussion) into individual catalogue of Roman coins - Bolin 1926.

² This term was introduced by W.Nowakowski (1983, 1991, 1992).

³ By the "bronze coinage" I mean emissions made of copper and its alloys, identified in numismatic literature with "Ae" symbol.

⁴ Engel 1933, 262-263, fig.1-2, Šturms 1950, Okulicz 1973, 408-421, Latvijas, 98-99, fig.37, Kaczyński 1976, LAA III, 10-12, maps 1,6,7 (A.Tautavičius), Michelbertas 1986, 193-198, fig.85-87, 238-240, fig.89 and especially Nowakowski 1983, 64 fig.1, 1991, 1992.

⁵ Coins are found in graves in other areas as well, especially in Sarmatian cultures - Köhegyi 1972.

This is in marked contrast to other territories, which most often produce denarii from the 2nd century as dominating in coin finds⁶.

It should constantly be kept in mind, however, that the majority of coins were found in the Westbalt circle territory in the second half of the 19th century and at the beginning of the 20th century⁷ and were more precisely described in a single publication issued in 1926 (Bolin 1926). Various misinterpretations are very likely, requiring detailed source criticism. Moreover, the proportions of denominations may have resulted from selection due to burial customs. All this calls for an analysis of the representativeness of coinage finds in terms of the classic division by H.J.Eggers (1951, 23-24) into "live culture", "dead culture" and "re-discovered culture"⁸.

The first level of representativeness is here the relationship of "re-discovered culture" to "dead culture" i.e. the attempt to determine to what an extent the image developed corresponds to the content found in the earth.

By 1944 the territories of the Westbalt circle had been quite well investigated archaeologically⁹. There was no active numismatics, however, to systematize informations on coin finds. As a result the data available comes from antiquaries and professional archaeologists who recovered coins occasionally when excavating cemeteries¹⁰. Nevertheless, a number of interrelated factors such as favourable regulations, a rich tradition of ancient studies, advanced conservation programmes and popularization activities as a part of the educational system (including teachers and the clergy), channelled all information and, largely, the very coinage finds, to museum files and collections¹¹. All Roman coins found on the territory of former East Prussia (Ostpreußen) collected in museums in early 1920's were seen and identified by the outstanding Swedish numismatist Sture Bolin¹². Unfortunately, almost nothing is known about finds from later years of the interwar period¹³. After World War II some information on finds from the relevant part of Lithuania comes from V.V.Kropotkin, P.Kulikauskas, A.Tautavičius and, predominantly, M.Michelbertas¹⁴. Occasional post-1945 finds in Sambia and the Kaliningrad (Königsberg) region remain unregistered.

And yet, considering the way in which the data on coinage finds were coming until 1920's and aware of competence in source criticism and practice in coinage identification of Sture Bolin, it may be thought that the image he presented is close to reality at the first level of representativeness.

An additional test might be the comparison of the proportion between bronze and non-bronze coins in different find categories. Accordingly, the following quantities of non-bronze coins have been recorded:

- in graves: 3.9% (13 pieces for 320),
- on cemeteries: 4.1% (7 for 165),
- recovered during excavations: 4% (17 for 410),
- occasional isolated finds without any known archaeological context: 10% (15 for 135)¹⁵.

⁶ As in the case of the Przeworsk, Wielbark and Chemiakhov cultures (Kropotkin 1961, Konik 1965, Kunisz 1973, 1985, Kubiak 1979) or Denmark and south Scandinavia (Lind 1981, 1988).

⁷ Single coin finds on this territory are recorded since the beginning of 18th century, i.a. by pastors: J.A.Helwing (1717) and P.Drygalski (1726), also see Bayer 1722, von Baczko 1780, Bock 1782-1785. The most complete data on coinage finds from the Mazurian region including detailed description was provided by E.Hollack and F.Peiser (1904) in the publication of a cemetery at Mojtyny.

⁸ It was just the custom of placing Ae coins in graves east of the Pasłęka river, as distinguished from bronze vessels associated with burials west of the river that H.J.Eggers selected as an example illustrating his source criticism studies.

⁹ A separate question is the state of publications of the results; nevertheless, reports on excavations frequently conducted by the most distinguished archaeologists of the period as well as complete find catalogues were carefully preserved in collections of two societies at Königsberg, later amalgamated into a single collection of the Provincial Museum (Prussia Museum).

¹⁰ Including O.Tischler, A.Bezzenberger, E.Holack, F.Peiser and A.Kemke.

¹¹ In particular in Königsberg, less frequently at Insterburg or Berlin collections.

¹² He visited Königsberg collection several times between 1923 and 1925 - Bolin 1926, 203.

¹³ An exception is an article by J.Liegle (1930) of finds from Sztynort (Steinort), Olsztyn voivodeship.

¹⁴ The latter made an attempt to supplement S.Bolin's catalogue basing on earlier reports (Michelbertas 1972, 110-125). But a number of his corrections proved erroneous. On the other hand, extremely useful is an analysis of later Lithuanian finds, notably those kept at the museum of Kaunas and coming from cemeteries including a very important necropolis at Palanga.

¹⁵ Among those 15 finds a number are doubtful such as those from large towns: Kaliningrad or Klaipeda where coins may have been lost in modern times. Still the number does not alter the general proportions.

It is primarily the hoards¹⁶ which testify to the essential difference in the structure of coinage attributable to "live culture" of the Westbalt circle. Special care must be taken however, while trying to identify hoards, so as to exclude such coinage groups on which information is doubtful, since those groups may have resulted from amateur investigation of a cemetery¹⁷ or even of a single grave¹⁸.

Nevertheless, seven unquestionable hoards of sesterii with approximately known composition have been reported on this territory¹⁹. Some of them include several hundred pieces. There is more information on fairly certain hoards of bronze coins, though lacking detailed data as to their composition²⁰. The only certain hoard featuring non-bronze coins is the deposit of Skandawa in which 21 denarii were found in addition to 11 sestertii²¹.

The distinct disproportion in hoard structure as compared to other cultures is essential in terms of the evaluation of find representativeness. Moreover, a few finds of sestertii are known, recorded in apparently non-sepulchral context²².

The dominance of Ae coinage in finds from Westbalt territories should not therefore be attributed to the state of research nor to ritual custom according to which sestertii appeared preferable for placing in graves. There is no source evidence suggesting a prejudice against Ar coins (denarii, antoniniani) placing restrictions on their possession, the places in which they were stored or used²³. Much would indicate that the image of "re-discovered" is not substantially divergent in this respect from "live culture". Within the coinage available on the Westbalt territories bronze coins were predominant, almost entirely limited to sestertii.

Striking is the unusual homogeneity of emissions occurring in hoards and on cemeteries.

Minting.

The production of bronze coins, their distribution and circulation in the Empire may deal with only to a limited extent. The sestertius was introduced along with other Ae coins (including dupondii and asses) to stable circulation in Imperium Romanum already by the time of Augustus (Grant 1969, 43-44, Kunisz 1976, 59-60). It was a privilege of the Senate to emit this Ae coinage to its considerable profit, especially in the earlier period, since bronze coins were (at least in the first and second centuries) credit money (Kunisz 1976, 44, 1979, 14-15). Sestertii weighing from 27 g to 20 g and subsequently slightly less, were the largest and heaviest coins regularly struck in Rome, bearing beautiful images of e.g. impressive buildings or statues²⁴. Like dupondii, they differed from other - smaller coins, as well as from majority of

¹⁶ Here understood as deposits fulfilling only thesaurization function.

¹⁷ At the Aukštiečiai cemetery, for instance, a total of over 200 coins were found - **Bolin** 1926, 228-230.

¹⁸ In grave no 369 at Aukštiečiai, for instance, 21 sestertii were found - **Bolin** 1926, 230. This is why a group of 30 Ae coins found together with a fibula at Povarovka can hardly be considered a hoard (here also a cemetery - **Bolin** 1926, 214), as in the case of 30 Ae coins from the Palanga grave field, without detailed information in **M. Michelbertas** (1972, 118).

¹⁹ Those are: Algimantai (35 sestertii - **Michelbertas** 1972, 110), Kudrinkos (from 368 coins 299 were identified **Bolin** 1926, 210), former Nutzwinkel (out of 138 coins 106 were identified - **Bolin** 1926, 215), 2 hoards of Pavyzdziui (one featuring 350 coins 323 of which were identified, the other containing 759 coins 718 of which were identified - **Bolin** 1926, 217), Saulažoliai (out of 60-70 coins 50 were identified - **Michelbertas** 1972, 120) and former Schakumehlen (out of 32 coins, 16 were identified - **Bolin** 1926, 209).

²⁰ For instance, former Deyguhnen (**Bolin** 1926, 206). At Vilkyčiai a hoard of 90 coins from Hadrian to Maximianus (rather Maximinus I) was recovered its denominations undefined (**Bolin** 1926, 232).

²¹ **Bolin** 1926, 221, deposit disregarded by A. Kunisz (1973). In the light of information provided by J. Liegle (1930) the alleged complex from Sztynort should not be treated as a hoard. The remaining finds (e.g. Szczytno - **Bolin** 1926, 233) come from the cultural borderland or from the central Lithuanian group which we excluded from Westbalt circle. On the territory under discussion only one later hoard from Smalninkai was reported probably as dated to the 4th century and including 208 Ae coins of which three pieces of Constantine I were identified (**Sajauskas** 1972, 57).

²² For instance former Niebudzen (a bog find of 5 second century Ae coins - **Bolin** 1926, 222) and former Spirdigsee (2 probable sestertii secondarily hidden in a barrow - **Bolin** 1926, 224). Lack of finds from settlements probably resulted from a very low state of research.

²³ Substantial discrepancy might then have occurred between the images of "dead" and "living culture". This discrepancy bars us, for instance, from learning about armour used in the Wielbark culture for it is not represented in graves in this area (**Kaczanowski, Zaborowski** 1988). However, isolated denarii and antoniniani from Westbalt circle graves occur in the same context as Ae emissions. See, for instance, Putilovo gr.84 and 184 (**Bolin** 1926, 210-211), Zhukovskoe (**Bolin** 1926, 215), Nawiady gr.11 (**Bolin** 1926, 236), Nikutowo gr.96 (**Bolin** 1926, 237), Prudovka gr.32 (**Bolin** 1926, 239), Liublino gr.36 (**Bolin** 1926, 218).

²⁴ And therefore they are the basic source for research in the "architectura numismatica" - see **Donaldson** 1859, **Brown** 1940, **Fuchs** 1953.

coins struck in the eastern provinces, by their golden tint, being made of special alloy, orichalcum, originally prepared exclusively for this purpose. In addition to copper it included zinc (ca 20%). Zinc if added in a quantity exceeding 5%, resulting in such a brassy golden-coloured appearance (Caley 1964, 69).

Since the time of Nero, a gradual decrease in the weight of sestertii²⁵ and reduction of zinc content in the alloy²⁶ was observed aggravating in the 3rd century. As a result, since Gordian III, those emissions largely lacked their original golden tint. Depreciation of sestertii is explained by the efforts to protect the profitability of Ae coinage production while Ar coinage was subject to galloping devaluation. This caused the change of proportions of values of denominations in metals (gold, silver and copper) and consequently in the alloys as well. The production of a high quality and costly alloy like orichalcum for minting credit money was of diminishing profitability (Caley 1964, 103, Callu 1969, 115).

Since Commodus, deterioration in the quality of alloy used for sestertii is accompanied by an abrupt reduction in the number of their emissions²⁷. Simultaneously the "bronze" coins struck centrally, that is, asses and dupondii, were emitted sporadically (Callu 1969, 133-134, Kunisz 1971, 64-65). A possible reason is that the Senate having a privilege of striking Ae coins was drawing hardly any profits. Consequently, it only minted the number of coins indispensable on the Italian market, merely to observe tradition, if not for the reason of prestige. Disturbances occurred in the distribution of centrally-struck "bronze" coinages which resulted in their sudden shortages in the majority of provinces²⁸. Because of such shortages of these centrally struck coinages in the Eastern provinces (including Thracia and Moesia Inferior) autonomous mints took up the production of small change for local needs, under the supervision of municipal administration (so-called Greek imperials). These emissions became especially intense in the first half of the 3rd century starting from the rule of Septimius Severus and Caracalla²⁹.

In Moesia Superior, in the mid-3rd century, a period of intensified military activity on the Danube, the Viminacium mint was operating between 239 and 256 A.D. Having an exceptional status, it was to meet the needs of the entire province³⁰ hence the high intensity of its emissions. A mint similar in character was functioning between 246-255 A.D. in Dacia³¹.

On the territories of Pannonia an insufficient amount of small change struck centrally at that time resulted in the production of the "substitute" ("supplementary") coinage manufactured by casting - the so-called *limesalsa*³².

Under the rule of Gallienus (early 260's) the last Rome-controlled sestertii were struck in a rather limited number, while the production of the remaining centrally-struck "bronze" coinage ceased altogether (Callu 1969, 135-137). Bronze emissions were simultaneously struck by the rulers of Imperium Galliarum, of which only Postumus' double sestertii proved regular between 260-263 A.D.³³. The former sestertii were overstruck then into the double denomination using countermark³⁴.

²⁵ Down to about 18 g - Callu 1969, 131.

²⁶ Caley 1964, 56, 72, 81-91, 110, Riederer 1974, 76-82, Etienne, Racht 1984, 377-409.

²⁷ To be observed as a considerable dwindling in number in the largest collections (see e.g. BMCRE), and as increase in prices of these coins in auction catalogues testifying to their rarity.

²⁸ Cf infra.

²⁹ 365 provincial mints functioned in the times of Septimius Severus; for more information on autonomous emissions see Jones 1963, Callu 1969, 11-110, Kunisz 1971, 65-70, Bursche 1984, 235-240.

³⁰ This is confirmed by a legend on the coins of this colony: LEGIO IIII FLAVIA - this legion was stationed in Sigidunum; for more information on the mint at Viminacium see Elmer 1935, Dušanic 1961, Fitz 1978, 611-684.

³¹ Probably in Apulum or possibly Samizegetuza - Callu 1969, 18, Winkler 1971.

³² If not in a state mint, they were produced with tacit approval of the authorities, according to W.Kubitschek (1921) and E.Lacom (1929) in the reign of Gordian III in Camuntum; see also Kunisz 1971, 115-117, 1978, 135-137 who dates the beginning of Danubian *limesfalsa* production to the times of Severus Alexander (at the latest to 239); a number of new *limesfalsa* finds are published in successive volumes of FMRÖ and "Fundberichte aus Österreich".

³³ Elmer 1941, Bastien 1967, Callu 1969, 137-138, Lafaurie 1975.

³⁴ The laurel wreath on the obverse was replaced by *corona radiata*.

Similarly, in the reign of Gallienus the autonomous mints largely ceased to operate³⁵. This paper does not venture into the reasons for the decline of autonomous mints (Schönert-Geiss 1968, Salamon 1970). As for the emissions of sestertii and the remaining centrally-struck bronze coinage, there is much to suggest that it was Senate who (considering general crisis which continued to increase) might have given up its doubtful "privilege" no longer able to bring profits.

Ae Coin Finds - Roman Empire.

Of prime concern are those finds which, beyond doubt, may be attributed to circulation in respective areas of the Empire after Commodus. During this period essential differences may be observed in the distribution and circulation of respective "bronze" coinage groups, making for the identification of the territories most likely to have formed a batch of coins flowing onto the south Baltic coast; additional conclusions of a chronological nature indicating the exact time of this flow will follow.

In the East provinces including Thracia and Moesia Inferior, the autonomous (Greek imperial) emissions dominated in all find categories: hoards, graves, settlement finds³⁶. A very few sestertii are encountered sporadically in addition to autonomous coinage hoards. Similarly, in Pannonia Inferior and Moesia Superior the emissions of Viminacium are predominant in the mid-third century with a relatively low participation of sestertii from that period³⁷. In Dacia, on the other hand, here sestertii occur more frequently, their number is lower than the total amount of autonomous emissions³⁸. A relative abundance of the 3rd century sestertii occurs in finds from Pannonia Superior, while Viminacium coinage prevailed on the *limes*³⁹ while deeper in the province, where those emissions are not so frequent, *limesfalsa* appear as a common phenomenon⁴⁰. Likewise these "supplementary" emissions appear in large quantities in Pannonia Inferior and Moesia Superior⁴¹. Proportions of Ae coinage similar to those in Pannonia Superior are observed in the territories of Noricum⁴².

In all cases under discussion, even if a distortion of the evidence in relation to reality in antiquity occurs, it is quite legitimate to give credit to finds which are very unlikely to deform general proportions in real circulation. According to J.P. Callu (1969, 116) the 3rd century sestertii were only used in the Latin part, to the west of Carnuntum. However, finds recovered from Gaul and Britain feature no sestertii of the first half of the 3rd century⁴³. These observations are based predominantly on numerous reported hoards unsupported by appropriate find inventories. In deposits of sestertii with the latest coins of Commodus and Septimius Severus, the latter are considerably worn indicating that they must have circulated for at least several dozen years (Buttrey 1972, 44-45, Depyrot, Cairou, Lassure 1985, 142-144). On the other hand, hoards including scarce double sestertii of Postumus combine large amounts of coins from the 2nd century, revailing hard-

³⁵ Very few towns struck coins under Claudius II and Aurelian and only Alexandria emitted tetradrachms up to 296/297 (Milne, Kraay 1971, Metcalf 1987, 159-165). A large number of coins from this town circulated widely especially in the last quarter of the 3rd century, throughout the Empire, with particular intensity close to the *limes* - see Callu 1969, 179, Kunisz 1971, 126, Mietczarek 1989, 107-111.

³⁶ Callu 1969, 35-57, Kunisz 1971, 119-136, Fitz 1978, 58-83, 102-225.

³⁷ Pekary 1953, Alföldi 1954, Nubar 1963, Callu 1969, 35-39, 113-115, Kunisz 1971, 112-132, Fitz 1978, 48-58, 72-83, 98-225.

³⁸ Winkler 1965, Callu 1969, 35-39, Kunisz 1971, 117-119, Winkler, Hopártean 1973, Fitz 1978, 58-66, 102-225.

³⁹ E.g. twice in Carnuntum, see Elmer 1933, FMRÖ III.1: Carnuntum, IX: Wien, also Callu 1969, 36-37, Kunisz 1971, 108, 112-132, Fitz 1978, 32-48, 72-83, 166-225.

⁴⁰ E.g. in Sopron; *limesfalsa* frequently occur over the *limes* - in Carnuntum for instance, see Elmer 1933, 67, Kunisz 1971, 115, 1978, 135-137, FMRÖ III.1: Carnuntum.

⁴¹ See note 36.

⁴² Only slightly lower is the share of Viminacium emissions and of *limesfalsa*. The proportions of the post Commodan bronze coinage (up to Trebo- nianus Gallus) over the whole province of Noricum is the following: 28.0% sestertii (including a high percentage of *subferrati*), 19.8% remaining central Ae (with asses as predominant), 19.4% *limesfalsa* (including copies of asses), 18.2% Viminacium emissions (with those of Bithynian Nicea prevailing) - author's own calculations primarily based on finds from Lauriacum (Ens, Lorch) using excavations reports and successive volumes of find catalogues published mainly by Günther Dembski in "Fundberichte aus Österreich".

⁴³ Callu 1969, 119-130, Kunisz 1971, 105-106, Buttrey 1972, 33-50, 56; the latest complete list of 60 hoards of sestertii from France - see Depyrot, Cairou, Lassure 1985, 144-145.

ly any 3rd century coinage⁴⁴. In this case there is a certain risk of some distortion of reality because hoards are often a mere selection of circulating coins. However, a sort of check data is available - sestertii over-struck with countermarks in the times of Postumus originated from the 2nd century coins, later on the only in circulation (Bastien 1967, 91-92, Buttrely 1972, 48-50). Therefore, bronze coinage centrally struck after Commodus practically failed to enter circulation in Gaul and Britain. In those provinces autonomous emissions are fairly sporadic finds (Callu 1969, 111-113, Kunisz 1971, 110-112).

The situation is quite different in Italy. The state of registration of coin finds on this territory is simply outrageous, in most cases makes it impossible to trace circulation with minimum probability. Nevertheless, unique and, at the same time, well-studied material is at hand which consists of 35 hoards of sestertii of which 26 are available for use: 19 from Sardinia, 2 from Sicily, 8 from Po Valley, 5 from the western and 1 from the Adriatic coast⁴⁵. The distribution indicates, according to J.P.Callu (1969, 117) that the "bronze" coinage was used in underdeveloped regions of Italy where trade was rather limited. It seems, however, that the spread of hoards as outline above results, first of all, from the state of research in this respect - failure to register deposits in central Italy.

All the above-mentioned hoards were hidden in the mid-third century A.D. (from Philip to Gallienus). Hoards from Po Valley area comprise nearly 50% post-Commodan coins, while they make up more than 80% of hoard finds from Sardinia, Sicily and Africa. Lack of earlier coinage, according to J.P.Callu (1969, 117-119) should be attributed to intensified thesaurization in Italy. It seems more likely, however, that this was due to common melting of old coinage by Rome's mint.

No autonomous emissions have as yet been recorded from Italian territory and although this may result from the level of research hardly can they be expected to occur south of Alps.

Most interesting is the case of the Rhineland *limes*. This area has produced a considerable number of sestertii struck after Commodus with those dated to 240's prevailing⁴⁶. Large amounts of autonomous coins were also recorded here⁴⁷ usually linked to movements of troops and the collecting of coins as peculiar souvenirs, which surprisingly often were placed in graves (Kunisz 1971, 110, Bursche 1983a, 58, 1983b). Accordingly, for the Rheinhessen district⁴⁸, for instance, 35 sestertii struck after Commodus are associated with 4 (10%) autonomous coins⁴⁹. Furthermore, one (2.5%) coin of Trebonianus Gallus from Viminacium and a single dupondius occurred there. On the other hand, hoards of sestertii usually terminate with emissions of Commodus. All these elements combine to form a pattern which almost entirely corresponds to the one registered in the Westbalt material.

Generally, similar to the Rhine *limes* is the situation of Agri Decumates⁵⁰ territories, despite a slightly higher proportion of dupondii, a slightly lower one of sestertii and substantially lower one of autonomous coinage (some 5%).

Ae Coin Finds - *Barbaricum*.

The ratio of different groups of bronze coinage minted after Commodus to the bulk of coins flowing into the territories of respective *Barbaricum* cultures may be analysed.

In the area east of the Vistula (beyond the reach of the Westbalt circle) settled by the Wielbark culture⁵¹ as well as in Ukraine covered by the Cherniakhov culture autonomous coins outnumber other bronze coins after Commodus.

⁴⁴ Post Commodan coins account for average of 4% - Callu 1969, 124-130, Buttrely 1972, 45-46, 56. Cessation in sestertii influx into the West provinces in the times after Commodus is a phenomenon comparable in its scale to the hiatus in the denarii influx to *Barbaricum* in A.D. 194.

⁴⁵ List of those hoards - Callu 1969, 117-119, Buttrely 1972, 50-51, 57 and a hoard recovered from the Tiber in 1972 - Riederer 1974.

⁴⁶ By the time of Philip (Callu 1969, 120), our conclusions are based on find lists included in published volumes of FMRD.

⁴⁷ Frequently from very remote areas - see Callu 1969, 112-113, Bursche 1983b, 198.

⁴⁸ Primarily, the longest series of finds from Vicus Altiacensis (Alzey), Bingium (Bingen) and Mogontiacum (Mainz) were considered as posing fewest methodological reservations - FMRD IV.1: Rheinhessen.

⁴⁹ Those of Severus Alexander from Alexandria an Issos (in hoard from late seventies), Gordian III of Tarsus (in a grave), Geta of Pergamon ("medal-lion" in a grave together with 3 second century sestertii) and Julia Maeza of Deultum (stray find).

⁵⁰ Here the image is obscured by the 233 Aleman invasion - see Christ 1960, FMRD I.7: Schwaben, II.1: Nordbaden, II.2: Südbaden, II.3: Südwürttemberg-Hohenzollern.

⁵¹ Among 13 Ae reported here: 6 autonomous coins, 2 Viminacium emissions and 5 sestertii.

In the Przeworsk culture (southern and central Poland to the west of the Vistula) these emissions make up over 25%⁵² which proportion given the state of recording of coin finds, may be underestimated⁵³. Similar proportions (with respect to sestertii) are revealed on Bohemian and Slovakian territories, in Austria beyond Danube and in Sarmatian areas⁵⁴.

In Scandinavia Ae emissions of the period under discussion are almost entirely absent⁵⁵ and on Jutland they are not very numerous as well (Balling 1962, 52-55)⁵⁶.

In this context it is interesting to note what happens west of the Oder up to the Elbe river-basin in the areas covered by the Elbian circle and Luboszyce culture. Here, autonomous emissions make up 6.3% of all Ae coinage minted after Commodus⁵⁷ with sestertii prevailing⁵⁸. These proportions should be seen as close to those existing in "live culture" in view of the high level of finds registration⁵⁹ and they origin from stray finds (outside graves)⁶⁰. Moreover, a hoard of sestertii was found of which 36 pieces were identified with the last coin of Julia Domna (Laser 1980, 102-102).

Numerous post-Commodus sestertii were found on the Eastbalt territory - in the Central-Lithuanian (Kaunas) group and in the Lithuanian-Lettland Cemeteries culture⁶¹. These finds could be treated however as a result of intensive contacts with the Westbalt circle reflected in other sources (Michelbertas 1986, 84-159, Nowakowski 1990, 89).

It is very important that all known sestertii hoards in *Barbaricum* come from northern part of central Europe⁶² of which 3 belong to East Pomerania settled by the Goths (the Wielbark culture)⁶³.

Ae Coin Finds - The Westbalt Circle.

Among 107 sestertii struck after Commodus which were collected within the Westbalt circle 2 (1.9%) dupondii and 1 (0.9%) as were identified. The proportion of asses is to be considerably lower compared to the factual amount flowing into the south Baltic coast area, and therefore far from real proportions in "live culture" because it may be possible that golden sestertii were preferred for deposition in graves. On the other hand it is possible that asses, if coming from stray finds, had little chance to be reported in the literature. The difference does not apply to dupondii using the same alloy as, and only slightly smaller than sestertii⁶⁴.

⁵² For 30 Ae there are: 2 Viminacium emissions (6.7 %) and 6 eastern emissions (20%) including 3 Asiatic (Tyre and Antiochia).

⁵³ Coins were usually identified and described by amateurs; hence e.g. the possible overlooking of their having been struck in an autonomous mint especially with a latin legend - e.g. Viminacium).

⁵⁴ In the latter area numerous *limesfalsa* occur.

⁵⁵ Bolln 1926a, Westermarck, Wiséhn 1983, 1984, Kromann, Watt 1984, 35-38, Lund Hansen 1987, 229-231.

⁵⁶ However, it is worth to mention Landwehr find of Trajan Decius Ae coin from Samos (Balling 1962, 54-55) between a few post-Commodan sestertii finds on Jutland.

⁵⁷ Including 2 Viminacium emissions (of Gordian III and Hostilianus), 1 Deultum (Gordian III) and 1 Perinthus (Severus Alexander).

⁵⁸ Among 64 Ae are 50 sestertii and 1 dupondius.

⁵⁹ The majority have a complete description - see Laser 1980.

⁶⁰ An exception is the Anklam grave containing 3 sestertii: Hadrian, Severus Alexander and Trebonianus Gallus (Laser 1980, 67-68).

⁶¹ Michelbertas 1972, 1986; 13 Ae coins (including 1 dupondius) with the latest Maximinus I sestertius found in the Vaitickūnai barrow are of particular interest (Michelbertas 1984).

⁶² Söhlenpump, Kr. Helmstedt (32 sestertii were identified with the latest of Philip II; 70% are post-Commodan emissions - Bolln 1926a, /58/); Neumünster, Schleswig-Holstein (probably secondary in character, with the latest coin of Trebonianus Gallus - Bolln 1926a, /60/); Winnefeld, Kr. Uslar (116 sestertii, 4 AE II, including the latest 6 coins of Postumus - Bolln 1926a, /34/) and Eastbalt finds - Michelbertas 1972, 1986.

⁶³ Pruszcz (83 were identified up to Commodus - Bolln 1926a, /97/), Gdańsk-Krakowiec (2 denarii and 13 sestertii up to Commodus - Lissauer 1887, 152), Gdańsk - port basin (doubtful complex, 10 were identified up to Lucilla - Krzyzanowska 1965).

⁶⁴ However, in the case of sestertii and dupondii struck in the 3rd century, often lacking of their golden tint, the process of selection could not have take place.

For 130 Ae post-Commodian coins 9 (7.1%) autonomous emissions⁶⁵ and 1 Viminacium were identified (totalling 7.7%). Not a single *limesfalsa* was recorded⁶⁶.

Within the group of the identified bronze coinage, emissions struck after Commodus constitute 14% of the total. The latest sestertii are: 5 pieces from the time of Decius⁶⁷ and one piece from that of Trebonianus Gallus⁶⁸. The only unquestionable finds of later coins from the 3rd century AD are: 1 autonomous emission of Gallienus⁶⁹, 1 antoninianus of Probus⁷⁰ and 2 Alexandrian tetradrachms⁷¹.

Ae Coinage Flow.

Irregularities in distribution of the bronze coinage in the first half of the 3rd century in the Empire, as discussed above, call for the definition of time and place of the coinage outflux from the Roman Empire into the Westbalt territories.

Hoard of sestertii collected on the south Baltic coast (with the latest coinage of Commodus and Septimius Severus) are of a primary deposit character, for they are identical to numerous hoards discovered within the Empire (especially in the West)⁷².

The diagram (Table I) shows the co-occurrence of coinages in complex finds from the Westbalt circle. Hoards and graves producing at least two identified coins have been considered. Very few groups including two coins at the most are dated (a later specimen) to the period before the Marcomanic Wars and these finds may have originated from primary deposits formed much later. There is no reason therefore for shifting the terminus post quem for the outflux of sestertii from the Empire to the times before the Marcomannian Wars. What may have a vital bearing on the conclusions is the earliest registered hoard from Kudrinka of which, among 299 coins identified, the latest are two sestertii of Commodus dated to A.D. 181 (Bolin 1926, 210). As already mentioned the earliest but not very numerous grave complexes with sestertii originate from the phase B₂/C₁, while they are most commonly encountered in the phases C₁ - C₂ (Godłowski 1974, 88-90). Archaeological data, then, confirm conclusions drawn from the analysis of numismatic material. What is especially interesting here is the relatively high percentage of coins from the mid-third century, which is perhaps largely due to a few complexes identified as a result of co-occurrence analysis⁷³. They have a vital bearing on the conclusions that follow. The most interesting is a complex from grave 67 of Šernai in which 5 coins from Gordian III to Trebonianus Gallus were found; the whole complex falling within a 10-year period: 243/244 to 251/253. This composition suggests as the coins had been deposited straight from the Rome mint.

Negligible participation of autonomous coinage among Ae coin finds from the Westbalt territories and lack of *limesfalsa* there indicate that the masses of coins under consideration may have only been formed in the west provinces or in Italy. This is true even assuming that sestertii had been selected, for there hardly would have been any choice in the 3rd century in the eastern provinces while *limesfalsa* should have flowed from central provinces.

The fairly low participation (7%) of autonomous emissions is nevertheless too high to justify a claim that the bronze coinage came from Gaul or Italy. Gallia is additionally excluded by 14%-participation of coins struck after Commodus among sestertii and, especially, complexes from the mid-third century. As for Italy, it could be accepted that this is the

⁶⁵ Including: 2 of Marcianopolis (Elagabalus and Philip II), 1 of Nocopolis (ad Istrum? - Caracalla), 1 of Macedonia (Beroea? - Severus Alexander), 1 of Prusa (not Prusias) in Bithynia (Severus Alexander), 1 of Antiochia in Pisidia (Gallienus), 1 "medallion" from Tarsus in Cilicia (Geta) and 1 of Laodicea (ad Mare? - Caracalla).

⁶⁶ If those emissions manufactured as castings had been regular this fact would have been noted by S.Bolin probably familiar with the article by W.Kubitschek (1921). They are not mentioned by M.Michelbertas (1972) either.

⁶⁷ Aukštiečiai (Bolin 1926, 230), Sovetsk (former Bendiglauken - Bolin 1926, 238), Kosewo (Bolin 1926, 236), Spychowo (Hollack, Peiser 1904, 21) and Sztynort (Liegle 1930).

⁶⁸ Šernai (Rühl 1876).

⁶⁹ Kuty (Antoniewicz 1955, 358-360).

⁷⁰ Rodniki (Bolin 1926, 238).

⁷¹ Maximinus from "East Prussia" (Bolin 1926, 240).

⁷² See note 43.

⁷³ We mean, first of all assemblages with at least three coins dated to the second quarter of the 3rd century e.g. gr.67 of Šernai, gr.219 of Aukštiečiai (Bolin 1926, 229), gr.10 of Palanga (Michelbertas 1972, 118); see also Michelbertas 1986, 80-83 where another method was used.

area that most of the coinage came from, while autonomous emissions appeared as an addition on the easterly route of this flow⁷⁴. Such an involved hypothesis is not necessary. Much more likely, is that the majority of the bronze coinage in the Westbalt territories originates from the Rhineland, especially from parts close to the *limes* where they could easily have absorbed autonomous emissions.

In the Rhineland a number of hoards have been found analogous to those from Westbalt circle. It is interesting that both areas offer very similar proportions of respective Ae coinage groups with regard to sestertii - lack of *limesfalsa*, slight share (2%) of dupondii and similar proportions of autonomous emissions⁷⁵.

Not a single hoard has yet been found in the Rhineland of which Westbalt the mid-third century coinage groups of Serniai type could have formed. Despite the presence of mid-third century sestertii in finds, it seems more reasonable to assume that those latest complexes were part of deposits formed in Italy.

The Rhineland source of prevailing Ae masses on the territories under discussion is reflected by analogous proportions of the respective bronze coinage groups from the Elbe territory. The Elbe circle lies in the vicinity of the Rhineland and mutual contacts are confirmed by numerous imports.

This origin is also confirmed by the distribution of well-known sestertii hoards including the deposits of Söhlempump, Pruszcz and Gdańsk⁷⁶ with a few other finds of this denomination in the Vistula mouth area. The hoards of Pruszcz and Gdańsk-Nowy Port are exact equivalents of Westbalt deposits and the hoard of Gdańsk-Krakowiec (sestertii with denarii) - of Skandawa deposit. The find from the Motława river (Gdańsk-Olszynka, Bursche 1980, 88) which includes two sestertii of Otacylla Severa and Hostilian corresponds to a group of the latest Ae complexes of Serniai type. All these finds⁷⁷ are in striking relationship to the fact that it was namely Gdańsk Bay area which, apart from Sambia and West Lithuania, offered rich amber resources⁷⁸. Lack of such numerous finds of single sestertii here, so common in the Westbalt circle, may probably result from the different burial customs observed in the Wielbark culture (the Goths) areas. Other categories of Roman imports such as bronze and glass vessels rather than coins found their way into graves. The difference therefore is to be seen on the "dead culture" level.

Relations of the Westbalts with the west provinces of the Empire (Gaul and Rhineland) are confirmed by non-coinage finds of imports like enamelled shield-shaped brooches⁷⁹.

If the Rhineland origin of the Westbalt Ae coins is accepted, their export from the Empire has to be dated to the period between the Marcomannian Wars and the mid-third century. The lack of double sestertii of Postumus (or sestertii with countermarks) on the one hand and of Gallienus's sestertii on the other would indicate such a *terminus ante quem*.

Conclusions.

At the present stage of research it appears that Ae coinage flowing into the Westbalt circle territories as largely formed over the Rhine *limes*, while the latest part may have come directly from Italy.

It is not unlikely that the inflow of this coinage was caused by an urgent need to change the direction of exchange. As a result of political events and migrations which had taken place in the third quarter of the second century (Godłowski 1985a, 81-84, 146-147), the traditional links between the Empire and European *Barbaricum* must have been badly disturbed: Hostilities in Pannonia and Slovakia during the Marcomannian Wars could not but have reduced the reg-

⁷⁴ Through Dacia, for instance, as assumed by T.V. Buttrey (1972, 51 note 30).

⁷⁵ 10% in Rhineland, 7.5% in the Westbalt circle. The only substantial difference in this respect is a slightly greater number of asses reported in the Rhineland territories. Provided that there was no deformation of any kind at the first level of representativeness, the disproportion might be explained by exports of higher denomination only so as to eliminate asses.

⁷⁶ See notes 61 and 62.

⁷⁷ Including fairly numerous finds of the 2nd century sestertii from the areas of the Vistula mouth and possibly Caracalla "medallion" struck at Perinthos (Bursche 1983b).

⁷⁸ Wielowiejski 1980, 23-26, Kolendo 1981, 59-74, 1985.

⁷⁹ Including also glass drinking horn (Nikutovo, gr.177) or scoop E.160 (Povarovka) - see Nowakowski 1983, 98-101.

ular exchange along the amber road and route⁸⁰. The establishing of connections along a much longer route than the traditional one for easily transportable goods (such as coinage) must have resulted from the desire to assure continued delivery of extremely sought and costly commodity - amber. This is confirmed by a considerable number of finds of amber products in Rhineland territories from the time after the mid-second century⁸¹. The direct character of this exchange manifests itself in an almost complete lack of these emissions in Denmark and on Baltic islands⁸².

A group of finds from the Westbalt area (Serniai type) dated to the mid-third century makes for a conclusion that the initiative to obtain "Northern gold" came directly from Italy.

Soon after, even this roundabout way through the Baltic sea was abandoned, probably because the risk involved started to exceed profits deep into the 3rd century. The risk continued to increase due to intensified activity of the Germans on the Rhine in the 250's. The immediate reason for abandoning contacts might have been the Aleman attacks (e.g. in 254) ranging as far as Gaul and particularly the invading Franks⁸³. Following the disastrous year of 259 in which the increasing internal disintegration of the Empire led to the creation of Imperium Galliarum⁸⁴, any activities to restore contacts hardly could be expected. After the mid-third century more distant *Barbaricum* areas lost their meaning in the economy and policy of the Roman Empire, deeply involved in defending its borders and internal conflicts.

New enlivening of the contacts, though not so intense as before, coincides with the times of the Constantines. Coinage reaches Westbalt territories only sporadically, and only by the eastern route. This direction is clearly suggested by a hoard found in the lake of Orijos in Smalninkai including 208 Ae coins of which 3 folles of Constantine I were identified (Sajauskas 1972), as well as by other isolated finds of Ae coinage in addition to 3 siliqua of Constantius II recovered from cemeteries in the Suwałki region⁸⁵. The latter finds are especially interesting for they indicate close relationship between the areas of the Cherniakhov culture and Sîintana-de-Mureş⁸⁶ via the Wielbark culture⁸⁷ and the Westbalt circle up to the Danish islands⁸⁸ in the third quarter of the fourth century.

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Abbreviations:

BMCRE - Coins of the Roman Empire in the British Museum (ed. H. Mattingly, R.A.G. Carson), 1-6, London 1923-1962.

⁸⁰ Wołgiewicz 1970, 233-234. According to K. Godłowski (1985b, 346) the peak in the import influx coincides with the phases B₂/C₁ and C₁ (i.e. the second half of the 2nd and the first half of the 3rd centuries) and there is no time interval reflected in the material. That is why, he claims, the thesis on the inhibiting role of the Marcomannian Wars in the exchange between Danubian provinces and the North, should be put among "scholarly legends". It should be stressed, however, that the lack of clear traces of such weakening may be the result of limitation of our dating capacity (Wielowiejski 1982, 32). Moreover, a number of objects might have left the Empire not by way of exchange but as the result of wars (plunder, ransom, tribute etc.) - especially armour and coins. Granting the continued development in exchange on the amber route following a peace treaty of Commodus (Tejral 1970, Wielowiejski 1982) it seems that deep, though brief crisis over the Danube under Marcus Aurelius, might have contributed to the activation of the Baltic sea route.

⁸¹ For instance a well-known ship model made in amber, exhibited at Römisch-Germanisches Museum, Köln (Kolendo 1985, 8 fig. 1).

⁸² In relation to other groups of imports - see Nowakowski 1983, 101, Lund Hansen 1987.

⁸³ Alföldi 1967, 365, Demougeot 1969, 484-500, Johnes 1978, 81-82.

⁸⁴ Alföldi 1967, 366 ff., Demougeot 1969, 492-502, Johnes 1978, 81-82.

⁸⁵ Boćwinka - 1 piece, Cyzicus (Tischler 1878, 215, Bolin 1926, 221 - erroneously Constantine II), Grunajki - 2 pieces, Simium and Constantinople (ZfE 3: 1871, 8-9 [R. Virchow], Tischler 1878, 215). One more piece was probably found within present Kaliningrad (formerly Charlottenberg - Bolin 1926, 224).

⁸⁶ Constantine II siliqua finds along with gold and silver bars and vessels concentrate mostly in Moldavia, Transilvania and Walachia - Bursche 1991, with earlier literature.

⁸⁷ We mean in particular the Zamość hoard including, apart from silver ornaments, 16 siliqua of Constantine II - Kropotkin 1970, Bursche 1983a, 74-75, Kunisz 1985, 253 - 5 siliqua are mistakenly attributed to the mint of Cyzicus instead of the one in Constantinople. With this horizon should probably be associated fragments of cut silver bowls and gold medallion of Constantine II from Młoteczno (Bott 1982, Bursche 1983a, 67-69) as well as silver vessels and bars and a golden medallion of Jovianus from Borochitse hoard in Volhynia (Tikhanova 1956).

⁸⁸ At Gudme on Fyn a large number of Constantine II's siliqua were excavated including a hoard of 285 pieces over 95% of which were struck in the East - Kromann 1989. From Fyn are also known finds of 2 gold medallions of Constantine II and numerous solidi of this emperor - Bolin 1926a, /147/.

FMRD
FMRÓ
LAA
Latvijas
NZ - N
SpöGK
WN - V
ZfE - Z

Referen

Alföldi
Alföldi
Antonle
Baczko
Balling
Bastien
Bayer T

Bezzent
Bock F
Bolin S

Bott H.

Brown I
Bursche

Buttrey

Caley E

Callu J
Christ K
Demoug
Depeyro
Donalds
[Drygal
Dušanic
Eggers
Elmer G

Engel C
Étienne

Fitz J. I
Fuchs G
Godłows

Grant M
Helwing

Hollack
Hollack
Johnes K
Jones T.

- FMRD - Die Fundmünzen der römischen Zeit in Deutschland (ed.H.Gebhart, K.Kraft, M.R.Alföldi), Berlin 1960.
 FMRÖ - Die Fundmünzen der römischen Zeit in Österreich (ed.R.Göbl), Wien-Eisenstadt-Klagenfurt 1970.
 LAA - Lietuvos TSR Archeologijos Atlasas. (ed.R.Rimantienė), 3, Vilnius 1977.
 Latvijas - Latvijas PSR Archeologija (ed.A.Birons, E.Mugurevičs, A.Stubavs, E.Šnore), Riga 1974.
 NZ - Numismatische Zeitschrift.
 SpöGK - Schriften der physikalisch-ökonomischen Gesellschaft zu Königsberg.
 WN - Wiadomości Numizmatyczne.
 ZfE - Zeitschrift für Ethnologie.

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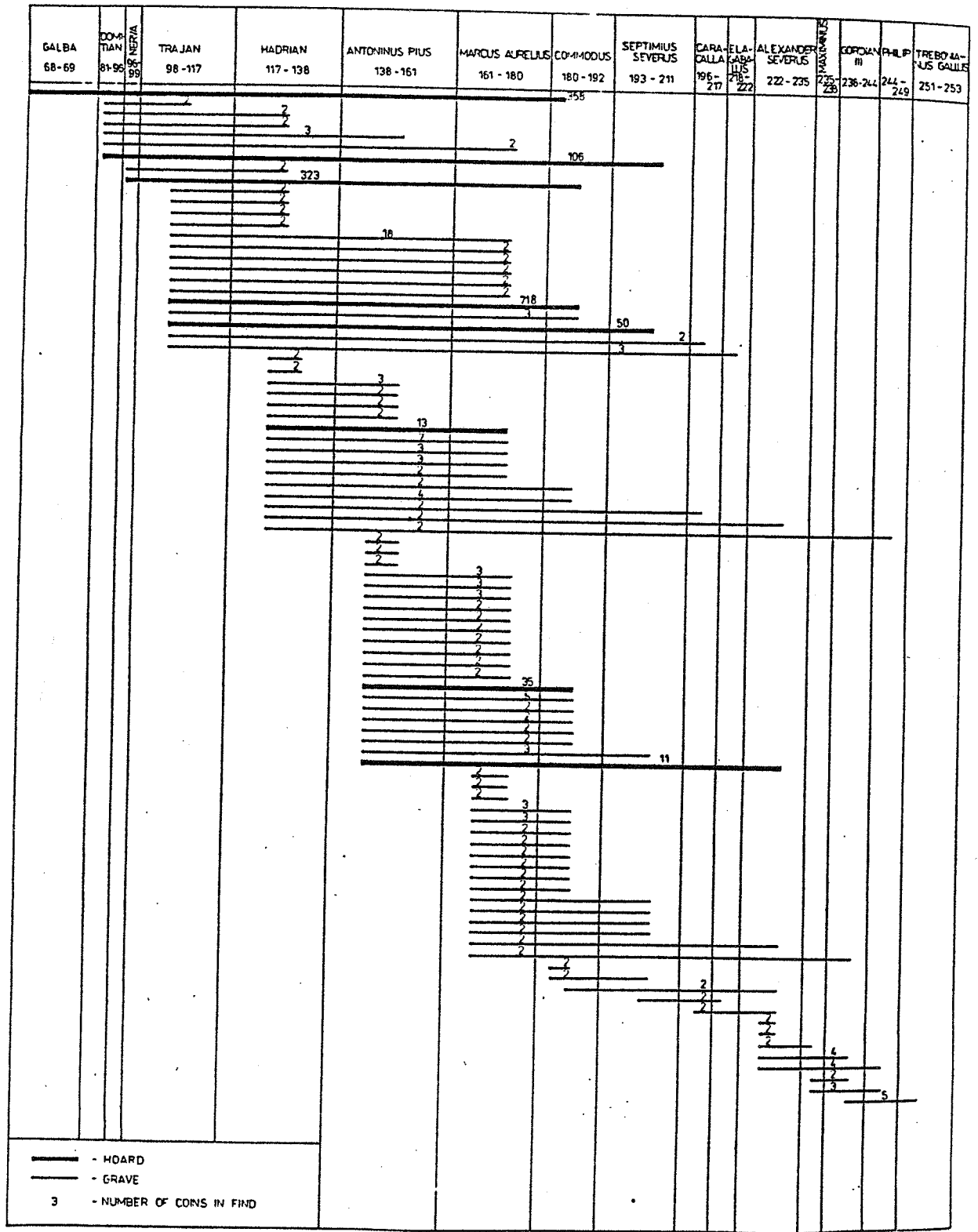


Fig. 1. Post-Commodan sestertii in complex finds from the Westbalt circle - chronological analysis of co-occurrence.

Line depicts time-span of coin in a find.