THOMAS FAUCHER (ED.)

Money Rules!

The Monetary Economy of Egypt, from Persians until the Beginning of Islam

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INTRODUCTION

The enigmatic use of the term "old Ptolemaic coinage" (παλαιὸν Πτολεμαϊκὸν νόμισμα) in some papyrus documents mentioning monetary transactions from 3rd-c. AD Roman Egypt has puzzled scholars ever since 1888. In that year, Carl Wessely acquainted the scholarly community with this expression, which he had read in two documents in the Viennese papyrus collection.[1] Since then further eleven texts mentioning either παλαιὸν Πτολεμαϊκὸν νόμισμα or just Πτολεμαϊκὸν νόμισμα have become known. One of these thirteen documents is from the Ptolemaic period; it dates to 182 BC and is consequently irrelevant to the following discussion.[2] The remaining twelve texts with reference to "old Ptolemaic coinage" or simply "old coinage" were all written in the period starting in 266, in the sole reign of the emperor Gallienus, and ending in the reign of Diocletian. With one exception, these texts are all securely dated to the period before Diocletian's important currency reform, through which the provincial coinage of Egypt was discontinued and the new denomination of the *nummus* was introduced in

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1. Wessely 1888, p. 146, where he refers to a "*Papyrus Erzherzog Rainer Nr. 1508 aus dem dritten Jahre Diocletians*" and to a "*Papyrus Erzherzog Rainer aus der Zeit des Claudius Gothicus Nr. 2001*". The latter text, dating to 269 or 270, was edited in 1921 by Karl Wessely himself as *SPP* XX, 71 (= *SB* I, 5151), whereas the former was published only in 1942 by Ernst Boswinkel as *P.Vind.Bosw.* 12 (it dates to 286–287).

2. *P.Mich.* III, 182 (Krokodilopolis, 2 Mar. 182 BC). The papyrus mentions an ἐπίτιμον ἀργυρίου τοῦ παλαιοῦ Πτολεμαικοῦ νομίζματος (l. νομίσματος) δραχμὰς χιλίας (ll. 48–50). The editor presumed that the expression is due to "a very early debasement of silver coinage", whereas C. Lorber provided us with an alternative, very convincing explanation *per litteras*: see appendix below. The fact that the wording of the expression is exactly the same as in some of the texts from the 3rd c. AD (see below) should be taken for a mere coincidence, because words like "old", "Ptolemaic", and "coin" are not very specific terms.

this province, too, in 296/297.[3] From the very same period, one other papyrus mentioning "old coinage" (παλαιὸν νόμισμα) is attested. The expression "(old) Ptolemaic coinage" occurs more or less contemporaneously with the term "new coinage" or "new coins of the emperor(s)" (καινὸν νόμισμα Σεβαστοῦ/-ῶν) which is attested in twelve papyrus texts dating to the above mentioned period from Gallienus (sole reign) to 295.[4]

There have been various attempts by the editors of these 3rd-c. AD Roman texts and by other scholars to explain this (at least at first sight) strange terminology, seemingly referring to the coinage of the Ptolemaic kings whose rule had ended some 300 years earlier. These explanations are highly diverse between themselves, and range from the assumption that Ptolemaic coins actually circulated in Egypt as late as the second half of the 3rd c. AD to the hypothesis of the παλαιὸν Πτολεμαϊκὸν νόμισμα being a "monetary fiction" or some sort of a "fictional standard": a "monetary fiction" that is supposed to have been devised in order to counter the *imponderabilia* of a politically and economically strained period in which the provincial silver currency issued by the emperors was debased gradually and constantly. This development was interpreted as causing distrust of the coinage in circulation among large parts of the provincial population, as well as fear of potentially imminent price inflation. The most recent treatment of the problem by Patrick Reinard still favours the thesis of the "old Ptolemaic coinage" mentioned in the papyrus texts being a monetary fiction.[5] In the present article, we hope to demonstrate that this view is implausible. Since the central question as to why in the later 3rd-c. AD Roman Egypt coinage was called "Ptolemaic" at all still has not been answered, it seems necessary to address this much debated problem anew: we hope to be successful in offering a new explanation. Unlike most of the other recent studies on this problem,[6] the following considerations are based exclusively on 3rd-c. AD texts securely dated to the period before Diocletian's currency reform: it seems methodologically unsound to take also later texts—or papyri of an uncertain date—into account, since after 296/297, the term "new coinage" (*vel sim.*) should have designated coins of the reformed currency, and the meaning of the term "old coinage" had become ambiguous.[7]

3. See Metcalf 1987. The one text that cannot be attributed to a specific year of Diocletian's reign is *SB* XXIV, 16320, dated to the first tetrarchy, i.e. 293–304. A dating of this papyrus in the early phase of this period seems probable, in view of the monetary terminology.
4. In one document (*P.Oxy.* XXI, 2587), both terms (i.e. "old" and "new" coins) occur (see also below).
5. Reinard 2016.
6. See e.g. Rathbone 1996; Reinard 2016.
7. The following documents containing the term καινὸν νόμισμα have therefore been excluded: *P.Grenf.* II, 74, 8–10 (302); *P.Lips.* I, 84, col. VI, 24–26, col. VII, 4–5 (302); *SB* I, 5679, 8–11 (307); *P.Neph.* 29, 11–13 (3rd/4th c.). Similarly, we have excluded the following texts mentioning "old" coins: *P.Oxy.* XIV, 1773, 25–27 (3rd c.); *P.Stras.* IV, 233, 6–7 (second half of the 3rd c.); *P.Stras.* VII, 636, 5 (end of 3rd c.); *P.Berl.Möller* 1, 7 (300).

1. THE TEXTS

The earliest document attesting the term "old Ptolemaic coinage" in the 3rd c. AD is a contract for the sale of four *arurai* of catoecic land in the Hermopolitan Nome, dating to the 2 *Pharmuthi* of the 5th year of Gallienus' sole reign (= 13th year of the joint reign with Valerianus = 28 March 266), in which the sale price is given as 1,600 drachmae ἀργυρίου π̣[αλαιοῦ Πτολεμαϊκοῦ νομίσμα]τ̣ο̣ς.[8] Though the expression is supplemented here, the supplement may be regarded as certain in view of close parallels in other texts of the same period, for example a sales contract for a slave dating to 269 or 270, and a contract for the sale of a house dating to 271/272, both from Hermopolis, where the sale price is also specified in "drachmae of old Ptolemaic coinage".[9] In *P.Oxy.* XLI, 2951 (= *ChLA* XLVII, 1415) dating to 26 May 267, a sales contract for a slave drafted in Latin in the winter quarters of the *legio II Traiana fortis* and followed by a Greek subscription of the vendor, the price of the slave is specified as "2,250 drachmae of Ptolemaic silver *denarii*" (ll. 24–25): τειμῆς ἀργυρίου δηναρίων δισχιλίων διακοσίω[ν] | πεντήκοντα Πτολομαεικῶν̣ (l. Πτολεμαϊκῶν). The use of the term "*denarii*" instead of "drachmae" (which one would expect) may be due either to the fact that the vendor, whose Semitic name points to a Mesopotamian origin, "has put *denarii* in the contract, because in Mesopotamia *denarii* and drachmae were interchangeable, or *denarius* has been used to denote tetradrachm, which was a common practice."[10]

"Old Ptolemaic coinage" then appears again in two contracts dating to the year 281, a sale of part of a house and one *arura* of farmland from Panopolis,[11] as well as a short-term loan contract from Hermopolis stipulating repayment in the current month,[12] where the sales price and the amount of the loan respectively are specified as being in "old Ptolemaic silver coinage". Amounts of money given in παλαιὸν Πτολεμαϊκὸν νόμισμα also appear in another loan contract from Hermopolis dating to 286–287,[13] in an application to the nome strategus for the enforcement of a debt (*demosiosis*) from the Lycopolite Nome dating to 287,[14] in a receipt for the repayment of a loan presumably from Antinoopolis dated to the year 289,[15] in two contracts for the lease

8. *P.Ryl.* II, 165, 18–19.

9. *SPP* XX, 71, 11–12 (Hermopolis, 7 Aug. 269 or 270; sale of a slave): τὴν συμπεφωνημέ]νην τιμὴν ἀργυρίου παλαιοῦ Πτολεμαϊκοῦ νομίσματος δ̣ρ̣αχμὰ̣ς̣ π̣ε̣ντακισ|[χιλίας - *c*.18 -]; *SPP* XX, 72, 9–10 (= *CPR* I, 9; Hermopolis, 271–272; sale of a house): εἰ̣ς συμπλήρωσιν τῆς ὅλης τιμῆς δραχμῶ(ν) | τρισχειλίων [παλαιοῦ Πτολεμα]ϊκοῦ νομίσματος.

10. Michael Crawford in the commentary to *P.Oxy.* XLI, 2951, 24–25.

11. *P.Coll.Youtie* II, 71 (duplicate: *P.Coll.Youtie* II, 72), 24–25: ἀ]ργυρίου | Πτολ̣εμαικοῦ παλαιοῦ νομίσματος ταλάντων δύο.

12. *P.Lond.* III, 1243, 9–11 (p. 176): ἀργυ[ρί]ου παλαιοῦ [Π]τολ̣ε̣μ̣[α]ικοῦ | [νομ]ίσματος δραχμὰς ἑκατὸν πεντή|[κον]-τα δύο.

13. In *P.Vind.Bosw.* 12, 7–9 (Wessely 1888, p. 146), the amount of a loan is specified as ἀργυρίου | παλαιοῦ Πτολεμαϊκοῦ νομίσματος δραχμὰς | ἑξακοσίας (γίνονται) ἀργ(υρίου) (δραχμαὶ) χ.

14. In *P.Sijp.* 17, 14–15 (Lycopolite Nome, 27 Dec. 291), the debt to be executed is specified as ἀργυρίου παλαιοῦ Πτο]|λεμαϊκοῦ νομίσ[ματο]ς δραχμάς, and the amount received through the bank as νομεί̣σ̣μ̣α̣τ̣ο̣ς παλαιοῦ Π̣τ̣ο̣λ̣ε̣μ̣α̣ϊ̣κ̣ο̣ῦ̣ (on the verso). This document is missing in the collection of the 3rd-c. AD Egyptian texts relating to "old Ptolemaic coinage" in Reinard 2016 (see above n. 5).

15. In *P.Oxy.* XXI, 2587, 5–7 (Antinoopolis?, 17 Sept. 289), the amount of a loan is specified as ἀργυρίου Πτολεμαϊκοῦ | νομίσματος δραχμῶν χειλίων, and the repayment is made in "new coinage" (καινὸν νόμισμα); we will deal with this text in a more detailed analysis further below.

of land from Hermopolis dating to 290–291,[16] and finally in a fragmentary contract for the apprenticeship of a weaver from Kellis in the Great Oasis drafted sometime in the first tetrarchy, between 293 and 304.[17] In addition to the texts mentioned above, there is one papyrus in which certain amounts of coinage are specified in "old coinage", without denoting it also as Πτολεμαϊκόν: a private letter convincingly attributed to 267–274, written in the Great Oasis, which mentions the payment for the delivery of a mummy.[18]

The expression "new coinage" (καινὸν νόμισμα) appears in papyri contemporaneously with the term παλαιὸν (Πτολεμαϊκὸν) νόμισμα. It is attested in twelve documents dating to the period 266/267–295, among which six feature the addition "of the emperor(s)" (Σεβαστοῦ/-ῶν).[19] The earliest of these documents are four applications dating to 266–268 and submitted to the town council of Hermopolis for the disbursement of money from the municipal treasury for construction works on public buildings.[20] The other texts mentioning amounts of money in καινὸν νόμισμα are: an order to an Oxyrhynchite bank to disburse 10 talents of "new coinage" as an ἐπιθήκη (that is a sort of short-term loan for business activities) dating to 278;[21] a contract for a deposit (παραθήκη) amounting to 148 talents and 1,280 drachmae of "new coinage of the emperor", also from Oxyrhynchos and dating to 279;[22] a document indicating the price in "new coinage" of four deliveries of state grain received by the δεκάπρωτοι of a Hermopolite toparchy in 280;[23] a receipt for a repayment of a loan in καινὸν νόμισμα, presumably from Antinoopolis, dating to 289;[24] a contract concerning the lease of donkeys and performance of transportation

16. In *P.Stras.* VI, 539, 5–6 (Hermopolis, 290–291), a yearly rent is specified as κατ'[ἔτο]ς ἀργυρίου παλεο[ῦ] (l. παλαιοῦ) Πτολεμαικοῦ | [νομίσματος; in *P.Stras.* VI, 557, 18–19 (Hermopolis, 7 Oct. 291), a rent is to be paid partly in kind, partly in coin, and of the latter the following is said: τὸ μὲν ἀργύριον | δωμεν (l. δώσωμεν) ἐν παλ(αιῷ) Πτολ(εμαικῷ) νομίσμ[α]τι.

17. In *SB* XXIV, 16320, 16–17 (Kellis, 293–304; see above n. 3), the remuneration for the woman who has given her slave to the weaver is specified as ἀπέσχηκα τὰ ἀργυρίου πα]λαιοῦ Πτολεμαικοῦ [ν]ọμίσμα|[τος τάλαντα *- c.?*].

18. *P.Grenf.* II, 77, 5–8: [το]ὺς μισθοὺς τῆς παρακομι|δῆς τοῦ σώματος ὄντας ἐν δραχμαῖς | τριακοσίαις τεσσαράκοντα παλαιοῦ | νομίσματος. In the listing of the materials needed for the mummification, of other payments for workers, and of the price for their rations (ll. 17–19) amounts of money specified as παλ(αιαὶ) (δραχμαὶ) appear twice, whereas the other six items of the list mention amounts in drachmae not specified as παλαιός. The total amount of all expenses however is again specified as ὅλης δα[πά]νης παλαιοῦ | νομίσματος δραχμαὶ | πεντακόσιαι εἴκοσι (ll. 30–32). This allows for the plausible assumption that all the payments mentioned in the document are meant to be made in "old coin". For the dating, see *BL* XI, p. 87.

19. Reinard 2016, pp. 116–122, has included in his collection of the coin terms "(old) Ptolemaic coinage" and "new coinage (of the emperor[s])" also texts merely attesting Σεβαστοῦ/-ῶν νόμισμα. He states that "*diese Texte* […] *aus methodischen Gründen nicht strikt von den Belegen für „altes" und „neues" Geld getrennt werden [dürfen]*" (p. 116). But, *pace* P. Reinard, these texts are irrelevant for the study of the problem, because official coinage in circulation at that time was automatically coinage "of the emperor(s)", the "old Ptolemaic coinage" included, as we shall see later on.

20. *SPP* V, 83, col. I, 10–13: αἰτοῦμαι [ἐπι]στ[αλῆ]ν[αι ἀπὸ] λόγου | [πολιτικοῦ] εἰς συν[ωνὴ]ν ξύ|[λων καὶ ἀνακ(ομιδὴν) αὐ]τῶν ἀργυρίου καινοῦ | [νομίσματος] τάλαντ[α] δύο καὶ *[hand 2]* (δραχμὰς) τρεισχειλίας; see also *SPP* V, 85, col. II, 7–8; 86, 8–11; 94, 18–22.

21. *BGU* IV, 1064, 7–9.

22. *P.Oxy.* XIV, 1713, 7–9.

23. *BGU* IV, 1090, 37–39.

24. *P.Oxy.* XXI, 2587; the loan was originally made in "Ptolemaic coin" (see above n. 15).

duties from Oxyrhynchos, dating to 286–293;[25] a contract for the sale of a slave for 15 talents of "new coinage of the emperors", drawn up in Hermopolis in 293;[26] and a fragmentary testament from 295, also from Hermopolis, mentioning a price of 12 talents of "new coins" for fine linen.[27]

Looking at the provenance of the texts mentioning either "(old) Ptolemaic" or "new coinage", it is clear that the use of such expressions was not confined to a certain region of Egypt, but was common in all parts of the country. The absence of any information from the Nile Delta is due to the well-known fact that the humidity of the soil in this region makes papyrus documents very scarce there.

Regarding the genre(s) of the documents that mention amounts of money in "(old) Ptolemaic coinage", it seems worth noting that the expression occurs almost exclusively in private documents—that is to say in private legal instruments like sales, loan and lease contracts, and one apprenticeship contract.[28] One may object that one of the texts attesting παλαιὸν Πτολεμαικὸν νόμισμα is an application to the nome strategus for *demosiosis* in connection with the foreclosure of a debt (287) and may therefore be considered an official document. But this application was caused by the non-fulfilment of a private legal instrument by the debtor, that is a loan contract in which the loan was specified as being in "old Ptolemaic coinage".[29]

In the case of the phrase "new coinage" the picture is a bit different: although the term καινὸν νόμισμα is also used in private legal instruments, a considerable number of official documents such as applications to the city council for the disbursement of money from the municipal treasury and receipts of local tax officials attest to the use of this expression, too.[30] We should also bear in mind that we are not dealing with a huge number of texts: the total of no more than about two dozen documents from the period between 266 and 295 certainly attesting either παλαιὸν (Πτολεμαϊκὸν) or καινὸν νόμισμα[31] represents only a very small minority of

25. *P.Osl.* III, 135, 17–19.
26. *P.Lips.* I, 4, 20–21; 5 (duplicate), 9–10 (= *M.Chr.* 171).
27. *P.Lips.* I, 29, 15.
28. See above for the survey of the relevant texts.
29. *P.Sijp.* 17.
30. See above for the survey of the relevant texts.
31. There are three more documents which we consider to be *testimonia incerta* and therefore exclude from the discussion, though they are included in other listings of documents relevant to the problem (mainly Rathbone 1996, n. 41 p. 336; Reinard 2016, pp. 116–122). These texts are the following: *PSI* VIII, 890 (Oxyrhynchos, 251–286), which lists various expenses (salaries, rations, etc.) and mentions two times the term παλαιῶν (ll. 25, 33)—but the context is obscure and it is very uncertain if there really followed the word δραχμῶν. *SB* VI, 9216 (Hermopolis, 285), a sale of a slave mentioning the price of the slave as [ἀργυρίου καινοῦ Σεβαστο]ῦ νομίσματος ταλάντων ὀκτώ (l. 17)—the supplement of the *editio princeps* (Bingen, CE 24, 1949, pp. 306–312) seems very risky, considering the poor state of preservation of the papyrus, and P. Reinard (2016, n. 44 p. 120) comments on Jean Bingen's supplement as follows: "*Die von Bingen vorgeschlagene Ergänzung der Lacuna ist in sich schlüssig. Jedoch muss man anmerken, dass der linke Rand des Papyrus in keiner Zeile erhalten und der rekonstruierte Wortlaut deshalb mit Vorsicht zu betrachten ist. Eine kürzere Ergänzung wäre* […] *ebenfalls denkbar*" (this is indeed the case). *P.Ant.* I, 43, 4–5 (Antinoite, late 3rd to 4th c.), a private letter: ἔτωκά (l. ἔδωκά) σοι λωτικιν (l. λωδίκιον) καὶ μνᾶς | παλεοῦ (l. παλαιοῦ) καὶ τυλάριν μέγα—in our opinion it is uncertain that this "old mina" refers to coinage in the present context, and we would deem an indication of weight for textiles (as those mentioned in the letter) equally possible.

the texts mentioning payments of money that have come down to us from the second half of the 3rd c. AD in general. In the overwhelming majority of cases the coinage is labelled as being "old" or "new", but simply as "coinage".

2. INTERPRETATIONS HERETOFORE PROPOSED: A CRITICAL REVIEW

To begin with, the interpretation of the term καινὸν νόμισμα does not pose any serious difficulties. It should doubtless be taken as referring to "new" issues of provincial coinage in the name of the Roman emperors, in the sense that it singled out coins produced in the period in which the respective documents were written, or the time immediately preceding it. The expression παλαιὸν Πτολεμαϊκὸν νόμισμα, by contrast, is much more difficult to explain. When scholars first tried to make sense of it, in the late 19th and early 20th c., they took the phrase literally and believed it to designate coinage of the Ptolemaic period that was still in use as late as the second half of the 3rd c. AD. C. Wessely, for example, took it as evidence for "*Ptolemäische Münzen im III. Jahrhundert n. Chr.*" or "*altptolemäisches Gepräge*".[32] His opinion was endorsed by Ulrich Wilcken in 1899 in the first volume of his *Griechische Ostraka*, where he states:

> Andrerseits ist durch Wessely der Nachweis geführt worden, dass auch noch in der Kaiserzeit Zahlungen in ἀργυρίου παλαιοῦ πτολεμαϊκοῦ νομίσματος beurkundet werden. Die von ihm citirten drei[33] Beispiele gehören alle der zweiten Hälfte des III. Jahrh. n. Chr. an. […] Wir kennen jetzt auch Fälle mit Σεβαστῶν aus dieser selben Periode, so dass erwiesen ist, dass damals Kaisergeld und Ptolemäergeld in Curs waren. Wessely's Vermutung, dass man gerade am Ende des III. Jahrhunderts wegen der bekannten Verschlechterung der Kaisermünze zu den alten ptolemäischen Stücken gegriffen habe, hat manches für sich.[34]

Similarly Wilhelm Schubart, in his *Einführung in die Papyruskunde*, remarked: "*Die Ptolemäermünzen, insbesondere die silbernen Tetradrachmen blieben auch unter römischer Herrschaft, bis gegen Ende des 3. Jh. p. C. im Umlaufe* (Πτολεμαικὸν νόμισμα) *und wurden sogar dem schlechter werdenden Kaisergelde vorgezogen.*"[35] Michael Rostovtzeff also subscribed to the interpretation first proposed by Wessely.[36] Furthermore, one may cite Frederick Kenyon and Howard Idris

32. Wessely 1888, pp. 144, 146.
33. Wessely (1888) has actually cited only two examples (see also above n. 1).
34. Wilcken 1899, p. 728.
35. Schubart 1918, p. 425.
36. Rostovtzeff 1957, vol. I, pp. 472f.: "It is worthy of note that in several contracts of the same time the money specified is not the current imperial issues of billon but the old Ptolemaic silver, masses of which probably lay hidden all over Egypt"; vol. II, n. 5 p. 737: "On the preference for Ptolemaic silver in the 3rd cent. AD, see C. Wessely, Mitt. P. R. iv, pp. 144ff."

Bell, who state in the commentary to *P.Lond.* III, 1243 (Hermopolis, 281)[37] that it is "very remarkable to find Ptolemaic silver in circulation so late as the third century".

As is well known, the first Roman emperor to coin provincial tetradrachms in Egypt was Tiberius, in 20/21, about half a century after the last Ptolemaic silver had been issued.[38] During these fifty years, the need for silver coinage in Egypt was exclusively met by the Ptolemaic coinage already in circulation, and these coins continued to be used, together with the earliest Roman provincial tetradrachms, in the Julio-Claudian period, as papyrological texts and the numismatic hoard evidence demonstrate.[39] It is not yet completely clear when the Ptolemaic tetradrachms were removed from circulation; in any case this must have happened already sometime in the period between Tiberius and Nero.[40] After that time, we do not find relevant quantities of Ptolemaic silver in the numismatic record any more. Two tetradrachms of Ptolemy XIII are recorded as part of a Roman hoard of more than 2,200 billon tetradrachms closing in the 270s, but this is an exception.[41] Hence, in the light of current hoard evidence, the assumption by Wessely, Wilcken, Schubart and others, according to which significant numbers of Ptolemaic coins continued to circulate until the end of the 3rd c. AD, can no longer be maintained. "The hoard evidence does not support the view that Ptolemaic coins were actually in use" in the second half of the 3rd c. AD, as Erik Christiansen put it.[42] It is therefore highly improbable that people should have possessed large amounts of Ptolemaic coins, with which to pay for example the two talents of "old Ptolemaic coinage" recorded as the price of part of a house and of one *arura* of arable land in Panopolis in 281.[43]

The expression παλαιὸν (Πτολεμαϊκὸν) νόμισμα in papyrus documents of 3rd-c. AD Egypt hence clearly cannot refer to coins struck under Ptolemaic rule, but must denote Roman imperial issues of Alexandrian tetradrachms. Before we try to identify these issues of "(old) Ptolemaic coinage", we first have to deal with the contrast between "old" and "new" coins in 3rd-c. AD Egypt. A single document out of the 25 texts attesting the terms "old" or "new" in the period between 266 and 295 hints at the relation of the two groups to each other.[44] It is

37. See above n. 12.
38. *RPC* I, p. 688; Butcher, Ponting 2014, p. 608; Mitthof 2009.
39. See the quite frequently attested designation of amounts of coinage in this period as being ἀργυρίου Σεβαστοῦ καὶ Πτολεμαϊκοῦ (e.g. *SB* X, 10246, 4–5, AD 55); for the (very meagre) hoard evidence, see Butcher, Ponting 2014, p. 608. See also Walker, King 1976, p. 139, as well as Burnett, Blouin, in this volume.
40. See Butcher, Ponting 2014, pp. 644f., whose metallurgical analyses do not seem to support the idea that Nero's large issues of Alexandrian tetradrachms represent a reminting of Ptolemaic tetradrachms.
41. The hoard: Christiansen 1985, p. 116, no. A109. Apart from the two Ptolemaic tetradrachms, it contained 2,229 billon tetradrachms of Roman emperors down to Probus, and one Roman bronze coin. For the odd Ptolemaic bronze coin in Roman hoards of the 2nd and 3rd c. AD, see Christiansen 1985, no. A60 pp. 102f. (= Noeske 2006, pp. 281–288); no. A84 pp. 108f. (= Noeske 2006, pp. 360–362); no. A107 p. 115 (= Noeske 2006, pp. 112f.).
42. Christiansen 1985, p. 85.
43. *P.Coll.Youtie* II, 71 (see also above n. 11).
44. Reinard 2016, p. 118, also cites *P.Berl.Möller* 1 (= *SB* IV, 7338: see above n. 7) as evidence for both terms (i.e. "old" and "new" coins) appearing together in the same text. But this cannot be proven. The text is a *dialysis* of a deposit which is specified (l. 7) as 3,000 drachmae of "old coinage". In line 14 (which concerns the payment of a fine in case of violation of the contract), the *editio princeps* has [ἐπ]ιτίμου τῷ ἱερωτάτῳ ταμείῳ ἀργυρ̣ίου̣ [δραχμὰς - *c.*27 - κ]αὶ ἱερὰ τὰ ἴσα; Frisk (in *SB* IV, 7338) proposed to restore in the lacuna ἀργυρ̣ίου̣ [καινοῦ Σεβαστῶν νομίσματος τάλαντα ---] (there must have followed a number after τάλαντα). Reinard (2016, n. 20 p. 118),

P.Oxy. XXXI, 2587, presumably originating from Antinoopolis and containing a receipt for the repayment of a loan dated to 17 September 289:

> Αὐρήλ̣[ιο]ς Π̣ο̣λυδεύκης Ὡρίωνος | Ἀντινοεύς, φυλῆς Παυλινίου τοῦ | καὶ Μ̣ε̣γαλισ̣ί̣ο̣υ̣ Ἀυρηλίῳ̣ Ἑρμεια ̣ ̣ ̣τ̣\ο/ | ̣ ̣ντους ἀπὸ [τ]ῆς αὐτῆς πόλεως χαίρειν. | ὁμολογῶ ἀ̣π̣εσχηκέναι παρά σου ἀφ’ ὧν | μοι ὀφείλει\ς/ ἀργυρίου Πτολεμαϊκοῦ | νομίσματος δραχμῶν χειλίων | καιν̣[ο]ῦ νομίσματος δραχμὰς χειλίας. | κυρία ἡ ἀποχὴ ἁπλῆ γραφε̣ῖ̣σ̣α̣ κ̣α̣ὶ̣ ἐ̣π̣ερω| τηθεὶς ὑπὸ σοῦ ὡμολόγησα. | (ἔτους) ς Διοκλητιανοῦ καὶ (ἔτους) ε | Μαξιμια̣ν̣ο̣ῦ̣ Σεβαστῶν. Θὼθ κ. | (hand 2) Αὐρήλιος Πολυδεύ|κης Ὡρίωνος ἔσχον | τὰς τοῦ καινοῦ δρα|χμὰς χειλίας.
>
> Aurelius Polydeuces, son of Horion, Antinoite of the tribe Paulinios and the *deme* Megalisios, to Aurelius Herm(...), son of (...) of the same city, greeting. I declare that I have received from you, out of the thousand drachmae of silver of Ptolemaic coinage that you owe me, a thousand drachmae of new coinage. The receipt, of which there is a single copy, is valid and in answer to the formal question put by you I have given my assent. In the sixth year of Diocletian and the fifth year of Maximian, Augusti, on the twentieth of Thoth. *[hand 2]* I, Aurelius Polydeuces, son of Horion, have received the thousand drachmae of the new *[sc. coinage]*.[45]

Since Aurelius Polydeuces explicitly states that the thousand "new drachmae" which he received as repayment of a loan of thousand "drachmae of Ptolemaic coinage" granted to Aurelius Herm(...) were considered by him not a total, but only a partial repayment of the loan—the Greek ἀφ’ ὧν being the crucial point here—this text makes it clear beyond any reasonable doubt that in the view of the creditor the thousand "Ptolemaic drachmae" were of higher value than the thousand "new drachmae".[46] This means that there must have been an exchange rate between the "Ptolemaic drachmae" and the "new" coinage. Unfortunately the receipt does not say—as one might have expected and of course would very much like to know—"how many 'Ptolemaic' drachmae were deemed to have been repaid by 1,000 new drachmae and how many remained to be paid off at a future date and rate".[47] But to give such information would by no means have been an obligatory clause in such a simple document whose only function was to acknowledge the receipt of a single payment. One may therefore assume, with the editor John Rea, that "there may perhaps have been a cancellation of the original loan contract and a new note given by the debtor."[48] The interpretation of the text as a partial repayment of a loan was criticised by the numismatist Erik Christiansen, who in

referring to the approximate length of the lacuna, regards this restoration as too long and proposes to restore ἀργυ̣ρίου̣ [καινοῦ νομίσματος τάλαντα - *c.*3 -]. But one could just equally restore ἀργυ̣ρίου̣ [Σεβαστῶν νομίσματος τάλαντα - *c.*3 -], which is only two letters longer than Reinard's restoration, and the "new coinage" is gone again.

45. Translation by the editor John Rea.

46. See also Reinard 2016, pp. 128f.

47. J. Rea in the introduction to *P.Oxy.* XXXI, 2587.

48. J. Rea in the introduction to *P.Oxy.* XXXI, 2587.

one contribution called the translation of the editor "very uncertain"[49] and stated in another study: "The editor's interpretation that the repayment only represented an instalment of the original loan is tempting but difficult to maintain, and thus 'new coins' seem to represent the same value as the 'old (Ptolemaic).'"[50] This criticism, however, is in our view completely wrong. The phrasing of the Greek text is unambiguous and correctly rendered in J. Rea's translation, quoted above. Consequently, the interpretation of the text as a partial repayment of a loan is certainly correct.

As stated above, the παλαιὸν (Πτολεμαϊκὸν) νόμισμα cannot possibly be identified with coins struck under the Ptolemies; hence, most scholars tend to regard the "(old) Ptolemaic coinage" as imperial coins in current circulation but belonging to earlier issues. Since the first references to "old Ptolemaic coinage" appear in papyrus texts of the 13th regnal year of the emperor Gallienus, we must be dealing with coins struck sometime before this date. The testimonies for "old Ptolemaic coinage" disappear during the reign of Diocletian, and presumably not by accident: Diocletian's currency reform stabilised the Roman monetary system, ended the production of Egyptian provincial coinage, and transformed the Roman Empire into a unified monetary zone. From Diocletian onwards, the special monetary status of Egypt was a thing of the past, and coin denominations circulating in Egypt were the same as in all other provinces of the empire. It seems reasonably certain that denoting particular coin issues as "old", "Ptolemaic" or "old Ptolemaic" did not merely mean using "conventional terms intended to express the hope that the coinage which they describe is good" as Michael Crawford thought,[51] since this could have been expressed far better and more precisely by the term ἀργύριον δόκιμον ("legal silver/tender") attested every now and then in documents from the 1st to the early 4th c.[52]

The majority of scholars treated the term "(old) Ptolemaic coinage" as being related to the well-known monetary developments of the later 3rd c. AD, involving a spectacular debasement of the silver currency. For example, Gunnar Mickwitz thought that the term "old Ptolemaic coinage" designated older billon tetradrachms "*ptolemäischer Art*", and that the epithet "Ptolemaic" was used to indicate the higher value of such coins in comparison to other issues.[53] This view was shared by the editor of *P.Vind.Bosw.* 12, a text stipulating a loan of 600 drachmae of παλαιὸν Πτολεμαϊκὸν νόμισμα,[54] who held that the term designated "*nicht von der Inflation beeinflußte Münzen*".[55] Erik Christiansen believed that this and other

49. Christiansen 1984, n. 155 p. 297, where he also states that the translation is "very uncertain according to Michael Crawford" without giving any further reference to any of Crawford's writings. We were unsuccessful in trying to identify Crawford as a source for Erik Christiansen's assertion.
50. Christiansen 2004, p. 119; Rathbone 1996, p. 337 also interprets the text as "acknowledging full discharge in 'new' coins of a debt contracted in 'old' coins".
51. Cited by the editor Gerald M. Browne in the commentary on *P.Oxy.* XLI, 2951, 24–25 (see also above, with n. 10).
52. See e.g. *P.Hamb.* I, 2, 14–15 (= *CPJ* II, 417 = *Jur.Pap.* 30; Babylon, Heliopolite, AD 59); *P.Flor.* I, 41, 16 (Hermopolite, AD 140); *P.Stras.* I, 10, 17–18 (Hermopolis, AD 268); *P.Charite* 3, 14 (Hermopolis, AD 317); see also Rathbone 1996, p. 335.
53. Mickwitz 1932, pp. 53f.
54. See also above n. 13.
55. E. Boswinkel in the commentary on *P.Vind.Bosw.* 12. The connection between the deterioration of the coinage in terms of reduction of its silver content and the inflation paradigm, often found in descriptions of

3rd-c. AD documents mentioning "(old) Ptolemaic coinage" were "referring to actual coins, not Ptolemaic but older Alexandrian tetradrachms having a higher weight and higher silver content than those being minted in the 260s and later."[56] But what could have been the reason for people to draw up contracts explicitly involving monetary transactions in "(old) Ptolemaic coinage"?

Dominic Rathbone, who agrees with the view that the term "'Ptolemaic' must denote previous issues of heavier tetradrachms (that is nearer in gross weight to the original standard)",[57] further observed that "there is no discernible difference in the use of 'old' or 'new' coins, or of coins not specified as either, as is the case in the majority of documents of this period: all prices seem normal for their time and there is no trace of any premium on 'old' or 'new' coins".[58] According to him,

> the specification of "old" and "new" coins in the 260s to 290 *[is]* occasional and inconsistent *[and]* must reflect a certain fear that tomorrow, for some reason, it might be better to be holding (or, in case of receipts, to be able to prove full discharge of one's obligations in) tetradrachms either of previous or current issues. Since prices seem to have remained fairly stable in the period after 274/75, as well as in the preceding period, the problem evidently had nothing to do with private transactions involving coin, and again the most likely possibility is that the fear was that the government would retariff the tetradrachm, or perhaps previous or current issues of it, for the purpose of tax-payments.[59]

Rathbone interprets the much debated *P.Oxy.* XII, 1411, dating to 24 November 260—that is some years before the first appearances of "(old) Ptolemaic coins" in papyri—as a further sign of supposed worries among the population that the government (in this case the usurpers Macrianus and Quietus) "would retariff the Alexandrian tetradrachm, that is devalue it in relation to the *aureus* or the set rates of taxation".[60] This proclamation of the strategus of the Oxyrhynchite Nome threatens the bankers with punishment because of their "refusal to accept the divine coinage of the emperors" (τῷ μὴ βούλεσθαι προσίεσθαι τὸ θεῖον τῶν Σεβαστῶν νόμισμα)[61] and orders them to accept "all coinage except the clearly counterfeit and adulterated" (πᾶν ⟦π⟧ νόμισ[μ]α προσίεσθαι πλὴν μάλ̣ι̣ς̣[τα] παρατύπου καὶ κιβδήλου).[62] Though it certainly cannot be denied that this text provides evidence for distrust in the coinage (at least on the part of the banks), this distrust need not necessarily have concerned all current coin in circulation, but may have been triggered by the coins issued by the usurpers Macrianus and Quietus.[63]

the economic situation of the 3rd c. AD and also endorsed by E. Boswinkel, is methodologically questionable, at least for Egypt; see also Rathbone 1996.

56. Christiansen 1984, p. 297; see in this sense already Callu 1969, p. 186; see also Henri Melaerts in the commentary on *P.Sijp.* 17.
57. Rathbone 1996, p. 336.
58. Rathbone 1996, p. 337.
59. Rathbone 1996, p. 337.
60. Rathbone 1996, p. 335.
61. *P.Oxy.* XII, 1411, 6–7.
62. *P.Oxy.* XII, 1411, 10–12.
63. See Geiger 2015, p. 121; Reinard 2016, pp. 134f.

But back to the problem of "(old) Ptolemaic" and "new" coinage. It is not easy to understand how fear of a re-tariffing of the Alexandrian tetradrachm could have induced people to draw up contracts in which monetary transactions were specified not only as being in "old" or "Ptolemaic" coins, but also in "new" coins. Why should such a fear have caused the contracting parties of a lease contract like *P.Stras*. VI, 539 to agree upon a payment of the yearly rent in "old Ptolemaic" coinage? Should this clause not rather be interpreted as indicating the simple wish of the lessor to get his rent paid in such coinage? Or why should the supposed fear of a potential re-tariffing of the Alexandrian tetradrachm be responsible for the granting of a loan in "Ptolemaic" drachmae and the repayment of the same loan to the creditor in "new" coinage as in *P.Oxy*. XXXI, 2587? Moreover, if fears of a re-tariffing of the Alexandrian tetradrachm may have caused some people to keep their "(old) Ptolemaic" coins, why should they have parted with them in a loan at all? Are we to assume that in such cases the creditor tried to meet the wish of the debtor to get "old" coinage in order to cope with his fear of the re-tariffing of the Alexandrian tetradrachm? This assumption seems most implausible. Contrary to Rathbone, who states that the problem of "old" coinage "evidently had nothing to do with private transactions involving coin", we believe that exactly this is the best way to explain the documents referring to monetary transactions specified as being in "(old) Ptolemaic coinage".

The interpretations discussed so far are quite diverse, but still all of them take the expression παλαιὸν (Πτολεμαϊκὸν) νόμισμα to refer to real (physical) coins. The first scholar to argue against this view was J. Rea, the editor of *P.Oxy*. XXXI, 2587, already discussed above, in which the receipt of 1,000 "new" drachmae as a partial repayment of a loan of 1,000 "Ptolemaic" drachmae is acknowledged. In order to explain this fact, Rea suggested that

> some old coin, which still retained a value as bullion, was adopted as a standard so that no loss would be incurred by a businessman who put his capital into a transaction that covered a period of time. That is, in the case of an interest-free loan, a man could lend current money equivalent to a certain number of "Ptolemaic" drachmae on condition that the debtor repaid the value of the same amount of this coinage at the rate current at the time of the repayment. If the value of the new tetradrachm fell, more of them would have to be paid back at the end of the term.[64]

Rea further stated that "this would explain satisfactorily why the expressions are used in loan contracts[65] [...] and in claims for money not likely to be met immediately".[66] While admitting that there are also texts that specify direct payments of "(old) Ptolemaic coinage", Rea tried to reconcile this with his interpretation of a "fictional standard" by submitting that "if the coins were used as an exchange standard it follows that the bankers must have been familiar enough with them to have a constantly revised exchange rate for them".[67] By way of this explanation it is also possible for Rea to return to the assumption of earlier scholars and

64. Introduction to *P.Oxy*. XXXI, 2587 (pp. 145f.).
65. Rea here refers (apart from *P.Oxy*. XXXI, 2587, edited by himself) to *P.Lond*. III, 1243 (p. 176) and *P.Vind.Bosw*. 12 (see also above, nn. 12–13).
66. Here Rea refers to *P.Berl.Möller* 1 and *P.Grenf*. II, 77 (see also above nn. 7, 18, 44).
67. Introduction to *P.Oxy*. XXXI, 2587 (p. 146).

to identify the παλαιὸν (Πτολεμαϊκὸν) νόμισμα with coins actually struck under Ptolemaic rule, because his theory is not based on a hypothesis of large amounts of Ptolemaic coins still circulating as late as in the second half of the 3rd c. AD—a hypothesis disproved anyway by the hoard evidence, as shown above. Rea states: "On the theory suggested here of a rarer use of the coins and a more widespread use of the term as a fictional standard, this argument *[sc. the non-circulation of physical Ptolemaic coinage in 3rd-c. AD Egypt]* is less cogent, and there have been, in fact, sporadic finds of Ptolemaic coins in hoards of the third century."[68]

The theory of Rea, if we understand it correctly, would therefore imply that the sum of 1,000 "Ptolemaic" drachmae granted as a loan, according to *P.Oxy.* XXXI, 2587, was a "fiction" in the sense that it was reckoned in a "fictional standard" based on some Ptolemaic coins kept by private individuals and bankers who set up an exchange rate between these Ptolemaic coins and the current imperial coinage. The loan must thus, according to Rea, have been paid out to the debtor in "new" coins of current issues, but since we do not know the exchange rate, we cannot say how many "new" coins were actually given to the debtor as an equivalent of the 1,000 "Ptolemaic" drachmae. The loan was then partly repaid to the creditor with 1,000 "new" drachmae, but, since we again do not know the exchange rate, we also are not able to say how many of the "Ptolemaic" drachmae of the original loan were regarded by the creditor as having been repaid by the 1,000 "new" drachmae. This "fictional standard" based on real Ptolemaic coins was, according to Rea, some sort of safety measure to secure people who put their money in long-term transactions like loan contracts or sales (with postponed payment of the price) against the loss which they would have incurred if the value of the current coinage fell in relation to the Ptolemaic coins. The entire construct seems overly complex. Another problem is that, according to Rea, the reason for the putative creation of a "fictional standard" of the "Ptolemaic" coins in relation to the current "new" coinage should be that the former pieces "still retained a value as bullion".[69] However, since "Ptolemaic coins", as Rea himself has to acknowledge, "like the Roman ones varied greatly in silver content", he is forced to assume that "if the standard really was a matter of bullion we should expect to find that 'Ptolemaic' means something quite precise—some particular issue or group of issues".[70] Rea's "fictional standard" would thus have been based not on whatever old Ptolemaic silver coins people all over the country might have happened to hold, but on specific issues of Ptolemaic coins like for instance coins struck under Ptolemy XII or XIII. This does not seem plausible at all.

But, even if one were prepared to admit that such a complicated system of a "fictional standard" of "old Ptolemaic" coins (of particular issues) might possibly have worked with monetary transactions that covered a certain period of time, Rea's hypothesis does not satisfactorily explain direct payments of larger sums of "(old) Ptolemaic money" like, for example, the 3,000 drachmae παλαιοῦ Πτολεμαϊκοῦ νομίσματος that were, according to *SPP* XX, 72, one instalment of the price of a house in 271/272.[71] This sum necessarily would have to be regarded as "fictional" in

68. Introduction to *P.Oxy.* XXXI, 2587 (p. 146).
69. Introduction to *P.Oxy.* XXXI, 2587 (p. 145).
70. Introduction to *P.Oxy.* XXXI, 2587 (p. 146).
71. *SPP* XX, 72, 10–11.

the sense of Rea's theory, because it is too large to have been paid in real old Ptolemaic coinage, with so few Ptolemaic coins attested in 3rd-c. AD contexts. Thus, according to Rea, the payment would have been made with coins of current issues but calculated on the basis of an exchange rate for Ptolemaic and current ("new") coinage. But can such a calculation really have been the reason to designate money paid in a sale as "old Ptolemaic coinage"? And why should the contractors of *SPP* XX, 72, have performed this complicated operation at all, since they simply could have calculated an adequate price in current coinage from the outset?

We had to deal with Rea's theory in greater detail since it was adopted and expanded in the most recent study of the problem by Patrick Reinard, who also regards *P.Oxy.* XXXI, 2587 as crucial for our understanding of the relation between "(old) Ptolemaic" and "new" coinage. Reinard agrees that it is to be interpreted as a partial repayment in "new" drachmae of a loan stipulated in "Ptolemaic" drachmae, the latter thus having a higher value than the former. Like Rea, Reinard obviously does not regard the 1,000 "Ptolemaic" drachmae granted as a loan as real physical coinage since he states: "*Beide Bezeichnungen scheinen eher für zwei separierte Systeme der Wertbemessung zu stehen. Die beiden Vertragspartner operierten physisch mit den „neuen kaiserlichen Münzen", abstrakt gerechnet wurde allerdings mit den „alten" ptolemäischen.*"[72] Reinard explains this distinction as the "*Resultat der Furcht vor einer Wertminderung*"[73] and thinks that this fear also underlies some other documents relating to monetary transactions that cover a certain period of time. Though a few such long-term transactions can certainly be found in the documentation,[74] this cannot be proven for all the documents cited by Reinard as evidence in this respect.[75] He even thinks that in the case of the loan contract *P.Lond.* III, 1243, p. 176 (Hermopolis, 29 September 281), stipulating its repayment τῷ ὄντι μηνὶ Φαῶφι ("in the current month of *Phaophi*"), the creditor "*hielt es folglich für möglich, dass selbst in dieser kurzen Zeit ein Wertverlust eintreten könnte*",[76] which does not seem convincing at all.

Reinard tries to explain the use of the terms παλαιὸν (Πτολεμαϊκὸν) and καινὸν νόμισμα with feelings of insecurity that, in his view, affected large parts of the population because of

72. Reinard 2016, p. 129.
73. Reinard 2016, p. 129.
74. *P.Oxy.* XLI, 2951 (= *ChLA* XLVII, 1415; Oxyrhynchos, 267), a sale of a slave; the price (specified in "old Ptolemaic *denarii*") was paid some months after the transaction had started. *P.Vind.Bosw.* 12 (Hermopolis, 286–287) is a loan of "old Ptolemaic coins" with repayment in the then current year, but the term of the loan cannot be determined exactly because the date is lost.
75. *P.Coll.Youtie* II, 71 (Panopolis, 281), a sale of a house for 2 talents of "old Ptolemaic coinage". Reinard 2016, p. 130, wants to deduce from the passage πέπ[ρα]κά σοι ὠνῇ καὶ πράσει τιμῆς | τῆς [σ]υνπεφωνημένη[ς π]ρὸς σὲ ὑπὲρ ἑκατέρα[ς ἀ]ργυρίου | Πτολẹμαικοῦ παλαιοῦ νομίσματος ταλάντων δύο (ll. 23–25), "*dass zwischen der Vereinbarung des Kaufpreises und der endgültigen Transaktion, die durch die vorliegende Urkunde terminiert wird, einige Zeit vergangen sein mag. Vielleicht befürchtete man seit der Einigung auf einen Preis und der erfolgten Auszahlung einen Wertverlust. Deshalb erfolgte eine Konkretisierung der Wertigkeit*". We can simply not see how this may be deduced from the frequently used formulaic phrase cited above, which just means "I have sold to you in purchase and sale at the price agreed upon with you, etc." *P.Oxy.* XIV, 1773 (Antinoopolis, 3rd c. AD) is a private letter mentioning two different payments, one in "new" and one in "old" drachmae, which do not seem to be interrelated (see above n. 7). We therefore do not see how a period of time for a transaction or fear of a loss of value of the capital should have mattered here, as Reinard (2016, pp. 131f.) seems to think.
76. Reinard 2016, p. 131.

the political turmoil in 3rd-c. AD Egypt, the diverse episodes of which—like the invasion of the Palmyrenes (270–272), the invasion of the Blemmii (279/280), or the usurpation of Domitius Domitianus and Aurelius Achilleus (296–298)—are discussed by the author at length.[77] Though these incidents admittedly will have affected people in some parts of the country, they were in our view too short-lived and too far apart chronologically to have caused distrust of the current imperial coinage for a period of three decades—a distrust that Reinard assumes to have triggered the introduction of the unusual monetary terminology. Contrary to his view, adopting more or less the traditional paradigm of the "crisis of the 3rd century", the economic situation of Egypt in the 3rd c. AD seems to have been fairly stable, and in some parts of the country even prosperous in comparison with the late Antonine period, when large parts of Egypt had suffered from the consequences of the "Antonine plague" and were facing an economically very strained situation.[78] 3rd-c. AD prosperity manifested itself for example in ambitious public building programmes attested during the reign of the emperor Gallienus in Hermopolis[79] and Herakleopolis.[80] We should also bear in mind that the expression παλαιὸν Πτολεμαϊκὸν νόμισμα first appears in the mid-260s, thus Palmyrene rule cannot have provoked the fear and uncertainty in Egypt that Reinard takes to be responsible for the creation of this phrase. In general, his view of a complete loss of faith in the coinage and a destruction of the "*Geldillusion*", as he terms it, seems to be far too pessimistic, considering the fact that the government continued to accept current coin for tax payments and thus obviously still guaranteed its value. We should like to repeat here that we have no more than just 13 documents attesting the use of the terms παλαιόν, Πτολεμαϊκόν or παλαιὸν Πτολεμαϊκὸν νόμισμα, and another 12 texts referring to καινὸν νόμισμα for the period from 266 to 295. These 25 testimonies, private documents scattered over a period of some 30 years, can hardly provide solid evidence for a hypothesis of a widespread feeling of political insecurity and distrust of the current coin. By way of contrast, there are some 400, in most cases precisely dated testimonies for monetary transactions in the same period that are not specified as being either in "old" or in "new" coinage.[81]

77. Reinard 2016, pp. 133-139. Similarly, Harris 2006, p. 23, already stated: "We can see references to 'old' and 'new' money in Egyptian documents of the a.d. 260s and later as signs of anxiety about the viability of the coinage."
78. One may refer to *P.Thmouis* 1 as an illustrative example out of many relevant testimonies; see also the remarks of the editor in her exhaustive commentary; on the importance of this text, see also Kruse 2002, pp. 661–703. For critical remarks on the "3rd-century crisis" from the monetary historian's point of view, see most recently Elliott 2014, who correctly observes that some of the tendencies in evidence in the 3rd c. AD in fact originated in the 2nd c., and that one ought to speak of a "second-century currency crisis—its natural consequences were merely deferred until later" (p. 151).
79. See e.g. the documents already cited above, n. 20, as testimonies for καινὸν νόμισμα (*SPP* V, 83, 85–86) and some other texts related to this building programme originating mostly from the files of the town council of Hermopolis.
80. A large unpublished papyrus from the Vienna collection contains accounts of building measures in connection with the renovation of a *stoa* in Herakleopolis. On the fairly stable economic situation of Egypt in the 3rd c. AD in general, see Johnson 1950; Rathbone 1991.
81. Search in the database papyri.info for the term "δραχμή" for the years between 265 and 305 performed on 24 Mar. 2016.

That the term (παλαιὸν) Πτολεμαϊκὸν νόμισμα denoted tetradrachms issued prior to *c*.260 is a view Reinard[82] shares with several other scholars, including Rathbone, as mentioned above. But in contrast to those researchers, Reinard denies that these older coins were really used as physical money in business transactions, when he states:

> Beide Bezeichnungen *[sc. the terms "old" and "new" coinage]* kursierten gleichzeitig in Ägypten und wurden, wie *P.Oxy.* 31/2587 […] zeigt, gemeinsam bei geschäftlichen Transaktionen gebraucht. Dabei waren die „alten ptolemäischen" Münzen nicht real existent, sondern ein fiktionaler Standard, der zur Wertbemessung verwendet wurde. Die „neuen kaiserlichen" Münzen waren hingegen physisch in Umlauf und wurden operativ genutzt. Ihr Realwert war im Vergleich zu dem fiktiven παλαιός-Geld geringer.[83]

However, the view that the παλαιὸν (Πτολεμαϊκὸν) νόμισμα did not really exist, but was simply a fiction based on imperial coinage prior to 260 and used to calculate sums in the current "new" coinage, cannot be correct. That it was real money is borne out not only by the numismatic evidence, to be discussed in the following section, but may also be deduced from the papyrological material itself. Several documents seem to refer to actual physical payments being made in παλαιὸν (Πτολεμαϊκὸν) νόμισμα. In *P.Ryl.* II, 165, a contract from Hermopolis for the sale of four *arurai* of catoecic land dating to 28 March 266, the seller (a woman) states that she has "received on the spot" (αὐτόθι ἀπέσχεν) from the purchasers the price specified as "1,600 drachmae of old Ptolemaic silver coinage".[84] Similarly the seller of the house in the sales contract *SPP* XX, 72 (= *CPR* I, 9; Hermopolis, 271–272) declares: "I have received on the spot from you the buyer from hand to hand in full" (<ἃς καὶ> αὐτόθι ἀπέσχον παρὰ σοῦ τῆς ὠνουμένης διὰ χειρὸς ἐκ πλήρους) 3,000 drachmae of "old Ptolemaic coinage".[85] In another sale of a house from Panopolis in Upper Egypt, dating to 281 (*P.Coll.Youtie* II, 71), the price is specified as 2 talents ἀ]ργυρίου Πτολ̣εμαικοῦ παλαιοῦ νομίσματος of which the seller says: ἅπερ ἔσχον παρὰ σοῦ […] πλήρη διὰ χειρός, "and I have received them from you, in full, from hand to hand".[86] In *P.Sijp.* 17 (Lycopolite, 27 December 287), a person declares that he had "received" (ἔσχον) through a bank 500 drachmae of "old Ptolemaic coinage".[87] This text also proves that not only private individuals, but also banks had "old Ptolemaic coinage" at their disposal, and that the latter thus must have circulated in the country. Finally, in a lease contract from Hermopolis dating to 290/291, where the payment of the rent is stipulated as being partly in kind and partly in cash, the tenants declare: τὸ μὲν ἀργύριον | δωμεν (l. δώσωμεν) ἐν παλ(αιῷ) Πτολ(εμαικῷ) νομίσμ[α]τι, "we will give *[= pay]* the money in old Ptolemaic coinage".[88]

82. Reinard 2016, p. 141: "*Am wahrscheinlichsten ist ein Bezug auf Münzen aus der Zeit vor der Alleinherrschaft des Gallienus.*"
83. Reinard 2016, p. 142.
84. *P.Ryl.* II, 165, 18–19.
85. *SPP* XX, 72, 10–11.
86. *P.Coll.Youtie* II, 71, 24–27.
87. *P.Sijp.* 17, 24–27.
88. *P.Stras.* VI, 557, 18–19.

We think that the evidence gathered above[89] speaks for itself: coinage which one can physically "receive" from somebody and "give" to another person cannot possibly have been something virtual or non-existent, but must be something real that one could take in one's hands and hand over to another person. We cannot be dealing with a "fiction" here.

Let us summarise the results of our enquiry so far. The term παλαιὸν Πτολεμαϊκὸν νόμισμα must designate issues of Roman provincial coinage in Egypt, presumably prior to Gallienus' sole reign. These coins were in the possession of inhabitants of Egypt and used by them together with the "new" coinage for payments or other monetary transactions. But since the "old" coins were deemed to be of higher value than the "new" ones, certain people wished to get paid in "old" coinage: this might explain the appearance of the term in sales contracts and similar documents. Other people—in particular those who had larger sums of παλαιὸν νόμισμα at their disposal and wanted to use this capital for business transactions which covered a certain period of time, like loans—may have felt somehow uncomfortable in view of the repayment. It would have been, of course, legally correct for them to receive a repayment in "new" coins: but since such a repayment would have been, in the view of the creditor, of less value than the sum he had originally granted to the debtor, creditors deployed a strategy to avoid such a loss. The most obvious precaution was to explicitly stipulate repayment in "old" coinage, and this may have been the case in *P.Sijp.* 17 (Lycopolite, 295) where a creditor had given as a loan 500 "old Ptolemaic coins" and gets this sum back again in παλαιὸν Πτολεμαϊκὸν νόμισμα, through the bank of the debtor by way of execution of the debt.[90] But the strategy to avoid a loss could also consist in an informal agreement between the contracting parties, in the sense that if the debtor received "old" coin as a loan, and was not able to repay it in "old" coin, but instead wanted to pay back in "new" coin, he had to pay more in "new" coin than he would have had to pay in "old". For this purpose, creditor and debtor may also have agreed upon an exchange rate between "(old) Ptolemaic" and "new" coins. Such an informal agreement and potential exchange rate would provide a sensible explanation for the partial repayment of a loan in "new" coinage, which had been granted in "Ptolemaic" coinage in *P.Oxy.* XXXI, 2587, discussed above. But such an exchange rate was of course bound to be an unofficial one that two contracting parties agreed upon *ad hoc* when drawing up the loan contract (or maybe not until the date of the repayment): the government could by no means officially admit that the "new" coinage was anything other but equivalent to the "old" one. This important point may presumably also be the reason why the "(old) Ptolemaic coinage" appears almost exclusively in private documents and private legal instruments, and not in public documents.[91] The unofficial character of the

89. One may also add *SB* XXIV, 16320, 16–17 (Kellis, 293–304), where the woman who has entrusted her slave to a weaver in order to get her trained declares that she has received as remuneration a sum in "old Ptolemaic coinage" (ἀπέσχηκα τὰ ἀργυρίου πα]λαιοῦ Πτολεμαικοῦ [ν]ọμίσμα|[τος τάλαντα - *c.?*]). Although the passage is restored, this restoration is imperative.

90. *P.Sijp.* 17, 14–15, 24–27 (see also above nn. 14, 87).

91. The one possible exception is *P.Sijp.* 17, just mentioned, since on the verso of this application to the strategus of the Lycopolite Nome for the foreclosure of a debt, a μαχαιροφόρος (a policeman or guard, who functioned as an executive organ in the foreclosure procedure) wrote that he had received the debt in "old Ptolemaic coinage" through the bank of the debtor (see also above, n. 87). However, a μαχαιροφόρος was not a high-ranking official; also, we are inclined to believe that the use of the term παλαιὸν Πτολεμαϊκὸν νόμισμα by the μαχαιροφόρος was ratio between "old" and "new" coinage established by private individuals may also explain why a potential exchange rate between the two kinds of coinage does not appear in any of our documents. From the legal point of view, "old" and "new" coins had to have the same value. Hence, it will have been wise not to potentially alert the government to a punishable offence by explicitly mentioning an illegal exchange rate between the two kinds of coinage in contracts, especially since the latter may have been filed in state archives. We may add that our interpretation of the textual evidence ties in well with a reconstruction of how the "black market" of coin-testing and unofficial exchanges evolved in the 3rd c. AD, recently developed by Colin Elliott.[92]

3. THE NUMISMATIC EVIDENCE AND THE TERMINOLOGICAL PROBLEM

It is not too common to find, in the monetary terminology of the Roman world, contrasting pairs specifying "old" and "new" coins of a certain kind, or even just one of these expressions—and when they occur, their meaning is frequently unclear or contested. The classic example are of course the *nummi novi* mentioned in the prologue of the *Casina* (line 10) of Plautus (*c.*254–184 BC), which used to play an important role in the scholarly debate of the first half of the 20th c. on the date of introduction of the Roman *denarius*.[93] Now that a *terminus ante quem* of 211 BC has been established for the *denarius* system on numismatic grounds, it is evident that the passage in Plautus cannot possibly relate to the *denarius* reform, and the reference to "new coins" should be taken to be entirely generic, in all probability.[94] This explanation will not do, however, in the case of the χρυσᾶ παλαιὰ δηνάρια mentioned in the inscription of a statue base from Palmyra (*IGRR* III, 1050) dated to April 193.[95] This text is commonly understood as referring to "old *aurei*" that were heavier than the contemporary pieces, although it is not easy to establish which gold coins exactly the author of the inscription had in mind.

Some forerunners of the terminology we are concerned with in this paper are found in the papyrological material as well. Apart from a few Ptolemaic attestations that we will not comment upon here,[96] three Roman texts seem relevant: *SB* VI, 9545, 34, a receipt for παλαιᾶς δραχ(μὰς) τέσσαρες (ll. 4f.) on an ostracon of 24 August 192 from Elephantine, for the ἐγκύκλιον tax; *BGU* VII, 1566, a papyrus of the early Severan period from the Kynopolites, dated to 7 *Hathyr* of a year between 198 and 209, in which the πόρος (capital) of a man nominated for the liturgy of ὀνηλασία is indicated in the following way: ἔχων πόρον ọδ̣[- *c.*? -] καινῶν καὶ

prompted by the fact that, according to the text on the recto, the loan which had not been repaid was originally stipulated in "old Ptolemaic coin" (see ll. 14–15).

92. Elliott 2014, esp. pp. 140–148; for comments on the problem of "old" and "new" coins in Egypt, see pp. 147f.

93. On the problem, see Zehnacker 1976; Callataÿ 2015, p. 31.

94. Thus Crawford M. 1974, n. 4 p. 28. The Casina is unanimously considered to be among the latest plays by Plautus, written perhaps in the 180s BC.

95. See Callu 1969, p. 187; Crawford M. 1975, n. 12 p. 563 (with previous bibliography); Woytek 2009, pp. 188, 192 (Testimony A8).

96. *P.Eleph*. 20, 18–20 (223/222 BC): χ̣ρ̣υ̣σ̣ί̣ο̣υ̣ ἢ ἀργυρίου καινοῦ νομίσματος; *P.Dion*. 14, 26 (110 BC): ἀργυρίου τοῦ παλαιοῦ νομίσματος. See also above, n. 2, and the appendix below.

ἄλ(λων) (δραχμῶν) ο (ll. 16f.); and *O.Theb.* 141, an undated list of accounts, attributed to the 2nd c. AD, in which ἀργ(υρίου) παλ(αιοῦ) (δραχμαὶ) γ[. .] are mentioned (l. 12). As far as we can see, these texts have not generated a lot of interest in research so far, and the ostracon from Thebes is hard to interpret anyway, since it cannot be dated precisely. However, basically two explanations of the mention of "old" and "new" coins at the end of the reign of Commodus and in the early Severan period seem possible: either the terminology was triggered by the significant quantitative fluctuation in (tetradrachm) output in Alexandria during the second half of the 2nd c. AD—after an ebb under Marcus Aurelius, it skyrocketed under Commodus[97]—so that a distinction between old and recent issues imposed itself;[98] alternatively, one might associate the terminology with a change in the weight standard and quality of the provincial tetradrachm under these emperors, as proposed already by Mickwitz[99] and Callu.[100] But now on to the developments of the later 3rd c.

In the case of the "old Ptolemaic" and "new" coins of the second half of 3rd-c. AD Egypt, different identifications of the "old" money have been envisaged up to now. As laid out above, the term "old Ptolemaic coinage" is first attested in a sales contract of 28 March 266, in the 13th year of the reign of Gallienus. Hence, as already argued, the expression must refer to coins produced before that date. Since the terminology is so unusual, one is inclined to connect its appearance with a significant change in the quality of the coins then issued: unlike in the case of the "old" and "new" coins occurring in the above-mentioned papyrus texts before and around 200, there do not seem to be alternatives to this interpretation for the 260s. That the terminology is first attested under Gallienus implies that it, of course, cannot have been occasioned by issues of billon tetradrachms struck on a reduced weight standard after an intriguing coinage reform conducted in Egypt under Aurelianus (270–275), as a prelude to this emperor's reform of the imperial *antoninianus* coinage.[101]

West and Johnson[102] as well as Callu[103] identified the "old" coins mentioned from the 260s onwards as Egyptian provincial coinage produced before the reign of Trebonianus Gallus (251–253). Under this emperor, Alexandrian tetradrachms are attested just for his regnal year 3,[104] and these have long been recognised to have been issued on a significantly lower weight standard than the tetradrachms of earlier rulers.[105] According to the reliable weight statistics recently published in *RPC* IX, the tetradrachms of Trebonianus Gallus weigh just 10.66 g on an average,

97. See, for example, Milne 1933, p. xxii; Christiansen 2004, pp. 107f.
98. On this line of argument, see also the appendix below.
99. Mickwitz 1932, n. 82 p. 50 (on *BGU* VII, 1566): "*Er* [sc. der Ausdruck] *gilt wohl entweder Mark Aurels oder Severus' verschlechterten Tetradrachmen*"; see also Heichelheim 1928, p. 249 with n. 2.
100. Callu 1969, n. 5 p. 187. For the changes to the coinage in this period, see Christiansen 2004, pp. 107f.
101. For this reduction of the weight standard, operated in Aurelian's years 5 (273/274) and 6 (274/275) in Alexandria, see Metcalf 1998, esp. pp. 275f.; on the relationship to the reform of the imperial coinage, see Estiot 2004, p. 42.
102. West, Johnson 1944, p. 69.
103. Callu 1969, p. 187.
104. For the possible political background of the hiatus in the activity of the Alexandrian mint during his years 1 and 2, see Loriot 1997.
105. See e.g. Vogt 1924, vol. I, p. 201; Milne 1933, p. xxiv.

and are thus almost 2 g lighter than the tetradrachms of his predecessor Trajan Decius, which were found to have an average weight of 12.62 g.[106] J.-P. Callu also tried to explain the peculiar terminology "old Ptolemaic" with reference to the weight standard of the issues concerned: *"Il nous paraît raisonnable d'appeler* καινὸς *le tétradrachme émis depuis Trébonien Galle, l'ancien étant celui qui, avant 251, se rapprochait un peu plus par son poids des ultimes multiples des Ptolémées."*[107] The weight standard used for Ptolemaic silver tetradrachms since the end of the 3rd c. BC was *c.*14.25 g, and Ernst Gölitzer maintained that the tetradrachm issues of Ptolemy XII Auletes and his daughter Cleopatra VII (51–30 BC) were still based on this theoretical target weight,[108] although he acknowledged that this standard was, in practice, not achieved in the final phase of Ptolemaic rule: Gölitzer calculated 13.5 g as a mean weight for better preserved tetradrachms of Cleopatra VII, a figure recently confirmed by Kevin Butcher and Matthew Ponting.[109]

On the face of it, Callu's contention might therefore be thought not to be far off the mark, with just about one gram separating the pre-Trebonianian from the Ptolemaic tetradrachms, but chronology is decisive against it: why should the production of lighter coins from 252/253 onwards have made an impact on the terminology of coin users only 13 years later? The timing of the appearance of the terms "old Ptolemaic" and "new" coinage practically obliges us to connect it with changes to the currency operated under Gallienus (sole ruler of the empire from 260 to 268), as intimated by Christiansen[110] and correctly stated by Hans-Christoph Noeske,[111] among others. We know that the provincial coinage of Alexandria was reformed under this emperor: the weight of the Alexandrian tetradrachm was lowered, as was the silver content of its alloy. Also, the last substantial issues of bronze drachmae were struck at the mint of Alexandria under Gallienus, in his own name and that of his wife Salonina, in year 12 (264/265).[112] Needless to say, these changes must be viewed in the context of the parallel modifications to the imperial coinage that are in evidence in the reign of Gallienus, mainly the cessation of the production of the classic Augustan bronze coinage at the mint of Rome[113] and his infamous lowering of the silver content of the radiate to values unheard of up to then.[114]

106. *RPC* IX, p. 399.
107. Callu 1969, p. 187.
108. Gölitzer 2004, p. 59.
109. Gölitzer 2004, p. 137; Butcher, Ponting 2014, p. 614 (average weight of 13.44 g).
110. Christiansen 1985, p. 85, who interprets the term "old Ptolemaic coins" as referring to "the older Alexandrian tetradrachms, which are found in the hoards of the period"; see also above, n. 56.
111. Noeske 2008, p. 132: *"Nach Ausweis der Schatz- und der Einzelfunde ist zu dieser Zeit kein ptolemäisches Silber mehr im Umlauf. Allenfalls Einzelstücke mögen überlebt haben. Es muß sich demnach bei dieser Bezeichnung, wie es schon E. Christiansen festgestellt hat, um ältere, größere, schwerere und besserhaltige Alexandriner Tetradrachmen handeln, offenbar um solche vor der Abwertung des Gallienus."*
112. See Burnett 2009, pp. 234–236. For Claudius II, A. Burnett lists only seven bronze drachmae (pp. 240f.); the bronzes of Aurelianus and Vabalathus are probably a different phenomenon, to be connected with Aurelian's new bronze denominations at Rome (p. 236).
113. On the parallel with the bronze drachmae of Alexandria, see Burnett 2009, pp. 234, 238.
114. See the instructive diagram in Cope et al. 1997, p. 10.

The metrological behaviour of the tetradrachms of Gallienus was investigated for the Egyptian years 8–11 of his principate (= 260/261–263/264) by Paul Legutko. He was able to distinguish two groups of issues for the years 8–11, one of "fine style" and one of "crude style", which he attributed to two workshops in different parts of Alexandria—a situation probably caused by serious civil disturbances in the city. At that time, Alexandria was split between supporters of Macrianus and Quietus, who had been proclaimed emperors after the capture of Valerianus by the Sasanian king of kings Shapur I in the East, and regime loyalists of the family of Valerianus. While the tetradrachms of fine style of years 8–10 in P. Legutko's sample average between 10.3 g and 10.8 g—thus being in the weight range of the reform coins of Trebonianus Gallus—the tetradrachms of poor style of years 9–10 average just 9.9–10.1 g.[115] A much bigger pool of hitherto unpublished data on the metrological development of the tetradrachm in the reigns of Valerianus and Gallienus that was kindly provided to us by William Metcalf allows to draw a bigger picture (see fig. 1).

Date	Number of specimens	Average weight	Standard deviation
Valerianus I, year 1 (253/254)	97	10.70	0.85
Year 2	68	10.71	0.96
Year 3	128	10.83	0.81
Year 4	104	10.97	0.95
Year 5	15	10.89	1.02
Year 6	195	11.00	0.97
Year 7	92	10.88	1.16
Year 8	19	10.62	0.97
Gallienus, year 8 (260/261)	38	10.93	1.11
Year 9	165	10.60	1.12
Year 10	106	10.53	0.99
Year 11	152	10.22	1.13
Year 12	185	9.93	0.95
Year 13	170	9.80	0.94
Year 14	337	9.85	0.90
Year 15	312	9.79	0.97

Fig. 1. The weights of Alexandrian tetradrachms of Valerianus I and Gallienus (data: W. Metcalf).

115. Legutko 2002, p. 139.

From figure 1 it is clear that under Valerianus the weight of the Alexandrian tetradrachm was relatively stable, between 10.6 g and 11 g. From year 10 of Gallienus onward (262/263), however, there is a significant decrease in weight,[116] and at the end of his reign, in year 15 (267/268), the average weight of the coins calculated by W. Metcalf is just 9.8 g, about one gram less than during the lifetime of Valerianus. As reported above, there had been another weight reduction of the tetradrachm just a decade earlier, under Trebonianus Gallus in 252/253; hence, the Egyptian weight standard was clearly sliding in that period.

The reduction in weight under Gallienus was accompanied by a drop in the silver content of the alloy. Unfortunately, we do not have as many data on this at our disposal as we would need, but the data we have at least seem reliable, since they are based on destructive, wet-chemical analyses of 12 specimens conducted by Lawrence Cope (see figure 2).

Date	Number of specimens	Average silver content
Year 11 (263/264)	1	6.84%
Year 12 (264/265)	1	4.66%
Year 13 (265/266)	3	3.92%
Year 14 (266/267)	4	3.21%
Year 15 (267/268)	3	3.30%

Fig. 2. The silver content of Alexandrian tetradrachms of Gallienus (after Cope et al. 1997, p. 12; averages were calculated by these authors).

These data tie in well with an early measurement of the silver fineness of one tetradrachm of Gallienus of an uncertain year, reported as being 4.0%,[117] as well as with the results obtained in analyses of Egyptian tetradrachms of Gallienus' successor Claudius II (268–270); the values for his issues are 3.81% for one coin, and 2.75%, 2.20%, and 2.10% for larger samples of specimens of his years 1, 2, and 3 respectively.[118] It seems that especially from years 12/13 of Gallienus (264/265–265/266) onward, the silver content was significantly lower than under Valerianus, for whose tetradrachms an average silver content of 7.5% is reported.[119]

Which impact did these changes in composition have on the appearance of the coins? At first glance, one might be tempted to say that they did not make much of a difference: when one goes through several trays of 3rd-c. AD Egyptian tetradrachms in large public collections, the first impression is that most of these coins look quite uniform, and as a rule coppery in colour. However, a closer look at the coins of the period we are dealing with in particular proves rewarding. While a few well-preserved Alexandrian tetradrachms struck under

116. In recording the weights of the coins of Gallienus, W. Metcalf did not take into account the stylistic varieties of the tetradrachms of years 9–11, as discussed in Legutko 2002.
117. West, Johnson 1944, p. 173.
118. Caley 1958, pp. 168f.
119. West, Johnson 1944, p. 172.

Trebonianus Gallus and Valerianus retain a silvery appearance to this day,[120] this is hardly ever true for coins struck during the sole reign of Gallienus.[121] Lawrence Cope's investigations into the properties of billon alloys with a low silver content may explain why: according to Cope, flans produced from copper–silver alloys with a silver content below *c*.8% could not consistently be rendered silvery on their surfaces through bleaching, the technique used by Roman mints to treat flans produced from silver–copper alloys since the mid-1st c. AD.[122] While it is true that many earlier 3rd-c. tetradrachms today look quite poor as well, the Alexandrian tetradrachm had landed way below the threshold identified by Cope only through the reform of Gallienus. Just as in the imperial coinage, the reign of Gallienus was a turning point also in the history of the provincial coinage of Egypt.[123] H.-C. Noeske suggested that it is not a coincidence that the term ἀργύρι[ο]ν δόκιμον ("legal tender") is attested precisely in 266 in a papyrus from Hermopolis Magna (*SPP* XX, 63, 17), and connected it with the currency reform of Gallienus;[124] despite the fact that we have another attestation of the term just two years later,[125] one should perhaps not press this point, since the expression ἀργύριον δόκιμον is not too specific.[126] Still, it is not unreasonable to suppose that coin users observed the physical changes to the imperial tetradrachms under Gallienus, and that it was deemed useful to stress that the new coinage still was acceptable currency.

It is against this background that the introduction of the terminology "old Ptolemaic coins" (first attested in 266 as well) and the contrastive expression "new coins" has to be viewed. The new tetradrachms of Gallienus were lighter than the earlier ones, and at the same time they normally did not look silvery any more, not even when they left the mint.[127] The described changes seem to have prompted a re-evaluation of the imperial tetradrachm coinage in circulation by the coin users, and to have given rise to the division into "old" and "new" coins. The question why specifically the attribute "Ptolemaic" was chosen to designate the earlier coins is not easy to answer, and no monocausal explanation is likely to be convincing. Rather, a combination of several factors may have contributed to the adoption of the terminology. In search for an answer,

120. See e.g. the specimens Rauch 84 (13 May 2009), no. 779 (Trebonianus Gallus); Pecunem, Numismatik Naumann 38 (6 Dec. 2015), no. 682 (Trebonianus Gallus); CNG electronic auction 113 (11 May 2005), no. 209 = CNG electronic auction 155 (3 Jan. 2007), no. 254 (Valerianus, year 4).
121. Exceptions prove the rule, e.g. the tetradrachm in Salonina's name CNG 81 (20 May 2009), no. 893 (year 11).
122. Cope 1972, p. 271. We are grateful to M. Ponting for confirming the validity of Cope's observation *per litteras*; according to him, depletion silvering is impossible below *c*.8% of silver: "Some fluctuation would be expected, but not very much. The addition of other metals to the alloy (such as tin and/or lead) will alter the threshold as well." Cf. also Butcher, Ponting 2014, fig. 5.1 p. 106.
123. Cf. Noeske 2008, p. 129: "*In jedem Fall bildet die Regierungszeit des Gallienus aber gerade auch in Ägypten einen ganz wesentlichen Schritt auf dem Weg in die Spätantike.*"
124. Noeske 2008, p. 132.
125. See *P.Stras.* I, 10, 17f. (268): τ[ὸ μὲν ἀ]ργύριον δόκιμον.
126. A search performed on papyri.info results in 17 hits (accessed on 19 Oct. 2016).
127. It is important to underline that the current appearance of 3rd-c. AD Alexandrian tetradrachms in collections does not necessarily correspond to what they looked like immediately after production: a thin silver layer on the surface, created through bleaching, may have worn off quickly in circulation or may have vanished during centuries of burial in the ground. Hence, the fact that the reign of Gallienus does not immediately appear as a watershed for Alexandrian tetradrachm appearance in coin collections today does not necessarily reflect contemporary reality.

one should bear in mind that this is a different phenomenon from a playful designation of current coin with obsolete names, sometimes to be encountered in Antiquity: a good example of this latter usage is to be found in an epistle by Ausonius (*c*.310–393/394), where he jokingly refers to the gold *solidi* of his world as "Philips" or as "Darics", that is with the names of the classical gold coins of Philip II of Macedon or the Achaemenid empire.[128]

In general, "Ptolemaic" coins must have been the archetypal "good old" coins for Egyptians of Roman times: apart from the small series of Nectanebo II (*c*.360–342), there is no Pharaonic coinage in Egypt with a native typology, and the Egyptian issues of Alexander the Great's reign (from the Memphis mint) are few and far between. In the 3rd c. AD, people doubtless still knew about the Ptolemies and their copious coinage, and the odd Ptolemaic tetradrachm will have been around, even if these specimens were not circulating widely any more. Also, Egypt was a country with a highly developed archival culture through the centuries: expressions like δραχμαὶ ἀργυρίου Πτολεμαικοῦ or δραχμαὶ ἀργυρίου Σεβαστοῦ καὶ Πτολεμαικοῦ νομίσματος were common in documents of the 1st c. AD,[129] which people could consult in later times—this may also have inspired them to use this term for older, better currency in the 3rd c. AD. Finally, the physical appearance of the Egyptian tetradrachms had changed for good through the reforms of Gallienus. The reduction of the weight standard is, in our view, unlikely to have triggered the new terminology, *pace* J.-P. Callu: it is true that, by the end of the principate of Gallienus, the tetradrachms were about 3.7 g lighter than the last Ptolemaic tetradrachms, on an average, but there had been several weight reductions in between, and an awareness of the precise weight of Ptolemaic tetradrachms will not have been widespread in 3rd-c. AD Roman Egypt. However, a change in appearance of the tetradrachm surface, from silvery to coppery, was a major alteration, from the viewpoint of the coin users. From the 3rd c. BC down to the 2nd c. AD, the silvery look had been the one common denominator of all the Alexandrian tetradrachms, from Ptolemaic issues to freshly minted Roman pieces. Although the quality of the alloy had deteriorated considerably since the end of the 2nd c. AD already, the complete disappearance of the silver surface from more or less all the freshly struck tetradrachms apparently did not happen before the reform of Gallienus—and it is at this point in time that a differentiation of the Alexandrian tetradrachms in "old" and "new" coins can be documented in the papyrological record.

128. Epistle 16 (to his friend Theon who owes him money, ll. 19–23): *Bis septem rutilos regale nomisma Philippos, / nec tanti fuerint, perdere malo, Theon, / implicitum quam te nostris interne medullis / defore tam longi temporis in spatio. / Ergo aut praedictos iam nunc rescribe Darios*, "Those twice seven gleaming *Philippes d'or* of royal mintage, Theon, I had rather lose—they would not be worth so much—than that thou, who art so closely twined about my heart, shouldst desert me over this long stretch of time. So either send back now forthwith the aforesaid *Darics*" (*Ausonius*, vol. II, p. 59 Loeb; translation adapted by the authors). For concordances between the numbering of letters of Ausonius in the Teubner edition of Rudolf Peiper and in the Loeb Classical Library edition (used here), the editions of Karl Schenkl and Agostino Pastorino, and the new Teubner edition of Sesto Prete, see Green 1980, p. 211, appendix. For other attestations of the term *Philippus* as a coin name in late antique contexts, see Melville-Jones 1993 and Melville-Jones 2007, *testimonia* nos. 445–448 (with the commentary on pp. 225f.).
129. See West, Johnson 1944, pp. 66f.

As detailed in section 2 above, a rigorous interpretation of the textual evidence leads to the conclusion that both "old Ptolemaic" and "new" tetradrachms were real money and circulated together in the second half of the 3rd c. AD; there seems to have been an (unofficial) exchange rate between the two classes of tetradrachms. In our view, the "old Ptolemaic" coins were the pre-Gallienic tetradrachms, and the "new" coins the Gallienic and later issues.

Does the hoarding pattern of these two groups of numismatic material fit the picture emerging from the papyri? H.-C. Noeske recently published the small Abu al-Gud hoard of Egyptian tetradrachms, closing in 246/247, and took the opportunity to perform a most illuminating structural analysis of 89 tetradrachm hoards from Roman Egypt.[130] One important result of his enquiry is that the development of the average size of Roman coin hoards in the second half of the 3rd c. AD is the same in Egypt as in the rest of the empire: from 260 onwards, there is a spectacular rise in the volume of coins hoarded, whether Egyptian tetradrachms in Egypt or *antoniniani* in other parts of the empire.[131] One of the Egyptian hoards closing under Diocletian contained more than 12,500 tetradrachms, for example, while just one of the tetradrachm hoards with a closing date before 260 analysed by Noeske comprised more than 1,500 coins.[132] This makes it clear that the development of the silver content in the alloy of Roman coinage in the 3rd c. AD is inversely proportional to the average size of coin hoards, in an empire-wide perspective, and these trends are of course interlinked: just like the above-mentioned parallels regarding the abolition of the bronze coinage in Egypt and in Rome in the second half of the 3rd c. AD, this is yet another point that speaks against the assumption, so frequently encountered in the scholarly debate, that Egypt is to be viewed by itself, as a case apart in the Roman Empire.

Of the 89 Egyptian hoards analysed by Noeske, 44 had end-dates between Gallienus and the end of the Alexandrian tetradrachm coinage under Diocletian. Within this group of deposits, two different hoarding patterns may be distinguished. For one sub-group of 18 hoards not only 3rd-c. coins are reported, but also old (and therefore silvery-looking) Roman tetradrachms, from the 1st c. AD to Marcus Aurelius.[133] Surprisingly, the deposits of this sub-group still contain an average of almost 23% of silvery coins up to Marcus Aurelius;[134] of course in some individual hoards of this period, the percentage of early coins of a higher intrinsic value is much greater.[135] The second, slightly bigger sub-group of 26 hoards, on the other hand, consists in deposits closing between AD 265 and 296 that contain exclusively 3rd-c. AD coins of a reduced silver content (and therefore coppery in appearance), mainly from Gallienus onward.[136] This is to be taken as evidence for a selection process in putting together these deposits, whereby silvery coins with a higher intrinsic value were excluded. Hence, the coin users in Egypt were apparently well aware that in the later 3rd c. AD two classes of tetradrachms existed, which ties in

130. Noeske 2008.
131. Noeske 2008, p. 134, and fig. 2 p. 152; cf. Estiot 2004, p. 40, for a graph charting the development of the production of radiates, on the basis of aggregate hoard evidence.
132. Christiansen 1985, no. A159 pp. 130f.
133. Overviews of the contents of these hoards are given in Noeske 2008, pp. 144f. (Groups VIII–XI).
134. See Noeske 2008, p. 149, Table 11b.
135. See e.g. nos. A95, A69, and A109 in Christiansen 1985; or no. A114 in Noeske 2008, pp. 144f.
136. See Noeske 2008, pp. 126f., 146f.

well with our interpretation of the papyrological evidence that led us to the postulate of an exchange rate between different classes of tetradrachms. People either hoarded just the new pieces of a low intrinsic value, or both classes together—and some will of course have hoarded only the earlier, higher-value coins; but in the absence of hoards from securely dated archaeological contexts, we are unable to identify their deposits (with an earlier *terminus post quem*) as having been put together in the later 3rd c. AD. Thus, the numismatic evidence allows us to identify beyond doubt the two groups of "old Ptolemaic" and "new" coins we read about in the papyrological texts of the years from 266 onwards.

APPENDIX
"Old Ptolemaic coinage" in *P.Mich.* III, 182 (182 BC) [Catharine Lorber]

The lease contract *P.Mich.* III, 182 (Krokodilopolis, 2 March 182 BC) stipulates as a fine for the non-fulfilment of some of its clauses an ἐπίτιμον ἀργυρίου τοῦ παλαιοῦ Πτολεμαικοῦ νομίζματος (l. νομίσματος) δραχμὰς χιλίας (ll. 48–50). From the reign of Ptolemy III (246–222 BC), the Alexandria mint struck silver tetradrachms only episodically, and usually in relatively small numbers. The tetradrachm issue of Ptolemy III (Sv. 1001) involved *c.*12 obverse dies, according to my own die study in progress; the Sarapis and Isis tetradrachms of Ptolemy IV (222–204 BC) 23 obverse dies according to the die study of Thomas Landvatter,[137] whereas the tetradrachm issue of Ptolemy V (204–181 BC; Sv. 1231) was much larger, requiring 63 obverse dies according to the die study of Julien Olivier. In addition, the hoard record reflects a policy of removing older and current silver coinage from circulation in Egypt, beginning under the reign of Ptolemy III and having a pronounced cumulative effect over the next two reigns. Astonishingly, we know of only one silver hoard deposited in Egypt during the reign of Ptolemy V, Asyut 1936 (*IGCH* 1702), closing date 185/184. Apparently it was a very small hoard: only four coins were recorded, two of the *Berenikeion nomisma* of Ptolemy III (and thus not tetradrachms) and two imported Cypriote tetradrachms of Ptolemy V. The pattern revealed in the hoards is of course consistent with the near-disappearance of silver staters from the papyrological record. The tetradrachm issue of Ptolemy V (Sv. 1231) is associated with the Fifth Syrian War by the many specimens in the Syria 1981 hoard (*CH* 7.90 = *CH* 8.337). I assume that these coins must have disappeared from circulation almost completely by the time of *P.Mich.* III, 182. Thus I suppose that the term "old Ptolemaic silver coinage" refers to the fact that silver coinage had not been minted in Egypt for some fifteen years and was not commonly in use. The fact that the papyrus mentions a sum of 1,000 silver drachmas should not, in my opinion, be taken as evidence that silver coinage was readily available in 182 BC. This is, after all, a penalty prescribed for failure to fulfil the terms of the contract, thus a hypothetical amount rather than a reference to actual currency. Despite a large issue of silver under Ptolemy VI (Sv. 1489–1490), which I connect with the Sixth Syrian War, the scarcity of silver coinage in Egypt did not begin to be reversed until 155/154 BC, when the Alexandria mint inaugurated a regular annual production of tetradrachms.

137. Landvatter 2012.

Abbreviations

NUMISMATICS

CH
Coin Hoards, vol. I–X, London, 1975–2010.

EH

Faucher, Meadows, Lorber 2017
Faucher, T., Meadows, A.R., Lorber, C., *Egyptian Hoards I. The Ptolemies*, BiEtud 168, Cairo, 2017.

IGCH
Thompson, M., Mørkholm, O., Kraay, C.M., (eds.), *An Inventory of Greek Coin Hoards*, New York, 1973.

RIC I
Sutherland, C.H.V., *The Roman Imperial Coinage*, vol. I: *Augustus to Vitellius*, London, 1984 (2nd ed.).

RIC II
Carradice, I.A., Buttrey, T.V., *The Roman Imperial Coinage*, vol. II, part 1, London, 2007.

RPC I
Burnett, A., Amandry, M., Ripollès, P.P., *Roman Provincial Coinage*, vol. I: *From the Death of Caesar to the Death of Vitellius (44 BC–AD* 69), London, 1992.

RPC II
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RPC III
Amandry, M., Burnett, A., *Roman Provincial Coinage*, vol. III: *Nerva, Trajan and Hadrian* (*AD* 96–138), London, Paris, 2015.

RPC IX

Hostein, A., Mairat, J., Levante, E., *Roman Provincial Coinage*, vol. IX: *From Trajan Decius to Uranius Antoninus (AD 249–254)*, London, Paris, 2016.

RPC CS

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