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## CHAPTER 23

# MONETARY POLICIES DURING THE EARLY GRAECO-BACTRIAN KINGDOM (250-190 BCE)



*Olivier Bordeaux*

### INTRODUCTION

Following the crossing of Alexander the Great into Central Asia, there does not seem to have been a strong policy on his part to monetize the Upper Satrapies, while as early as 333 BCE the striking of tetradrachms bearing Alexander's name and types began in Tarsus (Le Rider 2003). Indeed, before 323 BCE, none of Alexander's coins are struck east of the Tigris. Likewise, according to O. Bopearachchi (1999, 68–69), the few Achaemenid coins found north of the Hindu Kush were not locally made. However, things change considerably after the death of Alexander. Three series of coins are then struck in Bactria at the end of the fourth century: Athenian owl imitations, 'eagle' coins and issues bearing the name of Sophytos (Bopearachchi 1996; Bernard, Pinault & Rougemont 2004, 237–332; Jansari 2018; see also Jansari this volume). These coins are struck following two standards, one Attic and the other local. These coinages of well-implemented satraps led L. Capdetrey (2007, 42–49), in his book on the Seleukid kingdom, to defend the idea of a swift and pacific conquest between 308 and 305 BCE, after the two violent revolts of 325 and 323 BCE. This conquest happened in the context of the expansion of the Mauryan Empire, with which Seleukos I signed a treaty around 303 BCE proclaiming the authority of the Mauryas over the territories located south of the Hindu Kush.

The rise of the Graeco-Bactrian kingdom in Central Asia around the middle of the third century BCE must thus be understood in its regional framework: as Seleukid power seems to progressively fade, mainly because of dynastic conflicts, the Greek communities are forced to take their future into their own hands. In Parthia, the Seleukid governor Andragoras, facing the threat of the Parni led by the future Arsaces I, emancipates himself c. 247 BCE and strikes a series of silver and gold coins (D'iakonoff and Zejmal 1988). In Bactria, the satrap Diodotos acts likewise (Just. *Epit.* 41.4.3–5, 8–9) and goes through a now well-described transition between the official Seleukid coinage, and his own: having first replaced the image of Apollo with that of thundering Zeus but still bearing the legend ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ, Diodotos I eventually strikes silver and gold coins in his own name (Bopearachchi 1991, 41–46). Having thus proclaimed the independence of his kingdom, Diodotos I is succeeded by his son, Diodotos II, before the Diodotid family is wiped out by Euthydemos I between 230 and 225 BCE. The latter will later victoriously struggle



against Antiochos III c. 208–206, and be recognised as the true king of the Graeco-Bactrian kingdom (Polyb. 11.34.1–12). The early history of this realm is thus characterised by a significant number of conflicts, which often strikingly influenced the monetary policies of these rulers.

### DIE-STUDIES: WHAT, WHY AND WHAT FOR?

The analysis of any monetary corpus can be based on various criteria, whether they are intrinsic, like monograms, or extrinsic, like the archaeological context. Die-studies focus on the intrinsic qualities of the coins, while the historical or archaeological background does not influence the study itself. One must remember that, given the near-lack of written sources, the history of Central Asia is mainly a numismatic one: we know from the coins that there existed forty-five Graeco-Bactrian and Indo-Greek kings, while only eight are named by the sources. This methodology consists of a systematic comparison of all coins from a specific corpus, while the most common criteria for forming said corpora is to restrict them to a single king. Die-studies are based upon a way of making coins which is, regarding coin production in Central Asia, referred to as the hammer-striking method. Two bronze or iron matrices called dies are hand-engraved, and the blow of the hammer impress the type in relief on the coin. Each die shows more or less noticeable differences, and it is thus possible to assemble the coins together and to note which elements are linked, such as types or monograms. Experimental archaeology led by a team of the CNRS from 2007 to 2009 has demonstrated the soundness of die-studies, as well as bringing fundamental data about the productivity of coins (Faucher et al. 2013). Lacking any historical context, this methodology is therefore a crucial way of gathering essential information regarding the organization of any coinage, its productivity and more generally about the monetary policies of a certain king.

### RECENT RESEARCH

This particular time period in the history of the Graeco-Bactrian kingdom has been the subject of a noteworthy number of studies from the 1990s until the present day. The first works focused on the division between the coins of Diodotos I and II based on die-studies (Kovalenko 1995–1996; Holt 1999), since both kings used the same typology (thundering Zeus) and legend (ΒΑΣΙΛΕΩΣ ΔΙΟΔΟΤΟΥ). Recently, two articles (Jakobsson 2010; Zeng 2013; see also Jakobsson in this volume) have argued in favour of a somewhat controversial solution hypothesising a third king of Bactria not mentioned in the written sources, before the rise of Euthydemos I. Regarding the latter, the ‘initial’ model based on the age of the king on the obverse (see Boppearachchi 1991, 47–49) has rapidly been partially discarded, while some researchers have tried to organize this coinage around the anabasis of Antiochos III, and more precisely the siege of Bactra. The main issue with the coinage of Euthydemos I was thus to reconcile his numerous coinage with the large chronological frame of this king.

There has been an intense debate about the division of the Seleukid coinage between the mint of Bactra and Ai Khanoum, since the monogram  and its variants, assigned to Bactra by E.T. Newell, have been found associated with the letter or symbol  on several bricks from public buildings dated from the first period of Ai

Khanoum. The question to be asked would thus be if all coins bearing this monogram should not rather be assigned to the mint of Ai Khanoum, a hypothesis discussed but immediately discarded by Paul Bernard (1985, 39). B. Kritt has tried to argue in favour of this hypothesis in several books, the latest of which we have proven elsewhere to be highly questionable in its conclusions (Bordeaux 2017). What is more, there is a major lack of archaeological data from Bactra compared to Ai Khanoum, which should encourage us to exercise caution in this matter.

Last but not least, a book published by the present author focuses on both the Graeco-Bactrian and Indo-Greek kingdoms, in order to address questions regarding the monetary policies of several kings through die-studies (Bordeaux 2018). Beyond all these interrogations, it is the whole problem of Bactrian independence which is considered through the coinage of Diodotos I. The main problematics studied by numismatists now concern trying to determine the geographical aspects of monetary production, with long-term partisans of a two- or three-mint solution (see especially Kritt 2001; 2015). In this perspective, taking recent archaeological discoveries of coins in Central Asia into account is fundamental (see notably Kampyr Tepe, Uzundara, Jandavlattepa, etc.): based on our own research, we believe that there existed only one mint striking silver and gold coins for the early Graeco-Bactrian kingdom. What is more, with regard to the latest archaeological data, Paul Bernard's (1985, 14, 60) hypothesis of a decentralized production for bronze coins seems to make sense.

## DIODOTOS I AND II

Known from the early 19th century (Wilson 1841, 219), the coins featuring the names Antiochos and Diodotos are now numerous enough to conduct a detailed die-study of them, thanks to the discovery of several hoards in Afghanistan and Pakistan in the past 30 years. The corpus we worked on included 535 coins, distributed as follows: 241 staters, 232 tetradrachms, 59 drachms and 3 hemidrachms. The surprisingly high number of die-links which can be established between the various groups characterized by their monograms is the best proof that we are dealing with a well-organized and coherent coinage, both in terms of production and chronology. The coinage of both Diodotos I and II can be divided into two ensembles, according to whether the legend is engraved under or by the elbow (Holt 1999, 92, fig. 4). This discriminating detail must be replaced in its technical context: the engravers first started by engraving the dotted border, then the thundering Zeus and finally the legend which had to fit into the remaining space (Figure 23.1). The multiplication of monograms (up to four) forced the engravers to change their habits. However, this criterion does not seem to evolve in time and therefore cannot be helpful as a classification standard: issues with the type engraved beforehand are still common throughout the first half of Euthydemos I's coinage.

The hypothesis that Antiochos Nikator was a third Graeco-Bactrian king, which we mentioned earlier and will discuss briefly now, established a new model in which this putative king would have struck the whole coinage in the name of Antiochos, and reigned between 240 and 225 BCE. Jakobsson's analysis, after describing the Diodotids' portraits as "semi-personalized", carries on by stating that the Zeus type was a common one since Alexander (Jakobsson 2010, 23). Not only do we believe that since the beginning of Diodotos I's coinage, his portraits show real strength as



Figure 23.1 Comparison between types engraved before/after the legend (BNF 1972.392; K 2801 (BNF 1972.392; K 2801 ).

illustrated in this paper, but also that the change in deity (from the Seleukid seated Apollo) is the main feature to be acknowledged in this instance. When examining the so-called ‘pedigree’ coins struck by Agathocles and Antimachos I (Bopearachchi 1991, series 12–18; 9–10), Jakobsson considers the following points: the portrait of Antiochos Nikator does not look like Diodotos Soter, meaning it is a different person; Antiochos II’s epithet is Theos and not Nikator; Agathocles would rather have honoured Seleukos I or Antiochos I, as they were more involved with Bactria. O. Bopearachchi (1999, 79–80, note 122) has already given sufficient evidence that both portraits on the ‘pedigree’ coins were actually very close in style and thus engraved by the same person. Regarding epithets, there is reason to think that they were created *ex nihilo* by Agathocles, and that precise numismatic accuracy was likely considered secondary. Finally, the goal of these commemorative issues, unlike the people studying them, was not to give a truthful historical outline, but rather to honour others in order to honour oneself: featuring Antiochos II makes sense if one considers that independence was achieved under his rule. We thus consider Jakobsson’s hypothesis with great caution, as it lacks solid typological and historical grounds in its demonstration.

The conclusion of our die-study led us to establish strong links between the coins with both legend positions. Although the model established by F. L. Holt, that is the existence of two mints characterized by each engraving, is somewhat contradicted by our data, his chrono-typological sequence keeps its strong coherence and logic. The coinage of the Diodotids, though complex with numerous monograms, is well-structured in terms of monetary production, thanks to the identification of the main groups of coins sharing obverse die-links. It thus seems logical to divide this coinage into groups struck in a short amount of time, rather than a model of a continuous production during the whole length of the reign. We give the following chronology to both kings (see Bordeaux 2018, 52, fig. 1): c. 255/250–c. 246 BCE for the first strikes of Diodotos I (tetradrachms and drachms), c. 246–c. 230 for the rest of his coinage, and c. 230–c. 225 for the coinage of Diodotos II, which forms a single sequence.

## EUTHYDEMOS I

After he overthrew the Diodotids, Euthydemos I radically changed the reverse deity from Zeus to Herakles, a popular figure in Central Asia, and his coinage is



Figure 23.2 Euthydemos I through his various portrayals (BNF 1974.393; 1966 Don Delepierre; 1966.163).

characterized by the evolution of this type during his reign. What is more, he is the first Graeco-Bactrian king to be depicted first young (or middle-aged) and then old on his coins. However, our study revealed that the introduction of portraits depicting an older king did not mean the disappearance of portraits depicting a younger one: on the contrary, their production carries on (as an idealized portrayal of Euthydemos I?) along with a new monogram (𐎲), which suggests that these coins could be related to the rising to an elevated royal status of his son Demetrius I at the very end of the third century BCE (Figure 23.2).

Based upon a corpus of 666 gold, silver and bronze coins, we focused on the features of the obverse portrait, as well as the evolution of the style of the reverse, and were able to demonstrate a continuous evolution between all the groups which we created, thus linking the monograms 𐎠 and 𐎲 to a single mint, corroborating A. D. H. Bivar's hypothesis (1951, 23–29). Interestingly enough, the first strikes of Euthydemos I are characterized by the presence of gold staters, but more importantly by the use of an obverse die of Diodotos I, revealing the taking over of the latter's mint. It is now well-established that striking gold is a royal act *par essence* (Capdetrey 2007, 128), and it only makes sense that Euthydemos I decided to issue such coins in the context of the civil war against the Diodotids. By the end of his coinage, the reverse style achieved some kind of uniformity, with the disappearance of the dotted border and the legend engraved rather symmetrically, seemingly framing the seated Heracles.

How the siege of Bactra may have influenced this coinage depends upon how the unique gold octadrachm must be interpreted: could it be an issue immediately following the victory against Antiochos III? The rare written sources regarding this major military event (Polyb. 10.49; 11.34; 29.12.8) place the conclusion of the siege between the summer of 207 and 206 BCE. On the other hand, the invasion of Bactria by Antiochos III, in the lack of more precise data, is often considered alongside the siege of Bactra, especially regarding its exceptional duration: two years from 208 to 206 BCE. It thus does not seem unrealistic to consider that it most likely lasted less than a year, probably around a few months, which would account for both the fame of the siege, and Antiochos III's impatience leading to a rapid issue.



## MONOGRAMS AND THEIR INTERPRETATION

The meaning of the monograms has puzzled numismatists for a long time, and “constitutes one of the major problems of Graeco-Bactrian and Indo-Greek numismatics” (Bopearachchi 1991, 31). Their interpretation is almost entirely based upon the numismatic evidence, given the near complete lack of archaeological data in this area. Thus, monograms have been successively interpreted as:

- city names (e.g. Wilson 1841, 223)
- regnal years (Cunningham 1884, 98)
- monetary magistrate marks (Tarn 1938, 437)
- mint marks (Bopearachchi 1991, 32)
- marks of private firms mandated by the king (Fussman 1972, 34)

With the development of numismatic studies, monograms are often associated with each other based upon die-studies, style or legend. In 2003, based upon a die-study of the Indo-Scythian Bara hoard, as well as die-links among Graeco-Bactrian and Indo-Greek coins, O. Bopearachchi (2003, 49–53) estimated the number of mints in the Graeco-Bactrian kingdom to be at least three or four. Without giving any definitive answer to their meaning, the author outlines a chrono-typological frame for monograms of both kingdoms from those which are die-linked, or connected by the style and/or the epigraphy.

Under Seleukid rule, almost all coins bear one or several monograms, two most of the time, engraved on the reverse. Their interpretation remains difficult, while for some of them, their geographical distribution is well known (mints of Seleukia-on-Tigris, Antioch, Amphipolis, Bactra, etc.), which allow us to keep track of their history through their opening, relocation or even the discontinuity of their activity. G. Le Rider discarded the hypothesis of monetary magistrates, by doubting the existence of a public office regularly elected in order to supervise the continuous striking of coins, that is a magistrate. On the other hand, mint personnel would be a credible alternative, in the form of punctual monetary commissions. Recently, G. G. Aperghis (2010, 57–58) argued in favour of a “utilitarian” hypothesis, for which monograms and symbols could represent, as for the first, the magistrate responsible for striking the coin, and as for the second, the official recipient (a civil/military/financial administrator or a commanding officer).

Under Diodotos I, the number of monograms (including their variants) which may be attributed to a single mint due to the obverse die-links is particularly noteworthy:  $\Sigma$ ,  $\text{A}$ ,  $\text{N}$ ,  $\Sigma$  and  $\text{O}$ . It thus seems logical to discard Cunningham’s hypothesis of city names: several Greek letters are absent whether from the name  $\text{Ζαριάστρα}$  or  $\text{Βάκτρα}$ . During the Seleukid period, the monogram  $\text{A}$ , assigned to Bactra by E. T. Newell, already hinted at a similar conclusion. Altogether, the coinage of Diodotos I is rather difficult to assign to a mint in Bactra, apart from the logic of continuity with his predecessors. Finally, the question of Diodotos II’s mint still remains open: why did his monograms disappear after his death?

Euthydemos I takes over Diodotos I’s mint (represented by the monograms  $\text{N}$  and  $\text{A}$ ) to strike his first coins, and will carry on with it during the whole of his

reign. His gold and silver coins would thus have been struck in Bactra, an attribution we give with the requisite caution. Monograms  $\text{A}$ ,  $\text{P}$  and  $\text{A}$  are characterized by portraits of a different style within the same monogram, i.e. the work of different engravers, thus clearly establishing that monograms are not engravers' marks. The most striking point concerning Euthydemos I's mint is the lengthy use of the monogram  $\text{A}$ , progressively replaced by  $\text{P}$ . Its appearance would, typologically speaking, match the time when old portraits were already present on tetradrachms. Thereby, it is not illogical to think that this could be related to a likely co-regency of some sort with Demetrius I.

Somewhat surprisingly, a monogram used by the Seleukids,  $\Delta$ , makes a comeback under Euthydemos I. The origin of the bronze coins bearing this monogram is therefore to be found at Bactra, if credit can be brought to Newell's hypothesis. Bronze coins without monograms, particularly common among the coinages of Diodotids and Euthydemos I, are problematic. How may this absence be explained? Paul Bernard (1985, 16-17) expressed his doubts about a perfect symmetry between precious metal and bronze issues, which would draw a parallel with the disappearance of this absence after the death of Eucratides I. As for Ai Khanoum, it does indeed seem that its mint did not strike silver coins before Demetrius I and the monogram  $\Phi$ . In any case, the appearance of  $\text{P}$  in the coinage of Euthydemos I as well as in the frame of a single mint hypothesis could argue in favour of a magistrate's mark.

All things considered, and following Gérard Fussman's assertion, we are able to say what monograms are not, but not what they are. We consider the hypothesis of officinae's marks to be rather unlikely, as one must thus ponder that the dies would need to be moved from one officina to the other, which would be counter-productive to the goal of distributing the monetary production. We are therefore left with the hypothesis of monetary magistrates' marks, based upon several of our conclusions, although this theory remains unsettled, and particularly in order to explain the exceptional longevity of several monograms.

## MONETARY PRODUCTION AND MINTS

The coinages of Diodotos I, Diodotos II and Euthydemos I studied in this paper are all characterized by a scalable evolution, with the ability to adjust to multiple circumstances: armed conflict (whether the outcome is victory or defeat), expansion of monetary production, political upheaval. Although it is difficult to establish a link between economic prosperity and a noticeable variety in types and monograms, the totals of obverse dies ( $d_o$ ) identified tend to demonstrate numerically significant productions:

• Diodotos I:	23 $d_o$ for gold	86 $d_o$ for silver	
• Diodotos II:	4 $d_o$ for gold	29 $d_o$ for silver	
• Euthydemos I:	9 $d_o$ for gold	192 $d_o$ for silver	73 $d_o$ for bronze

Based on these results, we are able to address questions regarding monetary production. This concept has especially been discussed by François de Callataÿ through statistical tools which allow us to estimate the productivity of dies, their original number and the 'survival rate' of known coins in order to put ancient coinages into a wider



Table 23.1 n/d index according to each coinage

King	<i>n</i> (AV)	<i>d</i>	<i>n/d</i>	<i>n</i> (AR)	<i>d</i>	<i>n/d</i>	<i>n</i> (Æ)	<i>d</i>	<i>n/d</i>
Diodotos I	236	23	10,3	229	86	2,7			
Diodotos II	4	4	1	65	29	2,2			
Euthydemos I	12	9	1,3	531	192	2,8	123	73	1,7

picture (see especially de Callatay 2006). All things considered, recent numismatic studies and experimental archaeology give an appraisal of a production of 15,000 to 30,000 coins per obverse die, which is the range we shall keep. Furthermore, one of the first pieces of information given by die-studies is the *n/d* index, that is the number of coins (*n*) divided by the number of obverse dies (*d*). The lower the index (less than 3 in this instance), the greater the doubt about the original number of dies, since the likeliness to get closer to it diminishes as the *n/d* index reaches 1: the closeness between both numbers is then a warning that other dies may not have been accounted for.

The goal of such a method is certainly not to give a final and detailed account of ancient coinages, but rather to understand the broad amount of coins which were struck and circulated under the Graeco-Bactrian rulers, and to put these numbers into perspective with historical events. As we may see on Table 23.1, the *n/d* index is mostly quite low, equal to 2 or less. It is therefore interesting to note that the sole exception – Diodotos I's gold staters – can be attributed to their common typology as well as to the particular origin of these coins, that is the Vaisali hoard, discovered in 2000 in India (see Bordeaux 2018, 154–165 for a partial reconstruction of this hoard). It is thus vital to use this tool series by series, or at least by chrono-typological groups, in order to provide workable data.

Altogether, during the Hellenistic period we are left with one indisputable mint striking bronze coins north of the Hindu Kush, which is Ai Khanoum, and several probable ones, such as Afrasiab or Bactra. Further archaeological investigations are however still required to confirm the latter ones. With strong arguments backing up the existence of a single mint striking gold and silver coins now, it is tempting and logical to locate it in Bactra, the capital of the Graeco-Bactrian kingdom, although, in the lack of any decisive element, we cannot assert it. What is more, it is far from implausible that, in the long term, mints may be relocated due to factors escaping the numismatic analysis (loss of territory, political upset, etc.).

## CONCLUSION

The Graeco-Bactrian kings did strike a lot, and adapted their monetary policies to the technical constraints of their mints, as demonstrated by the stylistic variety on both the obverse and reverse of the coins of Diodotos I, Diodotos II and Euthydemos I. The first 60 years of the Graeco-Bactrian kingdom thus consist of a slow but clear evolution from Seleukid habits following the monetization of Bactria since the end of the fourth century BCE, towards a complete takeover by the Graeco-Bactrian kings, monetary magistrates and engravers. Coinage is a first-class tool regarding independence, although it is clearly destined to circulate inside the kingdom: whatever

the political message is, the Graeco-Bactrians and Bactrians are the targeted audience. Only with the end of the siege of Bactra do we find realistic portraits on coins. Altogether, the first kings seem to be barely concerned with the truthfulness of their portraits: this tendency will progressively disappear with the reigns of Euthydemos II and Antimachos I, whose portraits look significantly alike despite a great number of different monograms. The die-studies reveal a strongly centralized monetary production as far as the gold and silver coinages are concerned, most likely closely linked to the heart of political power (whether it is located in Bactra, Ai Khanoum, or elsewhere). It is difficult to establish how coins were put into circulation inside the Graeco-Bactrian kingdom, although military movements are a prospective hypothesis, in regards to the nomadic ‘threat’ mentioned by Euthydemos I.

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