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IN
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16**



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**STUDIES IN ANCIENT ART
AND CIVILIZATION**

16

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IN ANCIENT ART
AND CIVILIZATION**

16

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KSIĘGARNIA AKADEMICKA

ul. św. Anny 6, 31-008 Kraków

tel./fax: (12) 421 13 87

e-mail: akademicka@akademicka.pl

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Jarosław Bodzek
Kraków

ON THE DATING OF THE BRONZE ISSUES OF TISSAPHERNES

Abstract: *The author considers the problem of the dating of bronze coins issued in the name of the famous Persian grandee, Tissaphernes, satrap of Lydia and Caria and karanos between the years 413-407 and 400-395 BC. Three issues of such coins are known, which are different in iconography, form, legend and metrology. They are traditionally dated to c. 400-395 BC. However, in the author's opinion, in the light of recent discoveries and assessment concerning the launching of bronze coin production in western Asia Minor, it is possible that the dating ought to be moved to the first period of Tissaphernes in the office of karanos, i.e. to c. 413-407 BC.*

Keywords: *Tissaphernes; Astyra; Adramytteion; satrap; karanos; coin; chalkos; dichalkos; stater*

Western Asia Minor is the cradle of coin minting, but bronze was introduced to its coin production relatively late in comparison to other areas. The problem of the dissemination of the bronze coin in the Greek world was researched by M. J. Price (1968; 1979), who, working on the scarce material available in his time, dated the beginnings of bronze coinage in Asia Minor to the beginning of the 4th century BC. Discoveries made during the last three decades have allowed this view to be revised.

One of the most important testimonies concerning the beginnings of bronze coinage in western Asia Minor are coins minted in the name of Tissaphernes (c. 413-395 BC). This Achaemenid grandee, satrap and *karanos* was one of the main protagonists in the events taking place on the Graeco-Persian frontier in Asia Minor at the turn of the 5th and 4th centuries. His personality, policies, spectacular downfall and most of all

his influence on Achaemenid politics involving the struggle for hegemony between Athens and Sparta, were the reasons for which he was relatively frequently mentioned by Greek historians (cf. Hyland 2004).

Tissaphernes was politically active in the western provinces of the Achaemenid state c. 413-395 BC (Schaefer 1940, 1579f; Schmitt 1992). He was the son of Hydarnes, which probably makes him the descendant of one of the most important Persian families (Schmitt 1992). C. 413 BC he defeated the rebellious Pissuthnes and took from him the position of satrap of Sardes, also becoming commander (*karanos*) of the Persian forces on the Aegean coast (Ctesias 52). The post of *karanos*, was primarily of military nature but also meant a higher rank than an ordinary satrap (cf. Petit 1983; Bodzek 2011, 27-28). This made Tissaphernes the supreme Achaemenid official in the West. In the following years, Tissaphernes defeated Pissuthnes' son, Amorges, captured his capital, Iasos, and got involved in skirmishes of the conflict between Athens and Sparta that took place on the coast of Asia Minor (Thuc. 8.5-109; Xen. *Hell.* 1.2.1ff). In 407 BC, however, Darius II Nothos (423-404 BC), apparently not entirely satisfied with the results of Tissaphernes' activity, replaced him with his younger son Cyrus in the capacity of *karanos* and satrap of Sardes. Tissaphernes was removed to the minor position of the satrapy of Caria (Xen. *Hell.* 1.4.1ff; Xen. *Anab.* 1.1.2, 1.9.7; cf. Ruzicka 1985). When Artaxerxes II (404-359 BC) seized the throne, Tissaphernes took the king's side, warning him against the intrigues of Cyrus (Xen. *Anab.* 1.2.4f). He commanded the royal cavalry in the battle of Cunaxa in 401 BC, in which Cyrus the younger was killed. In recognition of his services, he married the king's daughter in 400 BC and regained his former position of *karanos* as well as satrap of Sardes (Diod. Sic. 14.26.4). His attempts at subjugating the Greek *poleis* and forcing them to pay tribute led to the war with Sparta, whose outcome was not to the satrap's advantage. After his defeat in the battle against Agesilaos at Sardes in 395 BC, Tissaphernes was captured on Artaxerxes orders and executed in Colossae (Xen. *Hell.* 3.4.25f; Diod. Sic. 14.80.3ff; cf. Westlake 1981).

Modern scholars, fascinated with Tissaphernes, have attempted to attribute several anonymous satrapal issues to him. These were, among others: electrum *hekte* minted in Phocaea (Bodenstedt 1981, No. Ph. 86, Pl. 8, 10; Cahn 1989, Pl. I, 8; Winzer 2005, Pl. 2. 6.6); coins of the type 'Tiarate Head/Great King-Archer' (Babelon 1910, Pl. LXXXVIII, 11-12; Franke and Hirmer 1966, Pl. 184; Cahn 1989, Pl. I, 7); the unique tetradrachm of the type 'Tiarate Head/lyre' (Babelon 1910, Pl. LXXXVIII, 25; Franke and Hirmer 1966, Pl. 184; Cahn 1989, Pl. I, 6), as well as the famous 'owl'

from the Karaman Hoard (Robinson 1948, Pl. 5, 8; Franke and Hirmer 1966, Pl. 184; Cahn 1989, Pl. I, 5) and analogous in obverse and reverse iconography bronzes (actually silver plated) minted in Dor (*SNG v. Aulock* 1967, No. 7636; Qedar 2000-2002). However, all these attributions were not based on strong evidence (Bodzek 2010, 108-109; cf. Harrison 2002, 303ff, 313f.). The only issue that can be attributed to Tissaphernes with any degree of certainty, on the grounds of the legend, remains the unique silver stater minted in Xanthus (Mørkholm and Neumann 1978, No. M221; Hurter 1979, 100, No. 6, Pl. 8, 6; Alram 1986, 105, No. 317; *SNG Copenhagen Suppl.* 2002, 460; Bodzek 2011, 102ff) and the aforementioned bronze coins.

Three issues of Tissaphernes bronzes are known (Bodzek 2011, 159ff, 299-300, Nos TAe1-TAe3); two of them were published in the mid-1980s by H. A. Cahn (1985; 1986), and the third one a decade later by J. Stauber (1996, 256, C-F; cf. Winzer 2005, 29, No. 6, 1). These three issues differ in iconography, legends and metrology; they were also probably not minted in the same mint.

The first type of Tissaphernes coins (Fig. 1) has the head of Athena in Attic helmet on the obverse and the head of Zeus in laurel wreath on the reverse (Winzer 2005, 29, No. 6.1, Pl. 2; Bodzek 2011, 300, No. TAe3, Pl. II. 3-3b); the latter has also been interpreted as a Dionysos in wine wreath (Stauber 1996, 256). A. Winzer (2005, 29) interpreted the head on the reverse as the satrap's portrait, but this identification is wrong. This is not indicated by the lack of individualised facial features, since one ought not to expect such traits in the case of a coin portrait dated *c.* 400 BC (cf. Zahle 1990, 53; Bodzek 1994, 128), but by the lack of elements characteristic of the satrap/grandee portrait type as for example a sharpness of features and an aquiline nose. In return we have a general idealization of the effigy recalling gods images. Moreover, the wreath is an attribute which points at the divine status of the person represented. The lack of tiara/kyrbasia headgear is not a decisive argument in that case as is shown by the grandee's portrait on the coin from Astyra discussed below (Fig. 2). A comparizon of aforementioned Tissaphernes' effigy on Astyra coins clearly shows the difference between portrait and god's image. The legend is place by the god's head, either in its full form – ΤΙΣΣΑΦΕΡΝΟΥ – or shortened to ΤΙΣΣΑΦΕΡΝ (Stauber 1996, 256, C-F). Coins of the issue weigh between *c.* 1.5 and *c.* 2.0g and their diameter is *c.* 11-12mm.

In the case of the second type (Fig. 2), the obverse features the head of a bearded, mature man, devoid of any headdress or attribute (Cahn 1985, 587, Nos 1-2, Fig. 1-3; Cahn 1989, 99, Pl. 1, 4; Stauber 1996, 254-255,



Fig. 1



Fig. 2



Fig. 3



Fig. 1. Tissaphernes (413-395 BC), Adramytteion (?), 413-407 or 400-395 BC, AE, *chalkos*.
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Fig. 2. Tissaphernes (413-395 BC), Astyra, 413-407 or 400-395 BC, AE, *chalkos*.
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Fig. 3. Tissaphernes (413-395 BC), Adramytteion (?), 413-407 or 400-395 BC, AE, *chalkos*.
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On all figures side images scaled 2:1, central images scaled 1:1

Nos 1-5; Bodzek 2011, 299, No. TAe1, Pl. II, 1-1b). The man is interpreted as Tissaphernes himself. Such an interpretation can be made because of the features of his likeness and the presence of the legend ΤΙΣΣΑ placed just below the head (beneath the neck). On the reverses of the issue, the statue of Artemis Astyrene and an *ethnicon* in the form of ΑΣΤΥΡΗ are placed, which allows us to connect the issue with the city of Astyra in Mysia (Cahn 1985; Stauber 1996, 255). Coins of this type have similar weight and diameter to the first type.

The third type of Tissaphernes coins (Fig. 3) has the head of Athena in Attic helmet on the obverse (Cahn 1985, 588, No. 3, Fig. 4; Cahn 1989, 99, Pl. 1, 3; Stauber 1996, 255-256, A-B; Bodzek 2011, 300, No. TAe2, Pl. II, 2-2b). It is very similar to the goddess head on the first type. Reverses of this type feature a rider in Iranian attire and are accompanied by the legend ΤΙΣΣΑ. It is probably a miniature portrait of Tissaphernes. The weight of the 'Athena/rider' issue is *c.* 1.0g (the average weight of the 24 studied specimens is 1.04g), and the diameter 10-11mm.

Only the second type can be attributed to a specific mint (thanks to the legend) and, as has already been mentioned, this mint was Astyra in Mysia. Due to the absence of identifying legends, the attribution of the remaining two types is problematic. H. A. Cahn (1989, 99) suggested Adramytteion as the minting place of the 'Athena/rider' issue (Fig. 3); he based his hypothesis on the similarity between the head of Athena on the obverse of the coins in question and representations of the same goddess on coins minted in the city. One should note that other possibilities have also been taken into account: Assos, Pergamon, Elaea, Phocaea (cf. Stauber 1996, 256-257), as well as Astyra (Winzer 2005, 29), but the attribution proposed by Cahn seems the most plausible. At the same time, the aforementioned head of Athena from the 'Athena/rider' issue shows great similarity to an analogous representation on coins of the 'Athena/Zeus (Dionysos)' type (Fig. 1), especially as far as the details of the helmet (dome, visor, neck guard and crest) and Athena's face are concerned. In the present author's opinion, the similarity is strong enough to allow for the hypothesis that both issues were minted in the same mint, i.e. Adramytteion (Bodzek 2010, 111ff; cf. Stauber 1996, 256f). A. Winzer's (2005, 29) suggestion to link this type with the Sardes mint is hardly convincing. It appears, therefore, that the minting activity of Tissaphernes, as far as bronzes were concerned, was concentrated in northwestern Asia Minor, in the region of Mysia, Aeolia and possibly also northern Ionia.

H. A. Cahn (1985, 593; 1986, 13) dated the minting activity of Tissaphernes to his second period in the office of *karanos*, i.e. c. 400-395 BC. Allegedly, as a reward for his loyalty to Artaxerxes during the revolt of his brother, the grandee was granted a special position, which allowed him to mint coins in his own name. Moreover, Cahn argued that the satrap's portrait on one of the issues in question represents a man past his prime, which would mean that the satrap was portrayed in the last period of his activity. Cahn also quoted Diodorus Siculus (14.35.7) on Tissaphernes capturing Aeolia and the siege of Kyme c. 400 BC, which confirms his activity and influence in northern Asia Minor in the period. The dating proposed by H. A. Cahn was widely accepted, for instance by W. Weiser (1989, 282f), J. Stauber (1996, 253), P. Debord (1999, 127) and A. Winzer (2005, 29f). Debord (1999, 127) did not, however, discard the possibility of an earlier date, falling in the first term of Tissaphernes in the office of *karanos*.

Nonetheless, H. A. Cahn's arguments for the c. 400-395 BC dating of Tissaphernes' bronze coins, as summarized above, are not entirely convincing. First and foremost, the argument concerning the satrap's age, estimated according to coins minted in Astyra, is subjective and therefore hardly acceptable – all the more so considering Cahn based his conclusion, among other things, on the similarity to the alleged portraits of Tissaphernes on the aforementioned coins, whose attribution remains doubtful. Moreover, in the period in question, coin engravers used portrait types rather than individualised likenesses. In the present author's opinion, other questions are of more consequence in dating the bronze coinage of Tissaphernes.

When attempting to date the coins of Tissaphernes, one needs to take the mint into account. As has already been mentioned, the main area of the satrap's minting activity, as far as bronze coinage, is concerned was northwestern Asia Minor. Two issues bearing his name were probably minted in Adramytteion, one for certain in Astyra. The decisive question is, therefore, in what period this area was under the satrap's influence. It seems that only the positions of *karanos* and satrap of Lydia gave Tissaphernes access to mints located in Aeolia and Mysia. As previously noted, the grandee held these offices twice, between the years 413-407 and 400-395 BC. It is rather unlikely that Tissaphernes could have minted his coins in northwestern Asia Minor as the satrap of Caria in 407-401 BC, not only because of the distance, but also due to his lack of territorial authority.

H. A. Cahn (1985, 593) rightly pointed out the subjugation of Aeolia to Tissaphernes c. 400 BC, and therefore the possible activity of the satrap in the area of Adramytteion bay at the time. However, Tissaphernes' active

interest in northwestern Asia Minor, and the region of the bay of Adramytteion in particular, is also attested in written sources for the period before 407 BC. When Thucydides gives his account of the events of the year 411 BC, he mentions the extermination of Delian refugees settled in Adramytteion by one of Tissaphernes' officers, called Arsakes (Thuc. 8.108). Noteworthy, however, is the fact that the dating of this incident is not unconditionally accepted in scholarship (Debord 1999, 120-121; Rubinstein 2004, 1038). Nonetheless, the historical evidence, known also to H. A. Cahn (1985, 593), suggests that the city was subdued by the satrap and that the area of Adramytteion bay was the area of his activity in the first period of his office as *karanos*. Tissaphernes could, therefore, also have minted coins in the area in the years 411-407 BC (Debord 1999, 127; Bodzek 2010, 114ff). One should remember in this context that Adramytteion has been suggested as the mint in which two of the issues discussed in the present paper were minted.

Another important question that needs to be asked is whether Tissaphernes could have produced bronze coins before 400 BC, or, more precisely, before 407 BC. This question is directly related to the general problem of the dissemination of bronze coinage in the Greek world, and in Asia Minor in particular. When Martin J. Price (1968, 101) studied the beginnings of bronze coinage in Asia Minor, he had at his disposal very scarce material. He only knew a small number of bronze specimens minted in Asia Minor and dated before the 380s BC. In fact, one can only include bronze issues minted most likely at the end of the 5th century BC between the years 412-407 on Samos (Barron 1966, 99, Pl. XVII), and coins attributed to the brothers Gongylos of Myrina and Gorgion of Gambrion, minted *c.* 399 BC (Babelon 1893, LXVIIIff; Six 1894, 315ff; Nos 4-8). In the latter case, however, the dating has been placed under doubt (Price 1968, 10). Moreover, considering the present state of our knowledge, some of the examples given by Price should be the subject of revision. The first bronze coins of Chios, dated by the British scholar to the end of the 5th century, seem to have actually been minted after *c.* 400 BC (Hardwick 1993, 219f). The proposed Hekatomnos (392-377 BC) example must also be rejected, since there are no bronze issues that can be linked to this satrap (Konuk 2000, 175; Ashton 2006, 10). Basically, according to the knowledge available to Price, the earliest bronze coins with certain dating were the ones minted in the name of the Lycian dynast Perikle, whose activity fell in the period *c.* 380-362 BC (Borchhardt 1976, 99ff; Bryce 1980; Keen 1998, 148ff).

The situation changed with the publication of unknown bronze coins of Tissaphernes, dated to before 395 BC, and precisely to 400-395 BC. This strengthened the hypothesis placing the introduction of bronze coinage in Asia Minor at the beginning of the 4th century BC (cf. Cahn 1986, 13); the coins of Tissaphernes were, as such, regarded as the earliest bronze coins minted in the area (Weiser 1989, 282-283). However, one should stress that the *aes* of Tissaphernes was, for a long time, an isolated case, until new finds, in particular the Phygela Hoard (Ashton and Kinns 2004, 71-72; Ashton 2006, 2, n. 5; Konuk 2011, 151ff) and new material appearing on the antiquarian market or kept in museums and private collections, allowed for a change of view concerning the beginnings of bronze coinage in Asia Minor. In the light of the aforementioned data, it is possible to accept that, around 400 BC, production of bronze coinage began to spread to Ionia, Aolis, Mysia and Troas (Konuk 2011). Among the issues worth mentioning is the one minted in Kisthene, attributed by some scholars to yet another Achaemenid grandee, Pharnabazus (Maffre 2004, 23, n. 121; Winzer 2005, 32, No. 9.2, Pl. 3; Bodzek 2011, 167f).¹ In the last years of the 5th century, bronze coins were also minted in other centres in Caria: Halicarnassus, Iasos and Mylasa (Ashton 2006). The fact that bronze coins were probably minted in the Rhodian Kameiros at the beginning of the last decade of the 5th century (precisely before 408/407 BC and the synoecism, which resulted in new, federal minting in Rhodes; Ashton 2006, 1) appears of particular importance. Similarly, the aforementioned bronze coins of Samos are dated to the years 412-408 BC; the 390s saw the minting of yet another satrapal issue, the so called 'Great King-Archer/map of Ionia' type. The hoard recently uncovered in Miletus shows that at least the silver tetradrachms belonging to this issue were minted before 390/385 BC (Weisser 2009, 151ff). All this evidence shows that the bronzes of Tissaphernes are not an isolated case, as was believed several decades ago, but that they have a solid context of bronze coinage production in Asia Minor at the end of the 5th and the beginning of the 4th centuries BC. Is it therefore justified to date them to the period after 400 BC?

Interesting conclusions can be drawn in this context from the analysis of the Phygela Hoard, which contains the earliest Ionian bronze coins, dated to the very beginning of the 4th century BC. It is composed of coins minted in Assos, Chios, Ephesus, Iasos, Kolophon, Magnesia on the Maeander, Miletus, Myus, Pergamon, Pygela, Priene and Samos. An important observation was made by Koray Konuk (2011), who, in his

¹ Cf. auction Bankhaus Aufhäuser 12, 1996, No. 80.

brilliant preliminary study, connected the hoard in question with the events of the war between Sparta and Persia at the beginning of the 4th century BC. He pointed out that the coins from the mints located in the southern part of Ionia and in Caria (Ephesus, Phygela, Myus, Samos, Miletus, Iasos, Halicarnassus and Mylasa), as well as in several mints in the north, were minted in the 'light' weight standard *c.* 0.55-0.65g (diameter 7-9mm), while some of the mints in the north, such as Chios and Kolophon, minted coins in the heavy standard, with a weight of over 1.0g and an appropriately larger diameter (10-12mm). Other mints, such as Pitane, Assos and Pergamon, minted coins in the light standard. It appears that at the end of the 5th and the beginning of the 4th centuries BC, both standards were used according to the preferences of mints, and not necessarily according to the issue chronology. Konuk's observation is of consequence to the dating of the *aes* of Tissaphernes, because, as has already been mentioned, the satrap's coins differ in weight. The average weight of the type 'Head of Tissaphernes/Artemida Astyrene' is 1.65g from 36 specimen studies. For the type 'Athena/Zeus (Dionysos)', only a few specimens are known; one of them weighs 3.10g, the remaining ones between 1.61 and 1.86g, therefore the average of 2.07g is misleading. When the uncharacteristically heavy specimen is not taken into account, the average for this issue is 1.71g, which shows that both issues were minted in the same weight standard. The average weight of the 24 specimens of the 'Athena/rider' type is 1.04g, which makes these coins lighter by only one third from the coins belonging to the remaining two issues.

Two interpretations are possible here. According to the first one, the heavy and light coins may form two denominations – probably *chalkos* and *hemichalkos* respectively. This interpretation seems to be corroborated by the concept of the types 'Athena/Zeus (Dionysos)' (Fig. 1) and 'Athena/rider' (Fig. 3) being minted in one mint. They would represent two denominations of the same issue, distinguished by the differing legends – ΤΙΣΣΑΦΕΡΝΟΥ (or ΤΙΣΣΑΦΕΡΝ) for the larger denomination and ΤΙΣΣΑ for the smaller. The other possibility is the use of two different weight standards: the heavier one, represented by the Astyra issue and the 'Athena/Zeus (Dionysos)' coins, and the lighter one, which was used for the 'Athena/rider' type. The use of two weight standards, the light and heavy ones, while minting the bronzes *c.* 400 BC is mentioned by K. Konuk (2011, 157f). In such a case, the coins 'Athena/Zeus (Dionysos)' and 'Athena/rider', originating from the same mint (Adramytteion?) would not make up two

denominations within the same issue, but would belong to two issues minted according to different weight standards. As a result, they probably could not have been minted at the same time.

In the process of establishing the chronological sequence of the issues of Tissaphernes minted in Adramytteion (?), the use of legends on the coins can also be helpful. As has been mentioned before, the satrap's name was written on the coins in question in two forms: ΤΙΣΣΑ and ΤΙΣΣΑΦΕΡΝΟΥ (ΤΙΣΣΑΦΕΡΝ). Assuming that the shortened form is earlier, the type 'Athena/rider', i.e. the one minted to a lighter standard, must be considered as earlier, while the heavier 'Athena/Zeus (Dionysos)' issue with the longer legend ought to be considered as later. It is not, of course, possible to assess the exact time between the two issues in question. One may, however, assume that the identical form of the satrap's name (ΤΙΣΣΑ) on the coins from Astyra, minted in the heavy standard, would most likely be roughly contemporary to the 'Athena/rider' issue of Adramytteion (light standard). Nonetheless, both issues in question could also be contemporary to the bronze coins of Caria, minted in the lighter standard and dated to the end of the 5th century. The latter hypothesis may be corroborated by the aforementioned argument, thus bronze coins belonging to the type 'Great King-Archer/map of Ionia' were probably minted at the beginning of the 4th century BC. Despite the relatively large difference in weight of the preserved specimens, one may distinguish two denominations with an average weight of 1.85g (*dichalkos*?) and 0.86g (*chalkos*?) respectively. Apart from the weight, another difference between the two is the legend BA present on the obverse of the larger denomination. It appears that both denominations were minted more or less contemporarily, which makes it a case of variety of denominations within one bronze issue.

As has been mentioned before, among the earliest bronze issues in Asia Minor are the coins minted on Samos and in the Rhodian Kameiros. Their production is dated most likely to before 408/407 BC (Kameiros), therefore to the time when Tissaphernes held the office of *karanos* for the first time. The satrap, who controlled both Lydia and Caria, could therefore have seen the bronze coins before his demotion in 407 BC, which made access to the Mysian mints difficult or even impossible for him. R. H. J. Ashton (2006, 1) pointed out extensive contact with Rhodos and Sicily as the possible direction from which the inhabitants of Kameiros adopted the notion of bronze coinage. Tissaphernes could have come into contact with bronze coins in a more direct way. H. A. Cahn (1986, 14) cited Thucydides' testimony (Thuc. 8.26) about the involvement of Syracusan ships

in skirmishes off the Asia Minor coast as an opportunity for the dissemination of the idea of bronze coinage in the area. Such an example could have given inspiration to the shrewd Persian grandee.

In the light of data presented over the course of the present paper, the minting of at least some of the bronze issues of Tissaphernes in the period of 413-407 BC seems quite possible, or at least not improbable. As has been pointed out, such a hypothesis is countered neither by the accessibility of mints, the dissemination of bronze coinage in Asia Minor, nor by the weight standards used. Tissaphernes' policy towards the parties fighting the Decelean war is of interest. Unfulfilled promises made to the Peloponnesians, as well as protracted payments to the Peloponnesian fleet, testify to an attempt at minimalising financial support – in other words, at attaining his goal at minimal cost. Bronze money was a perfect means for this aim, as it was a form of token war money at the given time and in the given place (cf. Konuk 2011, 158ff). Worthy of note in both the case of the Astyra issue and the 'Athena/rider' type is the fact that several stamps of the obverse and the reverse can be identified. These issues were therefore relatively prolific and as such related to particular expenses. Certainly, one cannot rule out the possibility that the coins in question were minted in the years 400-395 BC, but their possible dating to the years 413-407 BC should also be taken into account. If Tissaphernes was regarded as the forerunner of bronze coinage in Asia Minor in the early years of the 4th century, why should the dating of his coinage not be moved to the earlier period of his activity?

The proposed dating of the bronze issues of Tissaphernes to the years c. 413-407 BC also indicates an earlier beginning to the introduction of bronze coinage in Asia Minor. One may consider to what extent other issuers, in particular the Greek *poleis* and local despots, drew inspiration from the example of the Persian grandee. Nothing proved a better instrument for introducing a fiduciary coin than the authority of a *karanos*. And nobody set a better example.

References

- Alram M. 1986.** *Nomina propria iranica in nummis. Iranisches Personennamenbuch* 4. Vienna.
- Ashton R. H. J. 2006.** The beginning of bronze coinage in Karia and Lykia. *NC* 166, 1-14.
- Ashton R. H. J. and Kinns P. 2004.** *Opuscula Anatolica* 3. *NC* 164, 71-107.
- Babelon E. 1893.** *Les Perses achéménides. Les satrapes et les dynastes tributaires de leur empire Cypre & Phénicie*. Paris.
- Babelon E. 1910.** *Traité des monnaies grecques et romaines* 2/2. Paris.
- Barron J. P. 1966.** *The Silver Coins of Samos*. London.
- Bodenstedt F. 1981.** *Die Elektronmünzen von Phokaia und Mytilene*. Tübingen.
- Bodzek J. 1994.** Uwagi na temat portretu monetarnego w Licji końca V i pierwszej połowy IV w. p.n.e. In J. Śliwa (ed.), *MUNUS AMICITIAE. Studia archeologiczne poświęcone pamięci Olgi Hirsch-Dyczek*, 111-134. Krakow.
- Bodzek J. 2010.** Kilka uwag na temat monety Tissafernesa z kolekcji Muzeum Narodowego w Krakowie. In E. Dąbrowa, M. Dzielska, M. Salamon and S. Sprawski. *Hortus historiae. Księga pamiątkowa ku czci Profesora Józefa Wolskiego w setną rocznicę urodzin*, 105-122. Krakow.
- Bodzek J. 2011.** *ΤΑ ΣΑΤΡΑΠΙΚΑ ΝΟΜΙΣΜΑΤΑ. Mennictwo satrapów w okresie panowania Achemenidów (ok. 550-331 a. C.)*. Krakow.
- Borchhardt J. 1976.** *Die Bauskulptur des Heroons von Limyra. Das Grabmal des lykischen Königs Perikles. (IstForsch 32)*. Berlin.
- Bryce T. R. 1980.** The other Pericles. *Historia* 29/3, 377-381.
- Cahn H. A. 1985.** Tissaphernes in Astyra. *AA* 4, 587-594.
- Cahn H. A. 1986.** Zwei griechische Miszellen. In R. Margolis and H. Voegtli (eds), *Numismatics Witness to History. Articles by members of the IAPN to commemorate its 35th anniversary*, 11-14. Wetteren.
- Cahn H. A. 1989.** Le monnayage des satrapes: iconographie et signification. In R. Descat (ed.), *L'or perse et l'histoire grecque*, Table ronde CNRS, Bordeaux, 20-22 mars 1989. *REA* 91/1-2, 97-106.
- Debord P. 1999.** *L'Asie Mineure au IV^e siècle (412-323 a.C.). Pouvoirs et jeux politiques*. Bordeaux.
- Franke P. R. and Hirmer M. 1966.** *La monnaie grecque*. Paris.

- Hardwick N. 1993.** The coinage of Chios from the VIth to the IVth century B.C. In T. Hackens and G. Moucharte (eds), *Proceedings of the XIth International Numismatic Congress*, Brussels, September 8th-13th 1991, 211-222. Louvain-la-Neuve.
- Harrison C. M. 2002.** Numismatic problems in the Achaemenid West: the undue modern influence of Tissaphernes. In V. B. Gorman and E. W. Robinson (eds), *Oikistes. Studies in Constitutions, Colonies and Military Power in the Ancient World offered in Honor of A. J. Graham*, 301-319. (*Mnemosyne. Suppl.* 234). Leiden.
- Hurter S. 1979.** Der Tissaphernes-Fund. In O. Mørkholm and N. Waggoner, *Greek Numismatics and Archaeology. Essays in Honour of Margaret Thompson*, 99-108. Wetteren.
- Hyland J. 2004.** Waiting for Tissaphernes: Athens and Persia in Thucydides VIII. *Syllecta Classica* 15, 71-101.
- Keen A. G. 1998.** *Dynastic Lycia. A Political History of the Lycians and their Relations with Foreign Powers c. 545-362 B.C.* Leiden, Boston, Cologne.
- Konuk K. 2000.** Influences et éléments achéménides dans le monnayage de la Carie. In O. Casabonne (ed.), *Mécanismes et innovations monétaires dans l'Anatolie achéménide. Numismatique et histoire. Actes de la Table Ronde Internationale d'Istanbul*, 22-23 mai 1997, 171-183. Paris.
- Konuk K. 2009.** War tokens? The first bronze coins of Ionia. In *XIV International Numismatic Congress. Abstract of Papers*, 18-19. Glasgow.
- Konuk K. 2011.** War tokens for Silver? Quantifying the Early Bronze issues of Ionia. In F. de Callataÿ (ed.), *Quantifying Monetary Production in Greco-Roman Times*, 151-161. (*Pragmateia* 19). Bari.
- Maffre F. 2004.** Le monnayage de Pharnabaze frappé dans l'atelier de Cyzique. *NC* 164, 1-32.
- Mørkholm O. and Neumann M. 1978.** Die lykischen Münzlegenden. In *Nachrichten der Akademie der Wissenschaft in Göttingen* 1, *Philologisch-Historische Klasse* 4, 3-38.
- Price M. J. 1968.** Early Greek bronze coinage. In C. M. Kraay and G. K. Jenkins (eds), *Essays in Greek Coinage presented to E. S. G. Robinson*, 90-104. Oxford.
- Price M. J. 1979.** The function of early Greek bronze coinage. *AIIN. Suppl.* 25, 351-365. Naples.

- Qedar S. 2000-2002.** Tissaphernes at Dor? *INJ* 14, 9-14.
- Robinson E. S. G. 1948.** Greek coins acquired by the British Museum 1938-1948. *NC* 8, 43-59.
- Rubinstein L. 2004.** Aiolis and South-Western Mysia. In M. H. Hansen and T. H. Nielsen. *An Inventory of Archaic Poleis*, 1033-1052. Oxford.
- Ruzicka S. 1985.** Cyrus and Tissaphernes 407-401 B.C. *CJ* 80, 204-211.
- Schaefer H. 1940.** S.v. Tissaphernes. In *RE. Suppl.* 7, 1579-1599.
- Schmitt R. 1992.** S.v. *ČiOrafarnah. In *Encyclopaedia Iranica*. Retrieved from <http://www.iranicaonline.org/articles/cirafarnah-elamite-zi-ut-ra-bar-na-assyrian-si-dir-pa-ar-na-ni-gk> (status as of 30 March 2010).
- Six J. P. 1894.** Monnaies grecques, inédites et incertaines. *NC* 14, 297-338.
- SNG v. Aulock 1967.** Aulock H. von. *SNG. Deutschland. Sammlung von Aulock. Troas*. Berlin.
- SNG Copenhagen Suppl. 2002.** Schultz S. and Zahle J. (eds). *SNG. The Royal Collection of Coins and Medals Danish National Museum. Supplement: Acquisitions 1942-1996*. Copenhagen.
- Stauber J. 1996.** *Die Bucht von Adramytteion 2. Inschriften-literarische Testimonia-Münzen*. Bonn.
- Weiser W. 1989.** Die Eulen von Kyros dem Jüngeren. Zu den ersten Münzporträts lebender Menschen. *ZPE* 76, 267-296.
- Weisser B. 2009.** Funde aus Milet. XXIII. Ein Hort von mit Silbermünzen aus dem frühen 4 Jh. v. Chr. *AA*, 151-156.
- Westlake H. 1981.** Decline and fall of Tissaphernes. *Historia* 30, 257-279.
- Winzer A. 2005.** *Antike Porträtmünzen der Perser und Griechen aus vor-Hellenistischer Zeit (Zeitraum ca. 510-322 v. Chr.). Die frühesten Portraits lebenden Menschen von Dareios I. bis Alexander III.* Stuttgart.
- Zahle J. 1990.** Herrscherporträts auf lykischen Münzen. In R. Jacobek and A. Dienstl (eds), *Götter, Heroen, Herrscher in Lykien*, 51-56. Vienna, Munich.

Jarosław Bodzek
 Institute of Archaeology
 Jagiellonian University
jaroslaw.bodzek@uj.edu.pl

EDITORIAL NOTE

Since volume 14 of the *Studies in Ancient Art And Civilization*, published in 2010, the design of our periodical has slightly changed, and we also started to use the so-called Harvard referencing (or parenthetical) system, all due to the fact that *SAAC* was listed in the reference index of reviewed journals of the Polish Ministry of Science and Higher Education (List B).

Since 2011 (vol. 15) the publisher has been Księgarnia Akademicka Ltd. in Krakow. Starting with volume 16 (2012) an external review procedure has been introduced, compliant with the double-blind review process (anonymity of both the reviewed author and the reviewer). The referees include both members of the Editorial Board and others. The list of referees is published on the journal's website and in the hard copy. The primary version of the journal is the electronic format. As far as the names of the towns in Poland are concerned, these are given in their original form (e.g. Poznań, Gołuchów etc.), with the exception of the well established English ones such as Warsaw and Krakow (but in the title pages the original name Kraków is used).

With the 2011 issue we also introduced the following abbreviations, apart from those used in the *American Journal of Archaeology* and *Lexikon der Ägyptologie*:

PAM – *Polish Archaeology in the Mediterranean*, Warsaw

RechACrac SN – *Recherches Archéologiques. Serie Nouvelle*, Krakow

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Studies in Ancient Art and Civilization was created in 1991 by Professor Joachim Śliwa as an occasional series and since vol. 10 (2007) has become a regular annual journal edited by the Jagiellonian University Institute of Archaeology. Księgarnia Akademicka S. A. has been the publisher since 2011.

Fifteen volumes have been published to date, among them two monographs and three festschrifts for distinguished researchers from our Institute.

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