

Paying the Roman soldiers in the East (1st-2nd century AD)

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Arrian of Nicomedia, the governor (*legatus pro praetore*) of the province of Cappadocia, made his inspection tour by ship around the military outposts of the Roman army around the eastern shores of the Black Sea in AD 131-132. In Apsarus where five cohorts were stationed, as well as in Sebastopolis, he not only inspected the arms, the construction of the camp and the provisions of food, but also – and special mention is made of this – distributed the soldiers' pay (*misthophora*)¹. Which coins were actually used when paying soldiers? Were they of gold, of silver or of bronze, and did the Roman authorities in the East use mainly local coin issues, or coins minted in Rome, or both?

This study concerns the Eastern part of the Roman Empire (Anatolia, the Levant and Egypt) from the first to the second centuries AD (Augustus to Commodus), mainly because we already know some of the answers for the republican era and for the third century and can refer to that knowledge². My focus will be on precious metal coinages though bronze coins were essential for daily transactions. It will be argued that Roman aurei and denarii minted in the West (Rome) were the main currencies for the pay of the armies in the East, probably with the exception of Egypt. Local (or regional) silver series were supplementary only; they were of prime importance in providing the former client kingdoms with a (traditional) currency of their own, and may originally have been designed to pay the soldiers of the former client kings who had been absorbed in the Roman army.

The evidence is scanty and often contradictory and comes mainly from the coins themselves. Written sources, especially financial documents, are often difficult to use as most of them testify only the money of account that was used and rarely provide data about the actual coins handled in the transactions³.

- 1 Arrian, *The Periplus of the Euxine Sea*, 6.2 and 10.3 [French translation: Alain Silberman, *Les Belles Lettres*].
- 2 In the second half of the 3rd century local coinages disappear gradually and Roman mints are installed in the east and the Balkans; they became quasi permanent from Aurelian and Diocletian onwards. At that time (AD 250) the *antoninianus* replaced most of these local currencies.
- 3 See, for example, documents cited in West & Johnson [1944] 1967, 43-73; Butcher 2004, 192-195, on the use of denarii and asses in the documents in the Palmyrene tax laws; also von Reden 2010, 89-91.

COINS AND THE ARMY

From the early empire onwards, the roman West was limited by a borderline region studded with fortifications protecting the Roman world from the “barbarians”. These troops, as well as the rare military that secured the inner territories, were paid partly in cash⁴. They also received *donativa* on special occasions and *praemia* when leaving service. Though most finds from military camps have produced bronze coins and a few silver or gold ones, it is clear that military pay was not only settled in bronze, but that gold and silver played a major role⁵. A nice illustration of this is the second-century letter of the soldier Apion who, arriving at Misenum in Italy, wrote to his father Epimachus that he had received 3 aurei as a travel allowance (*viaticum*)⁶. Although the way the different metals were used over the centuries evolved⁷, there can be no doubt about the importance of these precious metals. This is demonstrated by the fact that gold and silver only were coined between AD 42 and AD 64. Further proof comes from the coinage of the revolt against Nero (AD 69) when only aurei and denarii, and no copper coins at all, were issued by his adversaries. Finds such as those from the battlefield at Kalkriese (AD 9) where gold and silver coins as well as bronze coins were found, can be added as evidence for this⁸. Though the original owners of most stray finds and hoards are unknown, the numerous silver finds and the thousands of aurei found all over the western empire clearly prove that these coins played a major role in the coin circulation and it is not far-fetched to link the presence of these coins to military pay, a major cost in the state’s budget⁹. To cite just a few numbers: not counting coins in hoards we know of almost 300 single aurei found in Britain for the first two centuries¹⁰ and around 1000 in Gaul for the same period¹¹. This is not to deny the importance of the bronze issues. Bronze coinage was made available to the soldiers in great quantities and one may assume that when small amounts were withdrawn from their “accounts” in the camp, the paymaster was actually paying out bronze coins. However, when large sums had to be paid out (for example, *praemia* or *donativa*) on pay day, the role of gold and silver coins must have been prevalent.

The situation in the East is completely different. First, as no real *limes*-belt existed as in the West, legionary fortresses were much more spread out and protection, especially in the first century AD, was provided by client kings. Even so, a standing army of legions and auxiliary forces, as well as travelling detachments, were active throughout the empire¹². Under Tiberius four legions were quartered in Syria and two in Egypt¹³; under Vespasian eight legions out of a total of 29 were stationed in the East (two in Cappadocia, four in Syria and Palestine and two in Egypt); while under Marcus Aurelius the number rose probably

4 On other means of payment, see Verboven 2009; Hollander 2007; von Reden 2010, 110-117; also van Heesch 2007, 77-96.

5 Wolters 2000-2001, 579-588.

6 Fink 1971, n^o 70 (= B.G.U 2.423, lines 9-10). See also Alston 1994, 113-123; Speidel 2009.

7 Bronze coins were less used in the 3rd century due to the creeping inflation.

8 Berger 1996.

9 Duncan-Jones 1994, 16-18.

10 Bland & Loriot 2010, xxv.

11 Bland & Loriot 2010; Brenot & Loriot 1992, 26.

12 Sartre 1991; Hassall 2000.

13 Tac., *Ann.*, 4.5.

to nine (two in Cappadocia, six in Syria and Palestine, and one in Egypt)¹⁴. In the second half of the second century AD some 65 auxiliary regiments were stationed in the East and 15 in Egypt (out of a total of 440)¹⁵. For the purpose of this paper, the exact numbers are not so important; what is clear is that those soldiers were present and had to be paid. Second, it is well known that Rome's coinage before the reforms of Aurelian (AD 274) and Diocletian (AD 294-298) was not a unified one. Besides the Latin-inscribed gold, silver and bronze coinages minted mainly in the Western part of the empire, especially in Lyons (till the Flavians) and in Rome, the eastern half of the empire had a bewildering variety of civic, local and regional coinages, nowadays commonly called Roman provincial coinage. Most of these were bronze coins with Greek inscriptions but silver coin issues do exist. However, there is a conspicuous absence of a local or provincial coinage in gold in the East¹⁶.

Today the pre-Reform coinages are well understood and some extremely useful publications are available (cf. *infra*). Using numismatic catalogues as *RPC* one gains the impression that in the East only local coinages circulated, and it seems natural to conclude that Rome's army was paid with these coins. This conclusion is flawed, because the "western" coinages (i.e. the coins minted in Lyons and in Rome) are catalogued in other volumes (as the *RIC*), thus artificially creating the idea of two monetary "zones". Hence, this picture is not necessarily a correct one! Using coin finds might help, but this source is also biased, because stray finds reflect the circulation of small change (low value coins are lost more frequently than high value ones) and consist mainly of bronze coins, while hoards are biased towards the largest denominations. In the East the largest coins were often tetradrachms, tridrachms and cistophori and these coins turn up frequently in hoards.

To address the question of which coins were used for soldiers' pay, I will present a summary of the major gold and silver coinages below, followed by a survey of the coin finds, and then formulate my interpretation of the data¹⁷.

ROMAN SILVER AND GOLD

Provincial coinage in silver

There is no Roman provincial gold known from the East. Not a single gold stater was issued by the provincial mints. On the other hand, silver issues are common. Several mints were active and issued cistophori, tetradrachms, tridrachms, didrachms or drachms (and smaller denominations). Most of these have inscriptions in Greek though some rare issues

14 Hassall 2000, 322-323; Speidel 2009.

15 Hasall 2000, 323.

16 That is if we consider the gold coins from the Bosphoran kingdom as non-Roman: *RPC* I, 329-333 and Wroth 1889, 46-73.

17 Important notice: the expression "Roman coinage" is used for coin issues characterized by western coin denominations (aurei, denarii, sestertii, dupondii, asses, etc.), all have inscriptions in Latin; "provincial coinage" in the East on the other hand is characterized by the use of Greek inscriptions (but not always) and denominations are cistophori, tetradrachms, drachms etc.

are bilingual (Caesarea: Trajan and Pescennius Niger¹⁸) and others are systematically in Latin (cistophori¹⁹). Although they are not rare, it should be pointed out that silver issues in the provinces remain the exception and that only a few of the hundreds of provincial mints issued them.

Detailed catalogues of these coins can be found in the *Roman Provincial Coinage* series, and the works of Kevin Butcher, Bill Metcalf and Bernhard Woytek²⁰. We can arrange the coinages by region as follows²¹:

Flavians: Asia (Ephesus [Rome]), Lycia, Cappadocia (Caesarea), Syria (Antioch); [Judaea], Egypt (Alexandria), Cilicia (Tarsus for Domitian), Cyprus (Salamis).

Trajan & Hadrian: Asia (Ephesus and others), Bithynia (several mints), Pontus (Amisus), Lycia, Cappadocia (Caesarea), Cilicia (Aegeae, Seleuceia, Mopsus, Tarsus), Syria (Antioch), “Arabia” (though probably minted in Rome and Antioch), Crete, Egypt (Alexandria).

Antonines: Epirus (Nicopolis, “Greece”), Pontus (Amisus), Cappadocia (Caesarea), Cilicia (Mopsus), Mesopotamia (Edessa), Syria (Antioch), Egypt (Alexandria).

Some characteristics are shared by several of these coinages, as summarized below:

1. While the mint in Rome struck gold and silver coins almost without interruption, minting in silver by the eastern mints is much more sporadic and, surprisingly, only rarely coincides with military campaigns²². Some issues are linked to specific developments: for example, a general debasement (Trajan in AD 107/9), or the creation of the province of Arabia (AD 106), but there is no regular minting pattern in the eastern mints (see Table 1: Flavians). We see, for example, that the Syrian silver tetradrachms are fairly common throughout the reign of Trajan, but only minted in 117-18 and 19 for Hadrian (AD 117-138) and none at all are known for Antoninus Pius (AD 138-161)²³. The same happens in Caesarea in Cappadocia, where coinage is abundant under Trajan, Marcus Aurelius and Lucius Verus, but much rarer for the other emperors during the first and the second centuries²⁴.

18 Trajan: Woytek 2011, 417-459; Pescennius Niger: van Heesch 1978.

19 *RPC*; Sutherland *et al.* 1970; Woytek 2010; Metcalf 1980 (Hadrian).

20 *RPC* vol. 1 & 2 (with supplements), volume on Antoninus Pius online; Butcher 2004; Metcalf 1980; Metcalf 1996; Woytek 2010.

21 Based on *RPC* (I-II & online), Walker 1976 and 1977; Woytek 2010.

22 Butcher 2003, 249.

23 McAlee 2007, *passim*.

24 See Metcalf 1996, 77-79 (on the quantity).

YEARS	ROME	ASIA	LYCIA	CAESAREA	CYPRUS	SYRIA	EGYPT
69/70	X	-	-	-	-	X	X
70/71	X	-	-	-	-	X	X
71/72	X	-	-	-	-	X	-
72/73	X	X	-	-	-	X	-
73/74	X	-	-	X	-	-	-
74/75	X	-	-	X	-	-	-
75/76	X	-	-	-	X	-	X
76/77	X	-	-	X	X	-	-
77/78	X	-	-	-	X	-	-
78/79	X	-	-	-	-	-	-
79/80	X	-	-	X	X	-	X
80/81	X	X	-	-	-	-	X
81/82	X	X	-	-	-	-	-
82/83	X	X	-	-	-	X	X
83/84	X	-	-	-	-	-	-
84/85	X	-	-	-	-	-	-
85/86	X	-	-	-	-	-	-
86/87	X	-	-	-	-	-	X
87/88	X	-	-	-	-	X	-
88/89	X	-	-	-	-	X	X
89/90	X	-	-	-	-	X	-
90/91	X	-	-	-	-	-	-
91/92	X	-	-	-	-	X	-
92/93	X	-	-	-	-	-	-
93/94	X	-	-	X	-	X	-
94/95	X	X	X	-	-	-	-
95/96	X	-	-	-	-	-	-
96/97	X	-	-	X	-	X	X
97/98	X	X	X	X	-	X	-
98/99	X	X	X	X	-	X	-
99/100	X	-	-	-	-	X	-

*Table 1. Issues of provincial silver coins compared with the Roman mint
(after Butcher 2003, 249).*

2. These provincial denominations do not always correspond to the weight and alloy of the denarius in Rome. To take just three examples: the silver drachms minted for Arabia under Trajan look like denarii but only contain 50 % of silver (the Roman denarii contain 80% silver). This is also true for the coinage at Caesarea in Cappadocia²⁵ and the Egyptian tetradrachms are essentially billon coins of a very poor alloy and seem to correspond to 1 silver denarius²⁶. Trajan's Arabia-drachms (minted in Rome and Antioch for circulation in Arabia) contain 1.6g pure silver and the denarii contain 2.7g²⁷. Is it thinkable that both were accepted at the same value? One could argue that perhaps the metal content was not so important. We know that coins were counted by the unit, and not weighed in the second century AD and that in an inheritance, for example, coins were not valued in the same way as silver tableware which was valued mainly by weight²⁸. We also know that during the Bar-Kokhba-War (AD 132-135) the local *zuzzim* (silver coins) were struck over Roman denarii of Trajan and also indistinctly over Arabia-drachms of the same emperor and thus of a much lower silver standard²⁹ ! With Woytek I am inclined to believe that this could only happen because the Bar-Kokhba overstrikes were a war coinage, but it proves that the idea of a fiduciary coinage was not unknown and was tolerable in some circumstances.

3. One of the most amazing findings of the last decades is that coin production in the provinces was – at intervals – being coordinated by “Rome”. The Roman mint struck silver drachms and didrachms for Caesarea in Cappadocia and other examples are known: Alexandria struck coins for use in Syria, Rome for Antioch, Antioch and Rome for Arabia, and Rome made cistophori for Asia. Once made, the coins then had to be transported to the East. These interconnected issues of coins, made in distant mints and sometimes at different weight standards and alloys, show that at least some of the eastern issues served “Roman purposes”, whatever these might have been. The attribution of eastern provincial coins to those remote mints is based on remarkable similarities in style and in the metal composition. The co-ordination by “Rome” illustrates very clearly that coins were not always struck for the region in which they were minted³⁰!

25 Woytek 2010, 117; Butcher 2012, 203-213; Butcher & Ponting 1997, 167-171.

26 Christiansen 2003.

27 Woytek 2010, 117.

28 Gaius (second century): “In those times [talking of the past], a person paying money would not count it but weigh it / *eorumque nummorum vis et potestas non in numero erat, sed in pondere*”: Gaius, *Institutes* I, 123. For the translation see Gordon & Robinson 1988 and Gaius, *Institutes* III. 90. Also: Ulpian (early third century AD): “When gold or silver is bequeathed, any gold or silver which was left is included in the legacy, whether manufactured or not. It is, however, well established that money, which is coined (*pecunia signatam*), is not included in the legacy” and: “... no one ordinarily classes his money as silver-ware. Likewise, where manufactured silver is bequeathed, I do not think that coins are included”. *Dig.*, 34.2. 19 and *Dig.*, 34.2. 27.

29 Woytek 2010, 119-120.

30 Carradice & Cowell 1987, 26-50 and with bibliography in Butcher 2004, 77-78. See also: Howgego *et al* 2010.

Roman aurei and denarii minted in the East

Besides provincial silver coinages, Rome also produced aurei and denarii in the East. Although aurei and denarii were mainly minted in Lyons (Augustus to Vespasian) and Rome (unique mint from Titus onwards), “official” Roman coinage in precious metals was also occasionally minted in the East during the first and the second centuries. Augustus apparently struck coins in Ephesus and Pergamum³¹; the Flavian emperors in Ephesus (clearly marked EPHE !), Antioch and elsewhere; Hadrian possibly in Antioch, Commodus in Alexandria; and Pescennius Niger in Caesarea in Cappadocia, Antioch in Syria and Alexandria³². These mints were also used by Septimius Severus when on campaign in the East³³.

A detailed survey of these coinages cannot be presented in a short article, but by way of example, the Flavian aurei from the East are listed in table 2,³⁴. The attribution to the mints is mainly based on very convincing stylistic arguments.

Mints producing aurei	Date	RIC ² II, n°
Ephesus	69-71	N°1398, 1415, 1437 (marked EPHE), 1439 (4 types)
Alexandria	69-70	N°1522 – 1529 (6 different types)
Judaea	70	N°1530-1538 (8 different types <i>e.g. ivdaea devicta</i>)
Antioch	70-73	N°1539, 1540, 1543-1545, 1548-1552 (9 different types)

Table 2. Aurei of Vespasian minted in the East.

Bronze coins

I will not discuss the use of bronze coins in detail in this paper. However, it is clear that in the Western empire bronze coins circulated in massive quantities in army camps, perhaps used as part of the soldiers pay or simply provided by the government or private persons to facilitate commerce. Bronze currencies were also very numerous in the East, and were minted often at irregular intervals at local or provincial mints. Marc Antony and Octavian/Augustus minted the very first “bronze” sestertii, dupondii and asses in the East (Anatolia & Syria³⁵) and Rome occasionally provided Syria *e.g.* with bronze coins minted in Rome³⁶. Though indispensable in daily life, both inside and outside the military settlements, it is improbable that large parts of soldiers’ pay was in bronze as this would have been very impractical. The clearest indications of the use of bronze coins by the military in the East are

31 Giard 2001³, 43-45.

32 RIC II and Carradice & Buttrely 2007, 8-9 for the catalogues and attribution. Commodus: Claes 2012, 211 with older bibliography. On Pescennius Niger: van Heesch 1978; Bland *et al.* 1987, 67-83.

33 Gitler & Ponting 2003.

34 Based on RIC² II and RPC II.

35 The famous C.A.-bronzes see RPC I (and also Howgego 1982 and Butcher 2004, 28-29, 321-330).

36 Carradice & Cowell 1987, 26-50.

without doubt the occurrence of military countermarks³⁷; for example, L VI F for *legio VI Ferrata*³⁸ and the exceptional issue of sestertii, dupondii and asses minted for Antoninus Pius at Bostra and inscribed *Legionis III Cyr(enaicae)*³⁹.

In conclusion, the coining of local silver as well as that of Roman gold and silver in the east was very sporadic. This indicates that neither of these coinages was sufficiently voluminous to cover the expenses of the army and that it is very probable that money had to be sent from the political centre, i.e. Rome. This will be discussed later in this paper.

COIN FINDS

Coin finds are a very useful source of information, however coin find publications related to the eastern parts of the empire are much rarer than for the West and they are not always very accessible. Site finds are always biased towards small change and so silver coins appear to be rare. Furthermore, data from excavated military camps are almost nonexistent which has led some scholars to think that the army played no role at all in the monetization of the East⁴⁰. I will summarize the relevant coin finds below.

Finds of silver coins containing denarii

Coin finds from Roman Syria have been listed by Kevin Butcher and those of Egypt by Christiansen⁴¹. In both regions the majority of the finds consists of hoards composed of local coinages, such as Syrian tetradrachms or Egyptian billon tetradrachms. However, some of the hoards are mixed, and contain, besides rare Roman aurei, also Roman denarii. The mixed finds are a minority, and I will discuss these first. Butcher lists 33 hoards from Northern Syria for the first and second century⁴². Ten out of 33 (approx. 30%), contain denarii. Seven out of 10 have denarii until Hadrian's reign⁴³. Two hoards deserve a special mention:

– *Mount Carmel*, Israël (Butcher n°22) is composed of 4850 tetradrachms and didrachms, also 275 denarii including 160 “Gaius and Lucius” denarii of Augustus⁴⁴.

– *Eleutheropolis*, Israël (Butcher n°30 but published in extenso by Svoronos⁴⁵; found in a grave and incomplete): is composed of 41 Syrian tetradrachms, tridrachms and didrachms, 13 Arabia “tetradrachms”, 43 Arabia-drachms, 5 camel-drachms, one drachm of Lycia, also 177 Roman denarii from the Republic to Hadrian.

37 Howgego 1985, 17-24. Chris Howgego lists countermarks from the following legions: III Cyrenaica, VI Ferrata, X Fretensis, XII Fulminata and XV Apollinaris. See also Butcher 2004, 187-188.

38 Howgego 1985, 250 n°726.

39 Hollard 2004, 155-173.

40 Katsari 2008, 242-266; Katsari 2011.

41 Butcher 2004, 151-174, 270-284; Christiansen 2003.

42 Butcher 2004, 271-274.

43 Butcher 2004, n°15b, 22, 28, 29, 30, 31, 32, 33, 33a, 33c.

44 *RIC*² n°205-212.

45 Svoronos 1906.

From Egypt only 3 hoards containing denarii from our period are known, they all end with Trajan⁴⁶.

From Larnaka, Cyprus, comes a hoard published by Metcalf containing 448 denarii from Vespasian till Commodus and also 3 didrachms from Cyprus.

Site finds are rarely published in detail, and those of Antioch and Dura Europos are perhaps the most interesting⁴⁷. These finds are summarized in Table 3. The figures suggest that denarii were not rare in Dura, but we need to exercise caution here: the tetradrachm was the higher denomination and it is widely accepted that higher denomination coins are more rarely lost. The main problem with site finds however is that there is no way to know when those second-century denarii were lost as they probably remained in circulation in the third century.

Emperors	Dura		Antioch	
	Tetradr.	Denarii	Tetradr.	Denarii
Flavians	2	18	1	3
Nerva-Trajan	1	16	-	1
Hadrian	-	13	-	-
Antoninus	-	16	-	-
Marcus Aurelius	-	16	-	4
Commodus	-	9	-	2

Table 3. Silver coins found at Dura and Antioch from Vespasian to Commodus (hoards excluded; plated coins included).

The Turkish evidence is also meager. Though large silver hoards with denarii are known⁴⁸, most date from the third century AD, just like the hoards from Dura Europos⁴⁹. One of the rare exceptions perhaps (but the hoard is incomplete) is the find from Manyas from which 208 denarii and 2 drachms of Amisus ending with Antoninus Pius (AD 140) are known (out of 2469 coins)⁵⁰. Excavations of a Roman necropolis at Juliopolis (Bithynia) also produced 108 denarii found in 75 graves. Several graves contained more than one denarius. Unfortunately,

46 Christiansen 2003, 42.

47 Find evidence based on the publication by D. Waagé (Antioch) and A. Bellinger (Dura) summarised by Butcher 2004, 159-162.

48 Arslan & Devocioğlu 2011.

49 Butcher 2004 (based on A. Bellinger); G. Depeyrot, online manuscript of the coin finds at Dura Europos based on Bellinger 1949 (accessed 31/01/2014): <https://cnrs.academia.edu/GeorgesDepeyrot/Unpublished-documents>

50 Arslan 1996, 31-36.

most tombs were reused and one grave contained as many as seven corpses from different periods. Still, at least six graves contained more than one coin of the second century⁵¹.

Though the evidence of grave finds is not very strong (because we are not at all certain when they were buried and should not forget that second-century coins are also present in third-century hoards), we know that – at least in the West – second-century denarii became very rare after the deterioration of the silver coin from the Severan dynasty onward, and that they are almost absent from British hoards from the first quarter of the third century⁵².

Aurei in the East

Evidence for the circulation of gold coins (aurei) in the “East” is equally scanty but that is not at all surprising. Regular coin find registration in that part of the world is just beginning and we should not forget that even find evidence of cistophori and all of Vespasian’s Eastern aurei and denarii is lacking.⁵³

Gold coins are mentioned by Flavius Josephus: during the Jewish War the inhabitants of Jerusalem swallowed gold coins as they tried to escape, and some of the refugees were killed once people realized the precious contents of their bellies! These gold coins were so numerous in Jerusalem in those days that they could be purchased for 12 attic drachms instead of the usual 25 (*B.J.*, 5.550-551). This is quite a surprising statement about the exchange rate. We know that no local gold coins exist, so if Josephus is not inventing this story, it shows that exchange rates could fluctuate and that Roman gold aurei (normally worth 25 denarii or drachms) were available.

This is also confirmed by the finds. Though Flavian aurei (all struck in Rome and Lyons) from Palestine are very rare and no finds of aurei can be associated directly with the Jewish War (AD 69-70), gold coins have been found in the region. From Palestine (especially modern Israel) several gold hoards and isolated gold finds are documented. (see Appendix I⁵⁴). In total ca. 110 aurei are documented: two single finds and the others coming from four hoards. The evidence from other parts of the Levant is very fragmentary. Two large gold hoards are known from Karanis in Egypt and three from Turkey (see Appendix II).

51 Grave n°118: 2 denarii: Hadrian and Sabina; no. 120: 1 local bronze of Hadrian and 1 denarius of Antoninus Pius; n°139: 3 denarii: Vespasian, Trajan, Marcus Aurelius; n°184: 1 local bronze of Hadrian and 1 denarius of Trajan; n°189: 2 denarii: Vespasian & Hadrian and 1 local bronze of Hadrian; n°190: 2 denarii: Trajan and Antoninus Pius.

I am very grateful to Dr. Melih Arslan for having sent me the list of coins from this excavation. On Juliopolis and the excavations see Arslan & Metin 2013 (general introduction to the site and illustration of 14 1st and 2nd century denarii).

52 For example: Bland & Aydemir 1991: Flavians (16 denarii), Nerva-Trajan (95), Hadrian (88), Antoninus Pius (178), Marcus-Commodus (221), Severus (388), out of 2.989 coins. Rarity of second century denarii in 3rd century hoards in Britain: Duncan-Jones 1994, 202-204.

53 Chris Howgego (Ashmolean Museum, Oxford) pointed out to me that the only four known find spots for Vespasian’s Eastern aurei are all situated in the West.

54 See also: Ariel & Fontanille 2012, 34.

To this can be added two papyri from Egypt cited by West and Johnson, one dated AD 42 and the other AD 154, in which gold pieces and “gold denarii” are explicitly mentioned⁵⁵.

So summarizing the find evidence it is clear that there is no overwhelming body of material as to confirm definitely that aurei and denarii circulated in the East “en masse”. This is not as important as a counterargument as it might seem. Even local silver coin issues are extremely rare because we simply do not have enough secure archaeological data. What the finds of gold and silver coins show, is that they are present and did circulate in this part of the Roman empire.

ARMY PAY IN THE EAST

Is it possible that soldiers in the East were paid only in local (i.e. Greek styled) coinages? Theoretically speaking, yes. During the late Republic Roman armies roamed across Asia Minor and further east, and de Callataÿ has shown that the Roman generals used local coinages⁵⁶. Some examples will suffice to illustrate the point: the usurping general Fimbria struck cistophori of a military type (military standards) in Asia in 85 BC inscribed FIMBRIA IMPERATOR, and the coin production of a city such as Arados and Laodicea, or the coinages of a client king such as Ariobarzanes I Philoromaïos, clearly peak with the presence of Pompey’s armies in the years 67-63 BC. This last point however might only indicate that the local economy boomed during the military presence.

A major argument for the use of “local” coinages can be found in the coin series of Roman Egypt. It is generally accepted that Egypt maintained a closed economic system, as it did during the Ptolemaic era⁵⁷. The Roman soldiers in Egypt would have been paid mainly in local billon (i.e. poor quality silver) tetradrachms minted at Alexandria. The overwhelming number of Egyptian hoards containing tetradrachms only would seem to confirm this. A series of third-century tetradrachms of Carinus (283-285) and Numerianus (283-284) mention on the reverse the *Legio II Traiana*⁵⁸ and seem to suggest that these coins had a military use. Even if this example is a late third-century one, it still is an important indication, though we should bear in mind that Egypt had an exceptional regime.

However, it is very unlikely that during the first and second centuries AD soldiers in the other eastern provinces would not have received at least some gold aurei. Some of these troops had served in the West, and their comrades on the Rhine and Danubian *limes* would have been paid in gold and silver. In the discussion below, I will argue that aurei as well as denarii (with the exception of Egypt) were the main coin denominations for the armies in the East⁵⁹. The find evidence is scarce but not contradictory (cf. supra). The following facts, however, are conclusive:

55 West & Johnson [1944] 1967, 70 (*P. Mich.* 2, 121 verso 1.6 and *BGU* 4, 1045).

56 de Callataÿ 2011.

57 Christiansen 2003, *passim*.

58 Milne 1933, n^o 4742-4745 and 4747.

59 See also Katsari 2011, 188.

1. The irregularity of local silver minting and the rarity of some of these issues. The absence in particular of a provincial silver coinage in Syria during the long reign of Antoninus Pius and the rarity of it under Hadrian are sufficient proof that this was not the money soldiers were regularly paid in. Recycling older coins via taxes might have filled the gap to some extent, but the contrast with the high and regular coin production at the mint of Rome is conspicuous (see Table 1).

2. The expectation that soldiers would be paid in aurei and denarii. When Pescennius Niger, governor of Syria, revolted in AD 193 he started minting aurei and denarii in Antioch, Caesarea and Alexandria (only aurei in Alexandria)⁶⁰. In other words, his soldiers were used to receiving those coins and expected to be paid in them. Excessively rare tetradrachms of Antioch and drachms of Caesarea are also known for this emperor, but the denarii significantly outnumber the local silver coins⁶¹. Further “proof” for the use of aurei (and silver) comes from the *Historia Augusta*, in which the author records that Niger ordered his soldiers not to carry gold and silver pieces (*aureos vel argenteos nummos*) in their belt when at battle (HA, *Niger*, 10, 7).

3. The minting of Roman aurei and denarii for the East, and their transportation to the East. Before the centralization of the coinage in Rome under the Flavian emperors, it is documented that aurei and denarii were minted for the East on several occasions (see below) and there is evidence for the transportation of western denarii to the East. There is no reason to suppose that the use of these denominations in the East changed after the centralization⁶².

3a. Engaged in war in the East, Marc Antony struck massive quantities of his so-called legionary denarii in 31 BC, as well as aurei and a range of bronze coins from sestertius to quadrans in the name of the praetor designate Lucius Calpurnius Bibulus, for example⁶³.

3b. Octavian also issued gold and silver in Anatolia, but later, when in conflict with Parthia and during the stay of Gaius Caesar in the East, significant quantities of Lugdunese denarii were transported to Armenia, where they regularly turn up in finds⁶⁴.

3c. Vespasian coined denarii and aurei (cf. supra) in the East (Anatolia, Syria, Judea and Egypt) between AD 69 and 76, and this in itself is important proof of the role these denominations played there⁶⁵. An odd series of denarii and aurei of Vespasian, apparently minted in Ephesus judging by the abbreviation EPHE, should be mentioned here⁶⁶. Could denarii and aurei minted so far from the borders of the empire have been military coinages? Or is the existence of this series proof of coinage out of pure economic necessity? Though one can argue either way, the military option cannot be ruled out. While we have no eastern

60 Bland *et al.* 1987, 67-83; van Heesch 1978. On Septimius Severus and the East see Gitler & Ponting 2003, 42-44.

61 This is based on the frequency of these coins in trade (a check is possible using ACSearch or CoinArchives.com ; <http://www.acsearch.info/> and <http://pro.coinarchives.com/a/>).

62 Possible exception are the denarii of Hadrian from Antioch, Butcher 2004, 98; McAlee 2007, 216-217.

63 Amandry 1986, 1987 and 1990 ; *RPC* I, 284-285 & 600 ; Crawford 1974 n° 544.

64 Depeyrot 2008, 321-328; K. Mousheghian *et al.* 2000, 8.

65 Carradice & Buttrey 2007, 3-4.

66 *RIC*² II, 160-173; *RPC* II, 125-131.

find evidence at all for these coins⁶⁷, we should remember that the place of minting is not always the place where the coins circulated. Numerous examples of this phenomenon can be cited for both the East and West of the Roman world: tetradrachms minted in Rome for Syria; tetradrachms minted in Alexandria for Syria (cf. supra); gold, silver and bronze coins minted in Lyons for Northern Gaul; and, of course, the regular aurei and denarii minted in Rome and transported to the East. Although the themes on the reverses of these coins of Ephesus are fairly varied and are not exclusively military in content (though common types are Victory, Pax, Concordia, a wreath), the cuirassed bust of Domitian is a clear reference to the military⁶⁸! Thus, we cannot exclude the possibility that these coins were used as soldiers' pay. Vespasian's military actions in Cappadocia are reported by Suetonius⁶⁹ (and the mint at Caesarea was not yet active in precisely these years⁷⁰). Military detachments were also active all over Anatolia and the soldiers of the *classis Pontica*, among others, had to be paid⁷¹. The fact that there is not always an exact correspondence between the date of minting and military campaigns is of minor importance as standing armies also had to be paid in times of peace!

3d. The evidence for the second century AD includes the very rare issue of denarii in Syria for Hadrian, also the Alexandrian denarii of Commodus, the coins of Pescennius Niger and some scarce find evidence. But, proof of circulation of the denarius in the East comes also from the well-known overstrikes of Bar Kokhba's coins (AD 132-135) on denarii of Trajan⁷²!

Transport of coins over long distances was never a problem in the Roman world and numerous sources testify to the transport of soldiers' pay⁷³, as does an inscription from the reign of Hadrian, recently found in Asia, that reads:

"... free lodging shall not be allowed for any soldier to take when travelling on private business. But if people [i.e. soldiers] are passing through while on duty or if they are bringing the ruling power's money ... public lodgings shall be given only to them and provisions at the market price which was effective ten days earlier" (this last point highlights the influence the presence of soldiers might have on local prices!)⁷⁴.

67 Though the coins are not very rare in commerce, no finds from the East are documented. I am grateful to Bill Metcalf and Chris Howgego for this information. The four Eastern aurei of Vespasian with findspot come from: Finstock (UK), Didcot (UK), Lincolnshire (UK) and Estrich (Germany). It is no coincidence that these two countries have the best possible tradition of coinfind registration!

68 Military bust of Domitian: *RIC*² II, n^o1445-1449. On the attribution (besides EPHE other "mintmarks" are known though all coins are die-linked) and the chronology (between AD 69 and AD 76) see Carradice & Buttrely 2007, 42-44, 160-171.

69 Suet., *Vesp.*, 8.4: "He sent additional legions to Cappadocia because of the constant inroads of the barbarians, and gave it a consular governor in place of a Roman knight" [Loeb].

70 *RPC* II, 125.

71 Policing in Asia cf. e.g. Fuhrmann 2012, 66-75. Also Reddé 1986, 7.

72 Cf. supra and Woytek 2010, 119 (with full bibliography).

73 Wolters 2006, 23-49; Hollander 2007, 106-107 (e.g. 180 BC: Livy 40.35.4).

74 Hauken & Malay 2009, 327-348 and also Fuhrmann 2012, 235-237.

However, a major question remains to be answered. What can we say about the so-called provincial series in silver, such as the cistophori of Asia (and Bithynia under Hadrian), the drachms and drachms of Caesarea in Cappadocia, the tetradrachms of Syria, the silver coins (tridrachms, drachms, etc.) of Arabia (ex-Nabatea), or the smaller series of Amisus, Lycia and Cilicia? Some of these coin issues, such as those from Asia, Cappadocia and Arabia, are of a markedly lower standard than the Roman denarii. The Arabian silver coins of Trajan, for example, circulated side by side with denarii, as shown by the Eleutheropolis-hoard (cf. supra), but contained less silver (see Table 4)⁷⁵.

Denomination	Silver %	Weight of coin	Weight of silver
Arabia-tridrachms	70 %	10,6 g	7,4 g
Arabia-drachms	50 %	3,2 g	1,6 g
Roman denarii	80 %	3,4 g	2,7 g

Table 4. Roman denarii of Trajan compared to the "Arabian" tridrachms and drachms.

Are we to think that these coinages were conceived to function in a closed monetary economy and are to be considered as strongly overvalued currencies following a local standard? Should we be envisaging 'monetary islands' as in Egypt, where billon tetradrachms (and aurei) were used to make state payments?

For the territories outside Egypt the evidence presented above clearly points towards a mixed system in which aurei, denarii and local/regional coin series circulated side by side. Rome was perfectly able to impose the same monetary system throughout its empire (as it probably did with the money of account). This would have facilitated the use of coins and bookkeeping (e.g. for taxes). That they did not do so is typical of the Roman attitude towards former client kingdoms or conquered territories⁷⁶. In most cases existing traditions were respected or at least only slowly modified. Asia, as well as Cappadocia, Syria, Nabataea (later Arabia) and Egypt had a long-lasting tradition of local silver coinages. Local economies were accustomed to these coins and so were the soldiers of those kingdoms. Once absorbed into the Roman empire most of the armies of the client kings would have been absorbed into the *auxilia* of the Roman army⁷⁷. The Arabian-drachmas of Trajan show local types with 'camels' and would be perfectly suited as pay for newly created regiments. Even cistophori have reverses that provide clear references to the army, namely the military standards that are frequently seen on the coins of Titus, Domitian, Nerva and Trajan⁷⁸. Given the importance

75 Woytek, Cistophore 2010, p. 116-117 (with full bibliography). Walker 1976-1977 is a very intelligent and useful work though his analyses of coins should be disregarded as the calculated percentage of silver is systematically too high.

76 For the West: van Heesch 2005 and 2013.

77 E.g. Butcher 2003, 413; Weiser & Cotton 1996, 285-287.

78 *RPC* II and Woytek 2010. Military standards are rare under Hadrian, see Metcalf 1980.

of food supply for the armies, even the reverses with the bundles of corn ears could be interpreted as a military reverse type. The main objection to the idea that these “provincial” coinages were used as pay for “local” regiments lies in the irregular minting of these series, which means that they were not really suited for regular payments. For example, Trajan Arabian drachms were struck only between 103 to 117 and Trajan’s cistophori were all struck in AD 98. So, the “military” explanation probably only works for the early years of Roman integration and, of course, as supplementary payments to all soldiers in exceptional circumstances.

It has often been suggested that the large issues of tetradrachms in Syria during the reign of Vespasian (AD 69-79) or Gordian III (AD 238-244) were struck to pay the army⁷⁹. In both reigns the eastern mint(s), such as Antioch, struck aurei and denarii (Vespasian) or antoniniani (Gordian III) as well as “local” silver. During the reign of Gordian III coins were struck in alternation: first antoniniani, then tetradrachms and finally again antoniniani. One cannot exclude the possibility that these issues were actually used to pay the armies; especially in the third century in times of monetary uncertainty. The introduction of the antoninianus and the rarity of gold issues in the third century might have provoked a need for higher coin denominations, but in the light of what precedes it, and not excluding the occasional use of these “local” coinages for army expenditure, it is possible to suggest another use for the “provincial” series.

The main purpose of these coinages can only have been their use as local, high value, commercial currencies *in continuation of pre-Roman money systems*. They were useful for local and regional commerce and to cover expenditure of “local” authorities (*e.g.* building, and could also have played an important role as high value denominations situated between the aureus and the denarius (*e.g.* cistophori and tetradrachms). Their irregular minting is typical of the Roman attitude towards administration and government, and characterized by ad hoc measures in response to local demand. The letters of Pliny to Trajan provide a good example of the way Roman governors worked. Even minor issues/problems were decided only after consulting the emperor and his entourage: for example, when Pliny asked the emperor to grant a military presence for the protection of Juliopolis, or Arrian wrote directly to Hadrian with the suggestion that he send a quality statue of himself (Hadrian) to Trapezus, as the one he saw there was rather ugly⁸⁰! We can imagine similar special requests to the emperor for the minting (local or otherwise) of silver coinage when necessity arose.

It is fascinating to conclude from the evidence that Rome was able to cope with different coin standards produced at the same mints (*e.g.* produced in Rome for the East). This might appear complicated, but we should imagine that the coins of each system would have been perfectly interchangeable and would have had an acceptable price expressed in denarii, the money of account⁸¹. This is not to say that exchange rates would never have caused problems or discussion. This over-arching system, partially designed for the local communities and partially for the military (auxiliary forces), is in no way different from the practices of the Hellenistic age or with what happened in Western Europe during the middle ages (from

79 Van Heesch 2011, 324-325; *RPC* II, 274-275. McAlee 2007, 315-319.

80 Plin., *Ep.*, 10.77 and 78; Arrian, *The Periplus of the Euxine Sea*, 1.3-4; Fuhrmann 2012.

81 On the money of account in Syria, see Butcher 2004, 193-194 (on the Palmyrene tax laws).

the thirteenth century onwards different coinages circulated side by side and even simple transactions often needed the intervention of a specialized money changer to determine the actual value of a coin)⁸².

A final word about Egypt – although denarii are occasionally mentioned in papyri, mainly from the second half of the second century onwards – the finds of local billon tetradrachms (and bronze subdivisions) from Egypt are so overwhelming that it is hard to avoid the conclusion that Egypt was the one exception, where hardly any coin minted outside the province (except aurei) circulated in vast numbers⁸³.

CONCLUSION

My main proposition is that aurei and denarii were, from the early empire onwards, the main currencies for the pay of the Roman soldiers in the West *and in the East*. Occasionally their pay could have been supplemented with regional coin issues, but the main purpose of these was to maintain the local customs and economic systems of the former client kings or partners of Rome. It is suggested that local militia or auxiliary forces (at least in the beginning), as well as local communities who needed high value currencies for local or regional commercial transactions, were the main target groups for these coinages.

Rome did not only transport large quantities of gold and silver coins to the East, it also (on special occasions) manufactured local coins, sometimes at a different standard. Although a systematic empire-wide economic policy was not in existence, the Roman administration (and the emperor in person) could react to very precise demands from the provinces and such demands could also include monetary matters. This is exactly what happened with the bronze coinage. On certain occasions, Rome provided the provinces with supplementary batches of small change (i.e. smaller coins than the usual *asses*). Three examples illustrate this: the presence of large quantities of quadrantes in the Rhine camps under Domitian; the semisses and quadrantes of the Roman mines struck in Rome and transported to mining districts in the Balkans; and the orichalcum asses and semisses of Trajan and Hadrian minted in Rome for Syria⁸⁴. The Roman administration was not yet the well-oiled machine of the later Roman empire⁸⁵, but it had the advantage of being flexible.

In a certain way, Roman monetary policy maintained existing practices from the Hellenistic period⁸⁶. In Egypt, the closed economic system of the Ptolemies was continued and complemented with Roman gold only, while in the rest of the Eastern Roman world

82 A nice example from Paris in 1424 can be found in Favier 1987, 165-167 (a soldier and a bar keeper could not agree on the value of a gold coin and the aid of a money changer is proposed).

83 See the hoards listed by Christiansen 2003, 42-43 (3 hoards with denarii). On denarii as unit of account in papyri see: West & Johnson [1944] 1967, 71; Christiansen 1984, 271-299. Also Haatvedt *et al.* 1964 (publication of 26 796 coins of which 2049 single finds and 24 747 from hoards). See also Noeske 2006.

84 van Heesch 2009, 125-142; Kemmers 2003, 17-35; Woytek 2004, 35-68.

85 Kelly 2004.

86 Le Rider & de Callatay 2006.

the Seleucid tradition of tolerating foreign coinages besides their own in an integrated but complex system was maintained.

The propositions formulated in this contribution are speculative and it is without doubt an unorthodox view that is presented here. But it is hoped that this will open debate and reflection and that the truth may emerge⁸⁷.

ABBREVIATIONS

RIC : *The Roman Imperial Coinage*, 10 vol., London, 1923-2007.

RPC : A. Burnett, M. Amandry, *e.a.*, *Roman Provincial Coinage*, 3 vol. + 2 supplements [2014], Paris - London, 1992 - 2006.

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Appendices

I. Roman aurei in Palestine (1st – 2nd century).

Aurei Emperor	Context	Source
Nero	Single find, Jerusalem	D. Ariel: "A survey of the coin finds in Jerusalem", <i>Liber Annuus</i> 32, 1982, 314 n ^o 74.
Tiberius, Nero (2), Vitellius, Vespasian [Lyons]	Hoard, Te'onim Cave, Western Jerusalem Hills: Roman aurei and denarii and provincial silver and bronze (total 24 coins). Latest coins: Hadrian AD 135.	B. Zissu, H. Eshel, B. Langford & A. Frumkin: "Coins from the Bar Kokhba revolt hidden in Me'arat Ha-Te'omim...", <i>Western Jerusalem Hills</i> , <i>Israel Numismatic Journal</i> , 17, 2009-2010, 113-146 and B. Zissu & D. Hendin: "Further remarks on coins in circulation during the Bar Kokhba War: Te'Omim cave and Horvat 'Ethri coin hoards", in: D.M. Jacobson, N. Kokkinos, <i>Judaea and Rome in coins 65 BCE -135 CE</i> , London, 2012, 215-228.
Julio-Claudians to Trajan	Hoard found in the sea, Caesarea Maritima (Israel). 42 aurei from Julio-Claudians to Trajan (AD 98-117)	M. Thirion: <i>Le trésor de Liberchies</i> , Brussels, 1972, 80 n ^o 20a.
Domitian, Trajan, Hadrian (2)	Hoard, unprovenanced found in a lamp. Roman aurei and denarii, Bar Kokhba-war coinage (total 16 coins) Latest coins: Antoninus Pius, ca AD 152	B. Zissu, H. Eshel, B. Langford & A. Frumkin, <i>art. cit.</i> , 228; D. Hendin: "A Bar Kokhba lamp hoard collection", <i>Israel Numismatic Journal</i> , 14, 2000-2002, 180-184 (plates 16 & 17).
Antoninus Pius (under Hadrian?)	Single find, Bethsaida. AD 138	R. Arav & C. Savage: "A rare aureus of Antoninus Pius at Bethsaida", <i>Israel Numismatic Research</i> , 6, 2011, 135-138.
Nero to Marcus Aurelius	Hoard, Acre (Israel) 38-40 aurei from Nero to Marcus Aurelius (AD 161), 1 denarius and 29 tetradrachms of Antioch (Nero-Trajan).	<i>Coin Hoards</i> , 7, n ^o 243.

II. Roman gold hoards from Anatolia and Egypt (1st – 2nd century)

Hoard	Range & composition	Bibliography
Kuşakkaya (Adiyaman, East-Turkey)	1400 coins of which 45 are known: 1 denarius of Galba and 44 aurei from Nero to Antoninus Pius.	A. Ergeç: "The Kuşakkaya hoard of aurei", in: R. Ashton, <i>Studies in ancient coinage from Turkey</i> , RNS special publ., 29, London, 1996, 37-39.
Mardin (East-Turkey)	8 kg gold coins and bars (!) of which are known: 302 aurei from Nero to Marcus Aurelius or Commodus (includ- ing 2 aurei of Antoninus Pius of barbarous style).	K. Regling: <i>Blätter für Münzfreunde</i> , 66 n°11, 1931, 353- 365; F. Gneccchi, <i>RIN</i> , IV, 1891, 276.
Turkey ¹	Some 200 aurei from Nero to Commodus	<i>Coin Hoards</i> , 3, n°156.
Karanis (Egypt)	60 aurei (in a bag) from Hadrian to Marcus Aurelius	R.A. Haatvedt, E. Peterson & E.M. Husselman: <i>Coins from Karanis. The University of Michigan Excavations 1924-1935</i> , Ann Arbor, 1964, 14-15 (and plate 8 & 9).
Karnak (Egypt)	Possibly 1800 aurei till AD 218/220	E. Christiansen: "The Roman coins of Alexandria (30 B.C. to A.D. 296). An inventory of hoards", <i>Coin Hoards</i> , 7, 1985, 108 n°A82.

