

Zeitschrift: Schweizerische numismatische Rundschau = Revue suisse de numismatique = Rivista svizzera di numismatica
Herausgeber: Schweizerische Numismatische Gesellschaft
Band: 80 (2001)

Buchbesprechung: La naissance de la monnaie, Pratiques monétaires de l'Orient ancien
[Georges Le Rider]
Autor: Kroll, John H.

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 11.01.2026

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

KOMMENTARE ZUR LITERATUR ÜBER ANTIKE NUMISMATIK

Georges Le Rider

La naissance de la monnaie, Pratiques monétaires de l'Orient ancien.

Presses universitaires de France, Paris 2001. ISBN 2 13 051467 7.
286 pages including a lexicon and index, and 9 plates. 208 FF.

These are stirring times for the study of early money and coinage. The book under review appeared just one year after the final publication of the Lydian gold refining establishment at Sardis,¹ and only a few months before the publication of a collection of papers on early money in the Aegean and the Levant edited by M. Balmuth.² Of these, however, the present book is the only one that discusses the earliest coinage and its background comprehensively, and for this reason is particularly welcome. In this controversial and continually evolving area of inquiry, an authoritative, current analysis has been badly needed. Here Prof. Le Rider [GLR] presents it not within the traditional geographic and cultural setting of ancient Greece but in the context of Near Eastern regal monetary history, which he surveys from the beginning down to the end of the Persian Empire. One result is that the second half of the book is devoted to the coinages of the Achemenid kings and western satraps of the 5th and 4th centuries, coinages that pose entirely different problems of numismatic and historical interpretation that are at once less momentous and less open to disputation. Accordingly, rather than review this major synthesis of Near Eastern numismatic scholarship in its entirety, I have chosen to narrow the focus and concentrate only on the chapters that are directly concerned with *La naissance de la monnaie* proper.

The value of GLR's distinctive Near Eastern perspective is nowhere more apparent than in Chapter I, which surveys the monetary use of metal bullion in Mesopotamia from the middle of the 3rd millennium. Long a matter of interest to scholars of the ancient Near East, the material is hardly new; but it has rarely received prominence, if mentioned at all, in prior scholarship pertaining to the origin of coinage. Yet its relevance can hardly be overstated, and much of the important work in the area is recent; most of GLR's citations on Mesopotamian textual and hoard evidence date from the 1990s. His overview of this currency treats in some detail the preference for silver over other metals (a preference which becomes exclusive after the 8th century BC) and official means of maintaining the

¹ A. RAMAGE, P. CRADDOCK, King Croesus' Gold: Excavations at Sardis and the History of Gold Refining. Archaeological Exploration of Sardis Monograph 11 (Cambridge, Mass. 2000).

² M. BALMUTH, ed., Hacksilber to Coinage: New Insights into the Monetary History of the Near East and Greece ANSNS 24 (New York 2001).

purity of the metal used in transactions and the weights by which it was measured. After discussing and rejecting several recent conjectures that coinage arose from or was anticipated by weighed royal ingots, the chapter concludes by noting that the evidence for the currency use of weighed silver bullion extends through the entire ancient Near East, including the Levant, Egypt, and, as now attested by an unpublished 6th-century hoard of cut-silver and silver coins,³ Western Asia Minor. Throughout, GLR emphasizes that although the economies of the Mesopotamians and their neighbors involved sophisticated and relatively complex banking, exchange, and contractual transactions, a traditional money of silver bullion was clearly quite satisfactory for performing these transactional needs, and indeed persisted in Mesopotamia itself until after the conquest of Alexander. Thus given the great longevity and serviceability of this «old» or «anonymous» money, as Le Rider appropriately calls it, how is one to explain the creation of a «new» money of signed and struck electrum coins in western Anatolia? The question has never been put so neatly.

To provide an answer, Chapter II begins with a careful review of the Lydian and Ionian electrum coinage: types, inscriptions, patterns of reverse punches, grouping of issues by common punches, circulation, chronology, etc. Noting that the correlation of specific reverse punch patterns with specific denominations runs through the entire Lydian-Ionian electrum corpus, GLR takes this to be an indication that the several issuing authorities, which he firmly believes were the Lydian kingdom and Ionian city-states, were bound together in a formal monetary union. A simpler, and in my view far more plausible explanation would be that such consistent adherence to a common physical format was the natural result of imitating an established prototype. As we shall see, however, GLR has his reasons for wanting to situate these coinages in a closed monetary system.

His lengthy discussion of absolute chronology is likely to be especially influential. Persuaded by A. Bammer's revisionist interpretation of the stratigraphy of the archaic Artemisium at Ephesus (which associates the Basis deposit and related deposits of treasure directly with the construction of the Croesus temple itself), and conscious of the limited and relatively compact character of the surviving Lydian electrum coinage, GLR comes out strongly in favor of a low, 6th-century chronology in which the earliest coins would date well along in the reign of Alyattes, about 590/580 BC, with the Lydian coinage in electrum continuing into if not through the reign of Croesus (560-546). This seems reasonable enough, even if other information, like the estimated 7th-century date of the vase that contained the Artemisium pot hoard, must be set aside as indecisive.

The author next discusses the several main theories for the origin of coinage – commercial, practical convenience, social justice, self-expression of the issuing

³ P. 36, note 1, where the hoard (known to GLR only at second-hand) is said to be in the Tel Aviv Museum. I believe this should be corrected to the Israel Museum in Jerusalem. The coins in the hoard are summarized in I. CARRADICE, ed., *Coinage and Administration in the Athenian and Persian Empires* (Oxford 1987), pp. 80, 94; I. CARRADICE, M. PRICE, *Coinage in the Greek World*, pp. 31, 47. Another 6th-century mixed hoard of cut-silver and coins from Western Asia Minor is CH I, no. 3 = GLR, p. 70.

entity – and, like others before him, finds each lacking, as least as a primary impetus. He proposes rather that the one cogent explanation is to be found in the profit motive – the profit which states would realize by issuing a coinage with a nominal value that (unlike that of bullion) could be set higher than its intrinsic value. Having forcefully argued for this fundamental function of coinage as a revenue-generating resource, he turns to early electrum and to the important earlier discussions of S. Bolin⁴ and R.W. Wallace,⁵ both of whom sought to explain the invention of coinage in terms of electrum, which because of its variable gold/silver alloy in its natural state and the ease by which it can be debased with added silver, was highly problematic as a monetary metal.

By theorizing that the Lydians debased natural electrum with added silver before striking it into coins that were issued at an arbitrarily high face value, Bolin originated the idea that coinage was created specifically to exploit its potential for generating state income. For Wallace, however, the purpose of adding silver to natural electrum and then striking the metal into coins with a symbol of authority was to provide a standardized or stabilized electrum, whose value, guaranteed by the stamp, was adjusted as closely as possible to the intrinsic value of the metal. The purpose, in other words, was to restore reliability to a metal that was otherwise unreliable as negotiable tender. Wallace argued further that a better solution to this end would have been to forsake electrum altogether as a transactional medium and to substitute a money of pure gold and/or silver, but that this solution was not possible until the cementation process of parting gold and silver was mastered around the middle of the 6th century (as suggested by the date of the Sardis refinery and the replacement of Lydian electrum coinage by a Lydian bimetallic coinage of silver and of gold staters named after Croesus). But here GLR insistently disagrees. Citing evidence that suggests that the parting of gold and silver had been understood and practiced in Mesopotamia since the 3rd and 2nd millennia, he contends that the Lydians could have produced a coinage of pure silver and of gold from the beginning, and the fact that they deliberately chose not to is arguably an indication that they preferred to employ an easily manipulated alloy with its potential for state profit as opposed to a bullion-based, intrinsic-value currency that did not offer this exploitative opportunity. Hence he dismisses Wallace's approach and moves on to construct what becomes in effect a revised elaboration of Bolin's theory.

According to GLR's reconstruction, the artificially debased Lydian electrum earned for its issuers the very substantial return of 15-20 per cent, an amount that represents the difference between the approximately 54 per cent gold content of extant Lydian coins (as reliably measured in recent laboratory analyses) and the ca. 73 per cent gold content of natural electrum (as calculated from Herodotus I.50, a comparison between the gold and electrum bars dedicated by Croesus at Delphi), which corresponds closely to the average gold content of electrum flakes that can still be panned from the Pactolus River (65-80 per cent gold) and to the

⁴ S. BOLIN, *State and Currency in the Roman Empire to 300 AD* (Stockholm 1958).

⁵ R.W. WALLACE, *The Origin of Electrum Coinage*, *AJA* 91, 1987, p. 385-394.

74 per cent weight differential between the electrum staters (14.1 g.) and the earliest Lydian gold staters (10.7 g.) that replaced them when the electrum coinage was abandoned. GLR argues that the Lydians issued these debased coins at their natural electrum value and were able to sustain this high overvaluation by enforcing their circulation in a closed monetary system that involved a «union» with dependent Ionian cities whose electrum coinages were presumably overvalued to the same degree. For a historical model he cites the closed monetary system of Ptolemaic Egypt, which profited handsomely from its heavily overvalued silver and bronze currency for centuries. And so confident is he about the effectiveness of the analogous system that he has proposed for the early electrum economy of 6th-century Lydia that he confesses puzzlement as to why the Lydians would have abandoned so profitable a currency in favor of an unprofitable bimetallic coinage of intrinsic or near intrinsic value.

Thus in Chapter III, an extended but inconclusive discussion of whether the shift to a bimetallic coinage occurred under Croesus or under Cyrus after the incorporation of Lydia into the Persian Empire, the author notes that the advantage of the later attribution would allow one to explain the shift as a decision by a (putatively more monetarily conservative) Persian. But of course the later attribution would mean also that the Lydian gold staters that the Greeks popularly called staters of Croesus were not instituted by Croesus; and although GLR rightly insists that this not impossible, he is obliged, in the absence of any firm supporting evidence, to leave the question open. Even so, it seems to me that unless some indisputable chronological evidence to the contrary should materialize, the ancient identification of such gold staters with Lydian types with Croesus may be regarded as a dependable enough basis for attributing their inauguration to his reign.

My larger concern with the edifice that GLR has constructed is that it does not adequately respond to the fundamental question of how *electrum* coins emerged out of a Near Eastern monetary environment that had relied for centuries on weighed silver bullion. Clearly, the ready availability of electrum in central west Anatolia ought to have been a key factor that led states ultimately to assume responsibility for what had previously been a matter of private procurement and use. GLR's insightful label of bullion money as «anonymous money» is very helpful here since it reminds us that this money was anonymous because it was procured through the same means that were used for procuring any other commodity, metal or otherwise. A government might furnish the standard weights, set and test for standards of purity, and even cast rings or ingots of silver for monetary use, but in a bullion economy, as we see from the miscellany of chopped silver plate, silver jewellery, and ingot pieces in bullion hoards, such money could also be provided by anyone else. An earring or a family's broken silver cup was as negotiable in the balance as an ingot from the king's foundry.

One supposes it was no different in western Anatolia during the generation or generations before coinage, except the metal in greatest supply in this case would have been the electrum that had been panned as gold dust in the Pactolus and other rivers of the Hermus watershed, dug up in the form of placer nuggets from these rivers' beds, and perhaps mined at the source of the electrum deposits on Mt. Tmolus. The pattern of extraction – and its presumed intensity – is familiar

from the fevered extraction of electrum gold from the American River during the mid-19th century California Gold Rush. We have no way of knowing to what extent, if any, the removal of this electrum gold may have been controlled through a royal monopoly or whether the exploitation was entirely in the hands of private individuals who may or may not have been taxed on a percentage of their recovery. But however much of extraction was managed under regal control, substantial quantities of the metal would presumably have found their way into private hands as well, for it would have been virtually impossible to ban all private panning and digging in riverbeds; and Ionian cities must have acquired large stocks of the metal as well in order to later mint it into coins. Such massive, broadly distributed, and possibly quite sudden accumulation of electrum would have led to wide-spread trading in the metal and hence to its use in bullion form as a regional exchange medium, more commonly, because of its abundance, than silver. In this connection we should not forget the Lydians' reputation as retail traders *par excellence* (Herodotus I.94; cf. Xenophon, *Anabasis*, I.5.6)

If it is then easy to account for the monetary use of electrum bullion in western Anatolia, it is not hard either to appreciate the difficulties that this alloy must have created. Its gold content was irregular by nature and by human manipulation; and even though one could test for the gold content of nuggets and ingots with the touchstone, this technique would not suffice for bags of gold dust or for minuscule pieces like the 1/96 staters later minted in coined form, or for pieces still smaller than these. Imagine, too, attempting to close a transaction with a bag full of small electrum pieces, each of which had a different gold/silver content. Electrum was different from silver, moreover, not only because it could not be refined down to an absolute purity but also because its value was many times higher, which meant that minor differences in gold content translated into very substantial differences in monetary worth. Clearly, as the trading in electrum expanded, some kind of standardizing intervention was called for, and here, we may assume, is where the state would have stepped in, if only to ensure ready acceptance of its own payments and to ensure the reliability of its receipts in this specie. An ideal solution would have been to separate out the silver from the gold and to deal in these pure metals; and GLR may very well be correct that the cementation process for purifying the metals was available long before the 7th century; there are good reasons for thinking so, although not yet laboratory proof. But availability of the technology need not mean that it would have necessarily been put to use. Perhaps artificially diluting the gold content of small ingots of natural electrum to a uniform level was judged a simpler and more expeditious solution; punching them on one side and later adding a design on the other side demonstrated that they had been so processed and guaranteed. Or perhaps the very earliest punched ingots were so marked because their gold content was guaranteed to conform to the average ca. 73 per cent of natural electrum; in that case the analyzed Lydian coins with their 54 per cent gold content would belong to a second phase of the coinage, even if this phase followed upon the first by only a short interval. As GLR observes, many more metallurgical analyses are needed, especially from those coins that appear to be earliest and from coins in the Ionian and several smaller Lydian series that have yet not been examined in the laboratory. Only when we have gold/silver ratios for

a much greater variety of the early electrum coinage will we fully be able to understand the metallurgical objectives at the very birth of coinage. For I believe that Wallace was correct to sense that the use of electrum bullion gave rise to a monetary crisis of some kind, such as had never occurred with silver bullion, and that coinage was created as a solution. Even if we do not yet have sufficient data to define the metallurgical aspect of this solution, it seems clear that the solution proved to be a failure and was eventually abandoned in favor of the ideal expedient of issuing coins of pure metal.

But were the early electrum coins at the same time heavily overvalued? Wallace has plausibly proposed that they were not. As he has written, the Lydian coins of 54 per cent gold may very well have been valued not as natural electrum but close to their artificially low intrinsic value. And in the short essay he recently contributed to the new book edited by M. Balmuth,⁶ he gives reasons for questioning the conventional assumption that the 10.7 g weight of the early Croesid gold staters (*and silver sigloi!*) was determined by the weight of gold in a *non-debased* 14.1 g Lydian electrum stater. Besides this, one may ask whether it is methodologically sound to employ the sophisticated and rigorously exploitative monetary policy of early Hellenistic Egypt as a model for monetary thinking in 6th-century Lydia and Ionia at a time when money was still regarded in general as weighed metallic bullion of intrinsic, market value. And I would question finally whether profit was ever as influential an incentive in the production of ancient coinage generally as it is portrayed in this book.

As a kind of appendix, the concluding chapter (VII) of reviews the ancient evidence pertaining to the motivation of Greek states to coin. Bringing together and discussing crucial testimonia on Greek monetary practice that have received little attention outside of a narrow circle of specialists, it is one of the book's more valuable contributions, even if, in my view, it is weakest when making the case that «un profit fiscal a joué le rôle principal dans la création de la nouvelle monnaie et dans sa rapide adoption par tous les États.» (p. 241)

One of the documents is the decree of late 2nd-century BC Sestos which honors Menas, son of Menas, for *inter alia* his role «when the people decided to use their own bronze coinage in order to give currency to the city's coin type and the people might obtain the profit that would accrue from this kind of revenue.» Doubtless, self-presentation and profit were common considerations in the decision of many ancient states to coin, but to suggest, as does GLR, that they were significantly relevant at the time coinage was invented in electrum is debatable. Most of the obverse types of the earliest electrum coinages, including possibly one in the Lydian series (two confronting boar's heads), could not have been state badges at all, but like the well-known *sema* of Phanes, were in all likelihood the pictorial signatures of individuals responsible for the minting. And whereas 4th- century and Hellenistic states unquestionably realized a substantial return from the issuance of token money in bronze, the profit from coining in precious metals may have been marginal and consequently of only secondary interest. Central to GLR's thinking,

⁶ Above, note 2.

however, is his conviction that the profitability and overvaluation of coinage in precious metals was far from negligible, and for his main argument he turns in this chapter, as earlier in chapter II, to the circumstance that the Athenians maintained two weight systems, one of weights connected with coinage, the other of «commerical» or «trade» weights, which during the 5th and 4th centuries were 5 per cent heavier than the «coin» weights. His ratio, which is attested in the Aristotelian *AthPol* 10.2 and by two 4th-century Athenian bronze weights marked with their mass in both systems, was understood by O. Mørkholm as a mechanism for providing the silver coinage with a weight value that was 5 per cent greater than an equivalent weight of silver bullion.⁷ The interpretation is seductive, and, like GLR, I once endorsed it in print myself. But on closer inspection it proves to be flawed. Surviving Athenian commercial weights of the 6th century, when Athenian coinage began, conform to a weight standard that was actually *lighter* than the Attic-Euboic standard of the coins, and fairly abundant epigraphical evidence makes it clear that what Mørkholm understood as a standard for silver coins was the standard used for gold and silver in all forms, including bullion.⁸ Thus the theory that Athenian silver coins were routinely overvalued vis à vis bullion by a factor of 5 per cent must be discarded. The minting fee that can be restored in the text of the 5th-century Athenian Coinage Decree is either 5 or (as assumed by most editors) 3 per cent, but whichever was correct, when allowance is made for the unknown expense of minting (and probably the refining) of foreign silver, it is unclear whether much would have been left over in the state in profit. Although we can be sure that precious metal coinages locally circulated at a premium over bullion – the premium being the result of minting costs and forced acceptance of the local specie – we have, so far as I have been able to discover, no way of calculating the premium or knowing if it was substantial enough to have been a major incentive in coin production.

One ancient passage pertaining to the incentive to coin that does not appear in this chapter is Plato, *Republic* II. 371b, where Socrates observes that in founding the ideal city, it is necessary that an agora be provided and «coinage as a token for the purpose of exchange (*tēs allagēs heneka*).» This may be obvious and banal enough, but it serves to remind us of the primary purpose of money, a purpose that would have been no less paramount when coinage was new. GLR would object that the need for a suitable means of exchange was not then at issue since weighed silver bullion had successfully served this purpose for so long. But if we accept that in this one particular region in the ancient world and at this one particular time, it was not silver but electrum that had become the common exchange metal of choice, we may easily appreciate the urgency of state intervention to ensure its ready acceptability. In these exceptional circumstances, coinage was invented as an expedient not for exchange generally but to preserve the transactional viability of a singular metal alloy. Once discovered, it was quickly recognized to be hugely

⁷ O. MØRKHOLM, Some Reflections on the Productions and Use of Coinage in Ancient Greece, *Historia* 31, 1982, p. 290-305.

⁸ For a short discussion, see my note in BALMUTH (note 2 above), p. 89.

more efficient and convenient than weighed bullion for the monetary exchange of pure silver and gold as well. Hence its rapid spread and its quick acceptance as a conventional responsibility of the well-managed state. States had long assumed responsibility for maintaining standard weights and measures; now coinage, which provided the standard of exchange value, came to be associated with them, as we see from the repetition of the weights-measures-coinage triad in the Athenian «Coinage» (or «Standards») Decree, in 4th-century reconstructions of the economic legislation of Pheidon and Solon, and in Plato, *Laws*, 746. I think this conjunction of standards deserves emphasis since, just as no one would want to claim that states maintained standard weights and measures for profit, so, even if some precious metal coinages returned some degree of profit, I find it difficult to believe that this profit was the prime factor behind state involvement in the provision of money.

Despite my taking issue with one of the author's main theses, I have not meant to conceal my great admiration for the achievement of this book. The abundance and range of questions raised and commented upon, the nearly exhaustive command of the specialist literature, the bold originality, the eloquence and energy of the argument... all of these will be familiar to readers who know GLR's previous scholarship. Here between two covers he has written what is at once a fundamental contribution to at least four highly significant areas of numismatic study: money before coinage, the world of early electrum, the western coinages and eastern bullion economy of the Persian Empire, and principles of Greek monetary practice. He has so much to teach, and all of it makes for stimulating reading and thinking, even when one cannot always agree, or perhaps, I am tempted say, especially when one cannot not agree; for I think that is proof of the best and most influential scholarship: to advance knowledge by being provocative.

Prof. John H. Kroll
Department of Classics
The University of Texas at Austin