

# 'ARROW-MONEY' AND 'SCYTHIAN' COINS AS MEDIUM OF EXCHANGES BETWEEN MONEY AND PRESTIGE ECONOMY IN THE NORTH-WESTERN BLACK SEA AREA

BY  
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## Abstract:

*In the first part of the study, the research focuses on arrowheads valued as money, especially on aspects related to the origin and early functionality of 'arrow-money' within the context of an emerging common market for the Greeks and 'Barbarians' in the north-western Black Sea area. Despite the different geo-political circumstances valid for each Milesian apoikia, the extensive circulation of 'arrow-money' and cast copper coins generally from Apollonia to Kerkinitis allows us to presume that the whole region had one united market; this was connected to the sacred sphere of the Greek colonists' lives, from early colonization to the Classical times. In the second part, the research is centred on another particular aspect of numismatic evidence in the context of long-term relations between the Greeks and non-Greeks in the western and north-western area of the Pontus Euxinus – coin recognition as symbol of legitimate power by some 'barbarian' dynasts. Chronologically, this spans the 2<sup>nd</sup> century BC, when in the territory of Scythia Minor (current Dobrudja) six dynasts with Iranian names are recorded to have used coinage with Greek iconography and legends. Archaeological and written sources (especially inscriptions) provide a basis for a simplified model describing money functions in the north-western Black Sea area on various levels in the Archaic, Classical and Hellenistic periods. The author believes that there were at least nine means by which coinage flowed from the Greek cities on the coast to their chorai and further to inland populations: 1. Money as medium of exchange. 2. Individual finds of the lost or intentionally deposited pieces as a result of peoples' mobility. 3. Annual tribute. 4. Diplomatic gifts. 5. Payment to mercenaries. 6. Ransoms for prisoners. 7. Occasional spoil of the poleis by certain barbarian dynasts. 8. Money hoarding (accumulation) for various purposes. 9. Monetary-signs and Greek copper money also seems to have played a role in rites of passage as funeral offerings. Compared to circumstances in other peripheral societies, it is possible to imagine that 'arrow-money' and subsequent small copper coins would be most easily accepted as standard value, acting as an intermediary and convertible factor in various transactions between the Greek money economy and the prestige economy of Thracian and Iranian 'Barbarians'.*

**Keywords:** North-western Black Sea area; Greco-'Barbarian' relations; 'arrow-money'; 'Scythian' coins; money functions.

## INTRODUCTION

A few years ago, in a paper for a collective volume dedicated to nomadism in antiquity, I attempted to trace the Greco-Scythian relations on the basis of money circulation by the edge of the steppe.<sup>1</sup> Later, in an international workshop dedicated to the 'money on the margins: coinage, forms and strategies of intercultural commerce on the Black Sea shore in the Classical and Hellenistic eras'.<sup>2</sup> I had the opportunity not only to present the state of research through debating ideas with several prestigious numismatists, but also to suggest certain prospective research directions: these were embedded in the context of long-term relations between the Greeks and non-Greeks in the western and north-western

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<sup>1</sup> COJOCARU 2011 (cf. COJOCARU 2010).

<sup>2</sup> The workshop was held between 18 and 22 June 2017 at Zichron Yaakov, Israel.

area of Pontus Euxinus.<sup>3</sup> One of the participants in that discussion, François de Callatay, would later publish an important study questioning the monetary value of arrowheads and Olbian dolphins.<sup>4</sup> It is actually for the first time that a Western numismatist of such prestige is involved through a more complex approach in a historiographical discussion carried out, for a century, almost exclusively by Eastern European scholars.<sup>5</sup> This prompted me to resume the respective discussion,<sup>6</sup> and consider a broader historiographical context as well as some more recent publications of the (pre)monetary-signs under debate.<sup>7</sup>

To start my examination of the introduction and early use of money in this region, I would like to evoke a comparison with the conditions in other peripheral societies.<sup>8</sup> Even if the ‘substantivistic’ theoretical position seems currently rather outdated,<sup>9</sup> I subscribe to the methodological premise as claimed by A. Bursche: “We must turn to anthropological theories regarding non-market economies, introduced by substantivistic and primitivistic schools of K. Polanyj, G. Dalton and R. Hodges (...) we cannot analyse early or so-called ‘primitive’ societies using the tools from market economy; many rules, as e.g., the need for economic profit, did not exist at all or at least were not very important in many past societies. Social relationships were regulated there by tradition, prestige and honour”.<sup>10</sup> At the same time, we must also take into account that the relationship between the economic relations on either side of the Roman frontier zone has been studied differently, and the Greek-focused studies are more helpful in this respect.

Although my further two-part approach deals with two different historical contexts, the two periods envisaged are characterized by the specific role of the nomads (especially the Scythians), as a parallel to the more familiar image in the Greek culture regarding the relationship between city-state on the coastline and non-Greek populations of the hinterland.

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<sup>3</sup> This region is particularly important for the distribution of ‘arrow-money’. The distribution area of the finds corresponds to the Black Sea coast between the Athia peninsula in the west to the western part of the Crimea peninsula in the east, with four main discovery areas – Apollonia Pontica, Histria/Argamum, Berezan/Olbia and Kerkititis.

<sup>4</sup> DE CALLATAY 2019: 268: “If non-functional arrowheads and Olbian dolphins were coins with a fixed value, how is it possible that people succeeded there and only for a while to manage with what will be progressively accepted only several centuries later elsewhere in the Greek world? And why to have stopped such a beneficial system? In terms of economic rationality, it would have been madness for the issuing power. These are questions which have not been dealt with”.

<sup>5</sup> To H. B. Wells’ contribution, I shall return below. SCHÖNERT-GEISS 1987: 412f. reports on the role of ‘arrow money’ in the Black Sea region (cf. SCHÖNERT-GEISS 1999: 1661, No. 9339). Among Western scholars it should be mentioned here also STINGL 2004 & 2005, who gives an overview of the development of various pre-coinage money forms and their distribution in the north-western Black Sea region.

<sup>6</sup> For a previous version in Russian, see COJOCARU 2020 (cf. also COJOCARU 2019: 87-96).

<sup>7</sup> I have in mind here, especially, TALMAȚCHI 2015 and 2017a, ISVORANU 2018, as well as three articles in print by G. Talmatchi (all three in Romanian): 1) Finds of monetary-signs as a result of archaeological research in Histria (Constanța/Metaxa sector, the 2016 campaign); 2) Finds of monetary-signs as a result of archaeological research in Tomis (1968-2001); 3) About the monetary-signs and their presence in the settlements of the native population in the Istro-Pontic area (6<sup>th</sup> - 5<sup>th</sup> century BC). I thank the author for permission to consult these manuscripts before publication.

<sup>8</sup> Cf. for instance WIGG-WOLF 2008: 35, referring to the ‘Germanic’ world during the early and middle Roman imperial period and the ‘Celtic’ world during the last centuries BC: “(...) both were *Randkulturen* at the periphery of a central *Hochkultur*: the Celts on the periphery of the Mediterranean world, the Germans on the periphery of a Mediterranean power that had expanded beyond the Alps to include the areas to the south of the Rhine and Danube”.

<sup>9</sup> G. Dalton and R. Hodges count among those scholars who have expressed views that are similar to the classic statements of K. Polanyi, and his more recent advocates, but there are many, very different positions. Most historians of ancient economies, even Polanyi, have agreed that money, in the period examined here, did operate in a market setting, but also ascribe some role to social structures as drivers of economic activity. It is the balance, or the relationship between the economically ‘rational’ and the ‘irrational’ that seems to be the main challenge for contemporary scholars (see, at the very least, SCHEIDEL *et al.* 2007; HARRIS *et al.* 2016; BRESSON, RENDALL 2019).

<sup>10</sup> BURSCHE 2008: 396. Cf. BURSCHE 2002: 3: “To understand the semantics of money uses in Northern Europe in antiquity we need to leave behind the world of economic profits, Euro and credit cards, and venture into a widely different age where all social relationships were regulated by tradition, prestige and honour”.

I. 'ARROW-MONEY' BETWEEN THE CULT OF APOLLO  
AND THE NUMISMATIC DISCOVERY OF THE 'GOOD SAVAGE'

In Eastern European historiography, including that of Romania, the idea of a transition stage, from barter to money economy, within the exchange relations between Greeks and natives has been discussed for almost a century. This, possibly, also in the sense of an existing local market where in the case of most operations – for which electrum or silver coin had too much value – a more accessible and unanimously accepted exchange equivalent would have been needed.

The earliest known 'coinage' in the north-western Black Sea area – from Apollonia to Kerkinitis – is the so-called 'arrow-money'. Such arrowheads were first discovered during the excavations conducted at Olbia in 1908,<sup>11</sup> but were identified as a separate numismatic class only in 1926 by G. Severeanu.<sup>12</sup> Subsequently, an increasing number of archaeologists and numismatists published new finds or contributed to the debate concerning this cast copper money of unique form.<sup>13</sup> My recently published first volume of the BCOSPE lists no less than 40 titles directly linked to the topic,<sup>14</sup> although I did not take into account the finds and publications related to Bulgarian and Romanian (Black Sea) shores.<sup>15</sup>

In a seminal article,<sup>16</sup> H. B. Wells distinguished categories such as 'appearance', 'weight', 'stratification and dating of finds'. Based on this, the author ventured the conjecture that 'arrow-money' may not have been intended (originally) to serve as tokens of exchange, but were perhaps functional arrow-points in a semi- or incompletely manufactured state. Wells evoked in particular the large hoards from Enisala<sup>17</sup> and Jurilovka [Zhurilovka]<sup>18</sup> (both in Romanian Dobrudja), which combine some specimens of true arrowheads together with several hundred remarkably uniform two-bladed arrowheads (Pl. I.1) imitating those of Scythian type (Pl. I.2). Their investigation led to the conclusion that: "the arrow-money was not on its way to becoming finished arrow-heads. Instead, arrow-heads once functional could, on being broken, be converted into something acceptable in the company of arrow-money".<sup>19</sup>

Since nearly all 'arrow-money' pieces that have ever been discovered are in the hands of Eastern European public or private collections, it is not surprising that the scholarly discussion was led most intensively by Romanian, Bulgarian, Russian and Ukrainian experts. Even a very short approach to all the issues discussed over time would already exceed the limits of this approach. I shall therefore confine myself this time to aspects relating to the origin and early functionality of

<sup>11</sup> See *Otchety Imperatorskoy Arkheologicheskoy komissii* (Reports of the Imperial Archaeological Commission) 1908 (St. Petersburg, 1912): 73f. For an early publication of arrowheads without monetary function, see OUVAROFF 1855: 117, No. 11-15, Pl. XVI.

<sup>12</sup> SEVEREANU 1926. For a more detailed historiographical perspective on the so-called Olbian dolphins and the non-functional arrowheads, see now DE CALLATAÏ 2019 (here p. 262).

<sup>13</sup> From the most important published literature, I mention here only BALABANOV 1982; ANOKHIN 1986; PREDĂ 1991; BANARI 2003: 289-299; STINGL 2005; BALABANOV 2006 (cf. 2011); TALMAȚCHI 2010 & 2017a; DE CALLATAÏ 2019.

<sup>14</sup> COJOCARU 2014: No. 811, 818, 826, 827, 829, 849, 850, 853, 858, 864, 875, 879, 933, 935, 936, 962, 963, 964, 970, 982, 983, 986, 988, 989, 995, 997, 998, 1006, 1007, 1010, 1012, 1021, 1022, 1023, 1031, 1032, 1036, 1037, 1038, 1053, 1054, 1062, 4709.

<sup>15</sup> For publications related to Bulgarian and Romanian Black Sea shores, see a more complete list of references in BANARI 2003: 289-299; TALMAȚCHI 2010 and 2017a; BALABANOV 2011.

<sup>16</sup> WELLS 1978; cf. WELLS 1981 & 1982.

<sup>17</sup> The hoard consists of 118 pieces. Published by ARICESCU 1975; cf. TALMAȚCHI 2010: 82f. (with previous bibliography).

<sup>18</sup> Three treasures were discovered (in 1918/9, 1957 and 1967), of which only two could be recovered – from the first 2000 pieces were preserved, and from the other only 30; see TALMAȚCHI 2010: 84f. (with previous bibliography). Cf. POENARU-BORDEA, OBERLÄNDER-TÄRNOVEANU 1980.

<sup>19</sup> WELLS 1978: 25. Cf. now DE CALLATAÏ 2019: 264 (with reference to WELLS 1982): "The idea of B. Wells that non-functional arrowheads could be unachieved functional arrowheads failed to receive any support". At the same time, the author disagrees with TALMAȚCHI 2010: 392: "The fact that this association exists between the two categories – fight arrowheads and arrowheads monetary signs – should not be difficult to explain in our opinion. Probably, the fight arrowheads were to be 'processed' by cutting the tip and from case to case, depending on the weight of samples, to be filled with lead and in the stem area". See now TALMAȚCHI 2017a: 54 (F. de CallataÏ does not quote this contribution). BANARI 2003: 290 distinguishes two categories of finds more clearly: "Bereits beim Gießen bewusst abgerundete Enden und abgestumpfte Rippen zeigen deutlich, dass diese Gegenstände von vornherein nicht für militärische, sondern andere Verwendungszwecke bestimmt waren. (...) Eine zweite, wenig häufig vertretene Kategorie besteht aus normalen, anfänglich für den Kampfwert bestimmten Pfeilspitzen, die zu einem gewissen Zeitpunkt dem ursprünglichen Gebrauch entzogen wurden und nach einem zusätzlichen Bearbeiten, wie etwa Entschärfung der Spitzen oder Bleifüllung der Tüllen, ihren Waffenfunktion verloren haben".

the 'arrow-money' within the context of an emerging 'common market'<sup>20</sup> among the Greeks and 'Barbarians' in the north-western Black Sea area.

To date, we know of some 33 hoards and slightly more than 70 isolate finds.<sup>21</sup> They are exclusively from the Milesian *apoikiai* and their *chorai*. We are thus safe to say that 'arrow-money' is of Greek manufacture. The makers may have been emigrants or the sons of emigrants from Asia Minor, where coinage in electrum and perhaps in silver too was already known.<sup>22</sup> Some hoards of electrum coins, such as those from Berezan<sup>23</sup> and Olbia,<sup>24</sup> dated to the first half of the 6<sup>th</sup> century BC, demonstrate their monetary use in the context of long-distance trade with Mediterranean *poleis* from the very beginning.<sup>25</sup> At the same time, for the long-distance trade with the 'barbarian' hinterland the most profitable way of economic exchange for the Greek settlers, at least in Archaic time, was bartering.<sup>26</sup> However, the economic development of the Milesian *apoikiai* in the north-western Black Sea area and the daily needs of the population in contact zones seem

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<sup>20</sup> I do not mean by this a profit-led economy, but the answer to a necessity in the local and regional trade. This trade "used to take place between the coastal communities or with those communities located inland. It required the gradual replacement of barter with a more advanced trade form, a metal instrument to measure the value of the products that were exchanged, made at first as arrowheads and later as Olbian dolphins (...). It would be difficult to explain the appearance of a 'financial' union for monetary-signs in such an early context, but we notice the existence of a trend in the analyzed area of casting some standards required by economic realities" (TALMAȚCHI 2017a: 49). On the criticism expressed recently by F. de Callataÿ, I shall return below.

<sup>21</sup> For the repertory of the single finds and hoards including monetary-signs, see TALMAȚCHI 2010: 81-100. Cf. CALLATAÿ 2019: 263: "We owe to Talmațchi having extensively worked with all the available evidence (...)". See also a previous discussion on the distribution area with location of the finds in BANARI 2003: 291-294. I am very grateful to G. Talmațchi for information on the latest data.

<sup>22</sup> The first coins (staters, hemistaters, hektes and trites) from electrum, discovered in Ionia and issued according to the Milesian standard, would date not before 600 BC. For a more detailed discussion, see LE RIDER 2001: 42-67; cf. SCHAPS 2004: 93-110. Among the Greek city-states, the island of Aegina would be the first issuer of silver coin, followed by Corinth and Athens. Regarding the controversial date of the first aeginete issues (by mid sixth century BC or even earlier), established on the basis of the ancient tradition, see KROLL, WAGGONER 1984 (with the conclusion on p. 339): "The steadily increasing numismatic evidence, however, no longer allows the first coins of Corinth and Athens to be dated earlier than ca. 575 and ca. 550 B.C. respectively and points to a sixth century date for the earliest coinage of Aegina as well".

<sup>23</sup> KARYSHKOVSKIY, LAPIN 1979. As a curiosity, I report here an information about a second hoard of electrum coins discovered in 2000 on the island of Berezan, beside other objects, by treasure hunters – see BUTKEVYCH 2016. The author though mentions on p. 5, among the more than 50 coins, the "staters of Borysthenes c. 625-575 BC" (sic), which absolves me from insisting on this 'publication'.

<sup>24</sup> BULATOVICH 1970.

<sup>25</sup> Cf. SOLOVYOV 2006: 65: "(...) serve as good illustrations of international trading in the Black Sea basin as early as the first Greek appearance there".

<sup>26</sup> The barter would have remained the basis of the exchange relations between the Greeks on the coast and the 'Barbarians' in the hinterland and in later times, the ways of penetration of Pontic coins in the local environment being considered by some researchers as non-commercial (payments for mercenaries, ransoms paid by the cities to ensure their protection, loot, etc.). A recent discussion in this regard is proposed by MUNTEANU 2013; cf. BANARU 2013. See now also DE CALLATAÿ 2019: 267: "So the basic idea that barter was replaced by coinage (*Naturalwirtschaft* by *Geldwirtschaft*) is rather problematic and certainly not as simple as generally thought". I agree with the idea in principle, not with its generalization. Thus, because I believe that it would be important to permanently distinguish between the local/regional market (where the will of the issuing authority could be imposed) and long-distance trade, whether we are talking about the Mediterranean world or the 'barbarian hinterland'. Cf. BALABANOV 2011: 173: "The spread of metallic money of various shapes and weights makes it possible to assume the formation of local regional markets, which functioned in parallel with international exchange". Even though I am aware of "the deliberate blindness of many ethnologists for the modern economy" (so DE CALLATAÿ 2019: 268, n. 68, with reference to BESSAIGNET 1970), it seems suggestive to me that the 'New normal' under Covid-19 restrictions has seen in East New Britain, Papua New Guinea a resurgence in bartering and the use of tabu (made from the shell of a marine snail known locally as *palakanoara*). Traditionally it is used in mortuary ceremonies or bride price exchange, but can also be used to pay school fees, local fines and even local government taxes (see <https://www.theguardian.com/world/2020/aug/22/the-return-of-shell-money-png-revives-old-ways-after-covids-blow-to-economy> – last accessed 22.02.2021).

to have caused the invention of small subsidiary 'coins'.<sup>27</sup> These were more practical for local trade even in comparison with the smallest fractions of electrum coins.<sup>28</sup>

Over the last decades, more and more scholars share the (still hypothetical) view that the use (and then production) of arrowheads for this monetary purpose was originally connected with the cult of Apollo (especially in his hypostases as *Ietros* and *Toxophoros*).<sup>29</sup> I myself have argued previously that the arrow shape was accepted also as a possible discovery of the 'Good Savage', whether we think of the contacts established with the Thracian or Scythian hinterland.<sup>30</sup> By the Thracians, some bronze objects (the so called 'coin hatchets') seem to have been used as tools of exchange prior to Greek colonization.<sup>31</sup> This circumstance would imply a readiness among the non-Greek trade-partners to accept a pre-

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<sup>27</sup> The term 'coins' or 'pre-monetary signs', related to the arrowheads and the Olbian dolphins, has recently been criticized by F. de Callataj, who denies their monetary/pre-monetary value. See DE CALLATAJ 2019: 266f. (with references to OBERLÄNDER-TÄRNOVEANU 1978; MIHĂILESCU-BÎRLIBA 1990; CONOVICI, AVRAM 1996; DE BOER 2002; TALMAȚCHI 2006 and 2010): "Although embarrassed by the name to give to these items, most numismatists joined the movement, soon followed by historians (philologists-historians) happy to get ammunition for a grand and early narrative about the Getae. The story of these arrowheads attesting a pacific but intense trade between the Greeks and the Getae has been repeated again and again, trying to take advantage of every scrap of evidence to postulate settlements or trade routes. The problem with this model is to take for granted that coins were produced for trade, as was the current opinion in the 1950s and 1960s". Indeed, there is a terminological confusion in the previous literature, even if we refer only to numismatists. At the same time, the nationalist approach focusing on the autochthonic endeavour of the Romanian archaeology cannot be denied, which survived in the post-communist historiography (as a best example one can mention here the History of Romanians published in 2001 [republished in 2010] by the Romanian Academy). However, it should be noted that, although F. de Callataj is also well acquainted with the existing debates in the Bulgarian, Soviet and post-Soviet historiography, here he quotes only the Romanian scholars. Maybe because the research conducted by numismatists and archaeologists in the former Soviet space has nothing to do with the "grand and early narrative about the Getae" (if we do not take into account some researchers from Chişinău/Kishinev). Regarding Bulgarian scholars, I quote here only BALABANOV 2011: 169: "More than 90% of finds of this type come from the Greek colonies and their surroundings. Therefore, today it is not controversial to assert that they served the internal trade of the Greek city-states, moreover, it was small retail operations. This circumstance gives us reason to consider 'arrow-money' as a regional form of non-coin money for servicing small trade operations, characteristic of western and north-western poleis along the Black Sea coast before the beginning of the Hellenistic time".

<sup>28</sup> Regarding the emergence of the monetary circulation in the north-western Black Sea area, still relevant are the remarks made by KARYSHKOVSKIY 1988: 27-34. Cf. SOLOVYOV 2006: 65: "In turn demand of the regional development and daily needs of the population in contact zones obviously were the reason of invention of small subsidiary coins, because even the smallest fractions of electrum coins, which widely circulated in the Eastern Greek world, were used mainly for international commerce, rather than for the local trade". NB! I do not try to perpetuate here the Marxist evolutionary explanation giving a grand role to local societies with the emphasis put on trade and commerce. I just want to point out that we cannot deny the existence of a money market in the Greek settlements on the north-western Black Sea coast since the Archaic time. This, even if the share of the currency will have been lower compared to the barter, especially regarding the exchange relations between the Greeks and the populations of the hinterland. I believe that P. Balabanov's previous reflections in this regard are also worth noting (BALABANOV 2011: 163): "At the same time, the fact that they (i.e., non-coin forms of money – remark V. Cojocaru) are reliable sources of information about the state of economic relations, the formation of local and regional markets and the development of market elements in the economy of specific ethnic formations remains underestimated. For traders of the ancient time, it was not the origin and form of banknotes that mattered (today the situation in world trade has not changed), but their real value. That is, we have no reason to interpret non-coin forms of money as 'barbaric' or indicating a lower level of market development in a given society. Let us recall that, for example, in China, the classic coins characteristic of the European continent appeared rather late and only as one of the used forms of money".

<sup>29</sup> This idea was first formulated by RUSYAEVA 1986: 49f. (cf. 2005: 229-231). The idea was readily accepted (ANOKHIN 1986: 83-85; 1989: 5f.; KARYSHKOVSKIY 1988: 33) or at least mentioned as interesting by several numismatists (PREDA 1991: 27; SHELOV 1993: 147). See now DE CALLATAJ 2019: 265: "In other words, put into iconographic perspective, to explain dolphins and arrows as a reference to Apollo works much better than a reference to salt-fish and grain". The author also refers to FINLEY 1985: 136, who notes that coin types are rarely referring to economic productions and never to manufactured products.

<sup>30</sup> COJOCARU 2011: 32: "Als eine Schlussfolgerung zu meiner bisherigen Diskussion vermute ich in der Pfeilform des frühesten bekannten Geldäquivalents im nordwestlichen Schwarzmeerraum einen Einfluss der Hirtennomaden und Steppenherren, mit welchen schon die frühesten mittelmeerischen Kolonisten in Handelskontakten stehen mussten". Regarding the phrase 'good/noble savage' (*bon sauvage*, in French), introduced in seventeenth-century English literature to designate the idyllic image of the 'savage' uncorrupted by Western civilization (which reminds, moreover, of the idealizing perspective on the 'Barbarians' to the ancient authors – beginning with Ephoros), there is a vast literature. I would like to quote here only some more important works of synthesis: ELLINGSON 2001; LEBLANC 2003; FAUVELLE 2017.

<sup>31</sup> Bronze axes and sickles seem to have had a valuable function, taking pre-monetary forms, since the late Bronze Age. Thus, Chr. Sommerfeld draws attention to the intentional stuffing of the sickle blades, in the sense of obtaining a kind of 'small change' – see SOMMERFELD 1994. For Thrace, the North-Pontic area, and other regions, cf. BALABANOV 2011: 162-165, with the conclusion on the p. 173: "Obviously, at the end of the Bronze Age, trade contacts of Thrace with the Mediterranean centres were very intensive.

monetary token instead of traditional bartering, i.e. exchanging different products in kind.<sup>32</sup> However, we cannot ignore the likeness – sometimes close to identity – of ‘arrow-money’ with the functional arrowheads of Scythian type (Pl. I.2).<sup>33</sup> At the same time, we know from Herodotus that king Ariantas, desiring to know the census of the Scythians, commanded every Scythian to bring him the point from an arrow, and that these arrowheads could even be casted into different objects.<sup>34</sup>

All the available evidence seems to indicate nevertheless that arrowheads – very different in size and weight<sup>35</sup> – were produced in Ionian colonies on the seaside,<sup>36</sup> both for the inner polis market and the purpose of facilitating easier trade with the ‘barbarians’ around (even if we were to speak only about a secondary functionality).<sup>37</sup> There is a scale-weight from Berezan reproducing an arrowhead and weighing 28.65g.<sup>38</sup> This has led some scholars to believe that its

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Moreover, in the course of their implementation, metal ingots were used, which played the role of money. They, obviously, were, on the one hand, the raw material for the manufacture of objects, and on the other, they also had an abstract value. Its value, however, was not guaranteed by the power centres and therefore was ‘floating’, that is, it fluctuated in accordance with a specific market configuration. By virtue of this consideration, it can be assumed that mainly trade was conducted on the principle of barter transactions, without absolute estimates of the value of goods”. See now also KUIJPERS, POPA 2021, who present a method for detecting perceptible standardization of weights and apply this to 5028 Early Bronze Age rings, ribs, and axe blades from Central Europe. The authors suggest that producing copies of rings led to recognition of weight similarities and the independent emergence of a system of weighing in Central Europe at the end of the Early Bronze Age.

<sup>32</sup> See TALMAȚCHI 2010: 10-14 and 110-112 (cf. TALMAȚCHI 2006). Cf. the critique in DE CALLATAÏ 2019: 266f., as well as my considerations in notes 27 and 28 above.

<sup>33</sup> See a clear analogy already in SEVEREANU 1926. Further development of this idea in MELYUKOVA 1964: 18f. and 28, Fig. 1; GRAKOV 1971a: 90.

<sup>34</sup> Hdt. 4.81: (...) βουλόμενον γὰρ τὸν σφέτερον βασιλέα, τῷ ὄνομα εἶναι Ἀριάνταν, τοῦτον εἰδέναι τὸ πλῆθος τὸ Σκυθῶν κελεύειν μιν πάντας Σκύθας ἄρδιν ἕκαστον μίαν ἀπὸ τοῦ διστοῦ κομίσαι. ὃς δ' ἄν μὴ κομίση, θάνατον ἀπέλειε. κομισθῆναι τε δὴ χρῆμα πολλὸν ἄρδιων καὶ οἱ δόξαι ἐξ αὐτέων μνημόσυνον ποιήσαντι λιπέσθαι. ἐκ τουτέων δὴ μιν τὸ χαλκίμιον ποιῆσαι τοῦτο καὶ ἀναθεῖναι ἐς τὸν Ἐξαμπαῖον. (“For their king, whose name was Ariantas, desiring to know the numbers of the Scythians, commanded every Scythian to bring him the point from an arrow, threatening all who should not so do with death. So, a vast number of arrow-heads was brought, and he resolved to make and leave a memorial out of them; and he made of these this bronze vessel, and set it up in this country Exampaeus”. Transl., with a brief commentary, by DE CALLATAÏ 2019: 269, with n. 72).

<sup>35</sup> The data practically vary depending on each hoard discussed, which in my view diminishes the relevance of an average height and weight when considering all the finds under discussion. Nevertheless, let me at this point also quote the opinion of an expert – PREDA 1998: 35: “From the available information, it follows that most of the pieces, around 70-80%, weigh between 4 and 5 g, or, in a larger context, between 4 and 6 g. The specimens from Olbia and the surrounding area are said to have an average weight of 4.5 g”. The same author mentions some pieces from Tomis that weigh between 1.15 and 2.92 g. On the other hand, some arrowheads as money equivalents from the Jurilovca [Zhurilovka] hoard even reach about 9 g. In a find from Berezan, the lightest piece weighs only 1.57 g, see PIVOROVICH 2001: 150. Cf. also BANARI 2003: 290, n. 1294.

<sup>36</sup> This idea was first formulated by PREDA 1961; cf. DIMITROV 1975; BALABANOV 2011: 169. See now DE CALLATAÏ 2019: 264f., who recalls two strong arguments in this regard – 1) some arrowheads exceptionally present letters or motives which seem to connect them with Greek cities; 2) the moulds for arrowheads were found at Olbia and Athia, near Apollonia. For arrowheads-ingots, which have represented the wheel on one side, as a solar symbol (at Histria), respectively the letter A or an anchor (at Apollonia), see also IACOB *et al.* 2001: 203f. The authors do not consider them pre-monetary signs, but coins of a particular shape (like the Olbian dolphins), defining them (with reference to WELLS 1978) as “money but not coins”. I remark here a certain contradiction (*coins but not coins*), about which see more detailed the note 27 above. For two recently discovered monetary-signs with the symbols of the wheel and a fish from Histria, see G. TalmaȚchi (*Discoveries of monetary signs as a result of archaeological research in Histria* – see note 7 above).

<sup>37</sup> For an original main functionality as tokens for the worshippers of Apollo, I shall return below. A possibly private production (authorized or not), as DE CALLATAÏ 2019: 265 tends to believe more recently, would not exclude in my humble opinion the use of arrowheads to pay for certain goods under certain conditions. Cf. BALABANOV 2011: 167: “(...) the production of non-coin money was not controlled by the state or any other authority. They could be made by any craftsmen and centres for the production of metal products. One can also think of situations when they were made specifically to pay for a specific trade or for use in trade between specific counterparties”. For the private production of the ‘arrow-money’, see already ANOKHIN 1986: 38; cf. BANARI 2003: 290, n. 1296.

<sup>38</sup> GRAKOV 1971b; cf. WELLS 1978: 8.

weight was normed,<sup>39</sup> but any attempts at establishing an exact value by reference to silver or electrum remain too speculative to be credible.<sup>40</sup>

Not even the chronological limits within which 'arrow-money' was in circulation are agreed on. The rough time frame is constituted by the second half of the 6th and early 5th century BC.<sup>41</sup> The mention of ἄρδις on a black glazed skyphos<sup>42</sup> shows that in Olbia they were still in use as a means of payment by early 5th century, obviously in parallel with the other pre-monetary tokens called 'dolphins' (Pl. I.3).

Archaeological research has shown that, already by mid-6th century, the Scythian Power Centre emerged in the steppe and steppe forests of the Lower Dnieper as a result of extensive migration to the West.<sup>43</sup> In this context of increasing economic activity and intensifying trade contacts with West-Pontic Thracians and the new rulers of the North-Pontic steppes,<sup>44</sup> it seems that the Ionian settlers had to find a means of a lower exchange value, but of more intense circulation.<sup>45</sup> At the same time, the colonization of new territories can still be associated only with copper exploitation (as part of the bronze alloy) – as shown, for example, in the Altyn Tepe deposits near Jurilovca [Zhurilovka]/Argamum –, where gold and silver were articles of import.<sup>46</sup> Apollo Ietros, especially as τοξοφόρος, could have been recommended by the oracle of Didyma<sup>47</sup> as a protective deity designed to facilitate direct contacts between Greek colonies on the seashore and the 'Good Savage', whether West-Pontic Thracians or the Scythians in their migration to the west.

Previously, indirect scholarly arguments included the votive arrows discovered in the sanctuary of Apollo Ietros at Olbia, as well as the dolphin-tokens, which seem to have evolved from the 'arrow-money'<sup>48</sup> under the influence of the cult of Apollo Delphinios.<sup>49</sup> At the same time, attention has been drawn to attributes such as the bow and arrows depicted on Apollo's early statues of Apollonia Pontica and Olbia, and the mythical tradition of Apollo Hyperboreus.<sup>50</sup>

<sup>39</sup> See e.g. ANOKHIN 1989: 6f. with Plate 1; ALEKSEEV 2010. Cf. DE CALLATAÏ 2019: 266: "These reconstructions are not only unconvincing (...) but moreover unnecessary in the hypothesis of a fiduciary bronze coinage".

<sup>40</sup> KARYSHKOVSKIY 1988: 34 assumes only a legal determination of the value between bronze arrowheads (according to number) and electrum coins. Cf., more speculative, SOLOVYOV 2006: 69, with No. 29.

<sup>41</sup> Thus, I agree with the dating proposed by KARYSHKOVSKIY 1988: 30; supported by PREDA 1998: 36f., 39; POENARU BORDEA 2010: 586. Cf. now TALMAȚCHI 2017a: 49: "(...) at the end of the first half of 6th century BC to the first half of 5th century BC"; ISVORANU 2018: 231: "the interval ca. 550 – the first decades of the 5th century BC". Much broader and more difficult to demonstrate is the dating proposed by BALABANOV 2011: 168 (with reference to TOPALOV 2007): "from the end of the 7th to mid-4th century BC". See also the different opinions mentioned by DE CALLATAÏ 2019: 262f., who do not subscribe to a specific dating.

<sup>42</sup> See DUBOIS 1996: 73, No. 31, who dates the inscription around 500 BC: "Ὁς θέλει βενέν, δέκ' ἄρδις καταβαλῶν πυγίζετω (...) Ἡφαίστοδωρον. For the translation, see DE CALLATAÏ 2019: 269: "Who wants to fuck will pay ten arrowheads and will fuck [from behind] (...) Hephaistodoros".

<sup>43</sup> Cf. ROLLE 2001: 646-648, with the map.

<sup>44</sup> So, a 'numismatic find of the Scythians' by the Greeks, even if we accept M. I. Rostovtzeff's argument that in this area only the upper classes culture was Scythian (ROSTOWZEW 1931: 275; cf. KOTHE 1969: 39).

<sup>45</sup> At this point I would like to quote from a comment on the law on foreign currencies at Olbia (Syll.<sup>3</sup> 218), which could be interesting for our topic: „La cité voulait donc que les commerçants arrivent au bureau de change de la cité avec des pièces dont la valeur commerciale était reconnue et non avec des lingots ou autres barres de métal précieux ou bijoux qui figurent dans un certain nombre de trésors monétaires de la région. Ces métaux non monnayés, et même peut-être encore des dauphins de bronze, étaient peut-être plus volontiers utilisés par les indigènes Scythes de l'arrière-pays (emphasis V. Cojocaru) qui recevaient de l'argent de l'Oural et qui pouvaient être tentés de traiter directement avec les marchands grecs en quête de blé sans passer par Olbia où la cité imposait un monopole local des transactions" (DUBOIS 1996: 33).

<sup>46</sup> ZLATKOVSKAYA 1971: 48; ANOKHIN 1986: 81-83; cf. TALMAȚCHI 2009: 593f.; 2010: 593f.

<sup>47</sup> SEG 36, 694; 40, 611. Cf. DUBOIS 1996: Nr. 93. The inscription was first published by RUSYAEVA 1986: 26-28. Against the fanciful commentary of the first editor, see EHRHARDT 1987: 116f.; BURKERT 1990.

<sup>48</sup> For the representation of a fish-arrow from Berezan, see COJOCARU 2011: 41, Pl. IV.9. Cf. BANARI 2003: 295f.: "Jedoch weisen mehrere Exemplare eine stark stilisierte Ausformung aus, so dass darin nicht immer der Prototyp eines Delphins zu erkennen ist. Einige sogenannte spitznasige Delphine sehen eher einem Fisch ähnlich. Darüber hinaus nähern sich einige Exemplare sogar der Pfeilspitzenform. Diese Tatsache unterstreicht, gemeinsam mit dem ähnlichen Herstellungsverfahren und der parallelen chronologischen Übereinstimmung, den identischen Verwendungszweck der vormonetären Pfeilspitzen und Delphine".

<sup>49</sup> The cult of Apollo Delphinios is particularly attested in Olbia. Cf. EHRHARDT 1989: 121: "In Istros und anderen westpontischen Poleis etwa ist der Kult des Delphinios nicht bezeugt, und hinsichtlich dieser Städte könnte man daran denken, daß der Delphinios vom Ietros verdrängt wurde". More recently CHIEKOVA 2008: 38, n. 98 wrote about an unpublished dedicatory inscription from Odessos, as the first evidence of Apollo Delphinios in the Western Pontic region.

<sup>50</sup> See, in summary form, RUSYAEVA 2005: 231; CHIEKOVA 2008: 27f. Cf. SOLOVYOV 2006: 71, who considers that the circulation of 'arrowheads' and 'dolphins' was probably authorised by the temples of the two deities (Apollo Ietros and Apollo Delphinios).

As a conclusion of the first part of my approach, I would like to express my agreement with a hypothesis previously expressed by some Russian scholars, such as Yu. G. Vinogradov, S. Yu. Saprykin and S. L. Solovyev.<sup>51</sup> Despite the possible different geo-political conditions in each Milesian *apoikia*, the extensive circulation of 'arrow-money' as well as of the cast copper coins in general from Apollonia Pontica to Kerkinitis allows the assumption that the whole region had one united market;<sup>52</sup> this was connected with the sacred sphere of the Greek colonists' lives, from the very beginning to the Classical times. François de Callataÿ's recent hypothesis that arrowheads and Olbian dolphins were created as tokens for the worshippers of Apollo<sup>53</sup> could indicate only one of the functionalities (possibly originally the main functionality). However, I do not think that it excludes the use of those signs in commercial transactions on the local/regional market,<sup>54</sup> or even in a funerary context, as 'Charon's obol'.<sup>55</sup> Besides, arrowheads are also known as votives to other deities. Interesting in this context is the discovery of more than eighty bronze arrowheads within a sacrificial site on the Kerameikos, associated with the cult of Dionysus and two Scythian statues.<sup>56</sup> Although the find was considered "unusual and unique" (*ungewöhnlich und singular*),<sup>57</sup> I find a possible parallel in the bronze arrowheads offered as votives to Achilles on the island of Leuke<sup>58</sup> and Cape Beykush.<sup>59</sup>

If we attempt a comparison with the circumstances in other peripheral societies, the idea developed by L. Hedeager about the economy of border regions as a third sphere between the Roman and the Germanic economic systems, seems very suggestive.<sup>60</sup> Before reaching Germania, Roman goods had to pass through some form of economic or social barrier on their way from the classical world. Like in the Roman Iron Age, we could imagine that 'arrow-money', Olbian dolphins and the subsequent small copper coins would be most easily accepted as standard value, acting as the intermediary and convertible factor in the various transactions between Greek money economy and the prestige economy of the Thracian and Iranian 'Barbarians'.

One may further extend the comparison between peripheral societies and a Mediterranean power. By looking at similarities with the Celtic and Germanic World, D. Wigg-Wolf provides another possible approach to a better understanding of the reasons why arrowheads and other (pre)monetary-signs might have been introduced: "With the production of smaller bronze units, often in considerable numbers, it became possible to use coin for small-scale, everyday

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<sup>51</sup> VINOGRADOV 1997a: *passim*; SAPRYKIN 2004: 73f.; SOLOVYOV 2006: 67

<sup>52</sup> Cf. BALABANOV 2011: 170: "It can be assumed that in the territory where arrow coins were circulating (...), there were quite intensive internal economic ties that ensured the circulation of these ingots as a generally recognized international currency. This is confirmed by the results of the analysis of antique imports (amphorae and black-glazed vessels), which for this region demonstrates very close analogies, both in terms of assortment, and in terms of production centres and the specific weight of certain categories of artefacts". See also SOLOVYOV 2006: 67, No. 11: „Certainly, I am far from supporting the idea that any political union of Greek colonies existed in the Northern Black Sea in the Archaic period, but the close economic relationship established between them from the very beginning of their foundation is a fact”.

<sup>53</sup> DE CALLATAÿ 2019: 269 (with reference to COJOCARU 2010 and 2011): "Not venturing into the definition of money (as a broader concept than coins), I would like to conclude arguing that these dolphins and arrowheads are best conceived as originally created as tokens for worshippers of Apollo (*i.e.* as payments for the god)". Already ANOKHIN 1986: 86 interpreted 'arrow-money' as exclusively cult votives, which were connected with the sacral sphere of the Greek colonists' life. POENARU BORDEA 2010: 586 also considers that 'arrow-money' could have evolved from offerings of this form to Apollo. See now TALMAȚCHI 2017a: 53, who describe a votive deposit of late Archaic time at Histria. Among the findings the author mentions some small vessels (*olipai*, Corinthian alabastra), Ionian cups, monetary-signs, a painted terracotta, etc.

<sup>54</sup> Cf. G. Talmatçi (*About the monetary-signs and their presence in the settlements of the native population in the Istro-Pontic area* – see note 7 above): "In the traditional local environment there can be no connection of the signs (*i.e.*, monetary-signs – V. Cojocaru) with Apollo and the adjacent symbolism, the only form of manifestation being the commercial, exchange, accompanying the Greek goods attested archaeologically among the finds". See also BANARI 2003: 295: "Daher liegt es auf der Hand, dass diese Gegenstände als Zahlungs- und Tauschmittel sowohl im griechischen als auch gräko-barbarischen Handel verwendet wurden. Der Fund von Pfeilspitzen mit zeitgleichen griechischen Importen scheint mir kein Zufall zu sein”.

<sup>55</sup> G. Talmatçi (*Finds of monetary-signs as a result of archaeological research in Tomis* – see note 7 above) discusses five monetary-signs and a coin 'with a wheel' coming from the inventory of a closed funerary complex at Tomis. Regarding the use of dolphins in a funerary context in the *chora* of Olbia, see SAPRYKIN 2004. Cf. also BANARI 2003: 289f. with No. 1292.

<sup>56</sup> BÄBLER 1998: 178f. (with previous bibliography).

<sup>57</sup> BÄBLER 1998: 178.

<sup>58</sup> OCHOTNIKOV 2006: 73.

<sup>59</sup> BUJSKICH 2006: 136, 139, 143.

<sup>60</sup> HEDEAGER 1988.



transactions, and so coinage could be used as a mean of exchange in a limited cash-based economy".<sup>61</sup> As in the case of the final phase of Celtic coinage in Gaul, the monetary function of the arrowheads and 'dolphins' was in late Archaic and early Classical times more or less restricted to *poleis* with their *chorai*.

The bronze arrowhead could have met the necessary conditions to impose itself as a means of exchange in the context of relations with the Thracian and Iranian populations for several reasons: the existence of arrows as a weapon of war, the development of the cult of Apollo Ietros as an arrow bearer,<sup>62</sup> possibly under the influence of a local deity, not least the existence of copper deposits in the area and the importance of bronze for the natives from the perspective of hoarding long before the arrival of the first Greek settlers. In summary, I note that the idea of currency – which would be already known to the first settlers of the north-western Pontic region (judging by certain electrum coins finds) – required an 'accommodation stage' in the form of an equivalent accepted by exchange partners of the hinterland as well.

## II. THE 'SCYTHIAN' COINS IN THE CONTEXT OF THE 'NOMADIC-SETTLED' DICHOTOMY

In the second part of my approach, I would like to focus on another particular aspect of numismatic evidence in the context of long-term relations between the Greeks and non-Greeks in the western and north-western area of the Pontus Euxinus. I mean recognition of coins as symbol of legitimate power by some 'barbarian' dynasts. The limited space frame unfortunately does not allow discussing here the bronze coins of Scyles from Nikonion<sup>63</sup> and the Eminakos silver staters from Olbia,<sup>64</sup> both dated to the 5th century BC, or the later silver pieces with the legend ΑΤΑΙΑΣ, supposed to have been struck in Heracleia Pontica, Dionysopolis and Callatis.<sup>65</sup> Thus, my focal point would be the 2<sup>nd</sup> century BC, when in the territory of Scythia Minor (current Dobrudja), six dynasts with Iranian names are recorded to have used coinage with Greek iconography and legends.

So far, over one thousand bronze pieces of various types are known:<sup>66</sup> they depict familiar images from the Greek iconography, but bear non-Greek anthroponyms like Tanousas, Kanites, Akrosas, Charaspes, Aelis/Alios, and Sariakes.<sup>67</sup> The last even appears on silver drachmas.<sup>68</sup> Firstly, one may notice that the area where these 'Scythian' coins were discovered corresponds to a large extent to the region in which (pre)monetary-signs such as the aforementioned arrowheads circulated. This once more refers to the Greek cities located on the north-western coast of the Black Sea as well as to their immediate surroundings. Since almost all representations on the obverse and reverse of the coins are related to Greek mythology, it becomes obvious they were not only struck in the urban communities on the coastline, but also circulated within the internal markets of the respective *poleis*. This assumption is confirmed by various indications: the typology of the coins; the countermarks on them referencing cities such as Histria, Tomis or Callatis on some pieces and the monograms representing the monetary magistrates and further guaranteeing certain value.

The iconographic program is for the most part as conventionally Greek as can be, with depictions of Zeus (Pl. II.1,10), Demeter (Pl. II.2,11), Demeter and Kore (Pl. II.3,6,13), Hermes (Pl. II.4,8), Heracles (Pl. II.5), Dioscuri (Pl.

<sup>61</sup> WIGG-WOLF 2008: 36.

<sup>62</sup> Cf. COJOCARU 2011: 32f.: "(...) nicht nur die Pfeilmünzen sondern auch die außer im Pontosraum ungewöhnliche Verbreitung des Apollokultes in seiner Hypostase als Ietros, der sich in Apollonia Pontica, Histria und Olbia sogar zum Hauptkult der Stadt entwickelte, deutet auf eine umgekehrte Repräsentation der Bevölkerung hin, die den Bogen als Hauptwaffe hatten. Also könnte Apollo Ietros aufgerufen sein, die Direktkontakte zwischen den griechischen Pflanzstädten an der nord-westlichen Schwarzmeerküste und den Skythen in ihrer großen Westbewegung zu erleichtern".

<sup>63</sup> ZAGINAYLO, KARYSHKOVSKIY 1990.

<sup>64</sup> KARYSHKOVSKIY 1988: 49-52; KULLANDA, RAEVSKIY 2004.

<sup>65</sup> DRAGANOV 2015: 33-61.

<sup>66</sup> So DRAGANOV 2015: 7: "(...) a database with more than 1000 Scythian coins was assembled by the author over many years"; cf. p. 8: "The conclusions drawn by this study were based on the most comprehensive database of Scythian royal coins ever assembled, comprising 1,084 coins". For further finds, I quote here only TALMAȚCHI 2017b (with an extensive previous bibliography).

<sup>67</sup> I have followed the transcription of the names and the succession of the six dynasties proposed by DRAGANOV 2015: 8, 63, 66-68. Cf. TALMAȚCHI 2017b: 159, with No. 8. See also a recent summary discussion in STOLYARIK 2017, who concludes on p. 452: "The Scythian ethnic presence in the Dobrudja is today probably best attested by the coinage issued by the Scythian kings Kanites, Tanousas, Charaspes, Aelis, Akrosas and Sariakos (sic)". Unfortunately, the author avoids arguing for a more accurate dating of the respective coins, noting only that "in the studies of these coins there are real disagreements about chronology, which as a whole usually ranges from the beginning of the third century BC through the first decades of the first century BC".

<sup>68</sup> DRAGANOV 2015: 258f., No. 764-773; cf. DRAGANOV 2020.

II.7,12,14), Apollo, Helios, the lightning bolt and the eagle, caduceus, the tripod, etc. There are, however, some indications that allow us to assume reversed influence, reflecting the mindset of the Iranian nomads. For instance, representations such as horse *protomai* (Pl. II.12,14) or arrowheads (Pl. II.9), even though they cannot be interpreted exclusively as nomadic motifs, certainly enjoyed great popularity in the Scythian environment.

Of particular interest is King Skiluros who reigned from his capital Neapolis. He is not only mentioned by Strabo,<sup>69</sup> but also on certain lapidary inscriptions,<sup>70</sup> as well as in a series of bronze coins dated between 140/135 and 115/110 BC. Several scholars have identified as his the portrait on the obverse of a coin type from Olbia (Pl. III.1/1-2).<sup>71</sup> On it his head looks right, is bearded and carries a sharp bonnet, similar to the Dioscuri on the bronze coins of Aelis/Alios, Akrosas and Charaspes.<sup>72</sup> Other contemporary pieces from Olbia display covered female head likewise looking right (Pl. III.1/3-5), or god Hermes (Pl. III.1/6-7). The symbiosis between the two different worlds becomes even more obvious when looking at the attributes on the reverse: wheat ear with club and quiver with bow, Scythian horse-drawn chariot and a caduceus. The legend always reads ΒΑΣΙΛΕΥΣ ΣΚΙΛΟΥΡΟΥ and ΟΛΒΙΟ.

The 'Scythian' coins have often been invoked as argument for an existing Scythian protectorate over the Greek cities on the north-western coast of Pontus Euxinus – a modern idea that I have tried to deconstruct in more detail elsewhere.<sup>73</sup> In the present discussion, I would like to ask the question whether the coinage naming Tanousas, Kanites, Akrosas, Charaspes, Aelis / Alios, and Sariakes potentially implies – like the Skiluros issues from Olbia – the existence of Scythian protectorates on Histria, Tomis, Callatis or Dionysopolis? But if so, we would have to account the fact that countermarks of those cities appear on some coins minted by the dynasts listed above. Moreover, if the notion of 'protectorate' also implies taking control of the local mints, how could one explain that the Skiluros coinage was issued in parallel with the autonomous bronze currency of Olbia? Crucial for solving the issue is ultimately defining how one should understand the modern notion of 'Scythian protectorate'?

#### CONCLUSIONS AND OUTLOOKS

Obviously, numismatic evidence is, despite its limitations, key to answering a host of questions related to the north-western Black Sea area in antiquity. The questions I have raised here, while they might seem to refer to certain antiquarian peculiarities, have in fact the potential of widely opening windows into the history of cultural interactions in the Pontic space. What is needed, though, are systematic enquiries based on all available sources. A catalogue compiling all relevant finds is thus a desideratum, whether we want to study 'arrow-money' and 'dolphins' or 'Scythian' coins.<sup>74</sup>

Another goal consists in the constructive cooperation between Romanian, Bulgarian and other scholars from the former Soviet Union, which should lead to sober interpretation of the documentary material. Many contributions, especially those published during the communist regime, are impregnated with Marxist thinking, and much of this now belongs to the past.<sup>75</sup> And, in addition, even today most publications presenting new finds or discussing long-known materials are far away from interdisciplinary approaches that combine methods, concepts and theories from archaeology, numismatics, epigraphy, art history and history under the umbrella of Classical Studies.

We therefore have to re-assess our numismatic evidence in line with the standards that many Western European research institutions have achieved over the last decades. Whether we are talking about (pre)monetary-signs or currency itself, I agree with F. Kemmers and N. Myberg that we must take into account the coin's historical and ideological characteristics and thus distinguish between minting (primary context), its use (secondary context) and deposition

<sup>69</sup> Str. 7.4.3 and 7; cf. 7.3.17.

<sup>70</sup> Syll.<sup>3</sup> 709 = IOSPE I<sup>3</sup> 352; SEG 37, 674; 39, 692. Cf. VINOGRADOV 1997b.

<sup>71</sup> See, for instance, FROLOVA 1964: 44. KARYSHKOVSKIY 1988: 102 wrote about an unidentified deity.

<sup>72</sup> More about the iconography of the Scythian coins in Dobrudja, see now DRAGANOV 2015: 68-83 (with Dioscuri on p. 72-74); cf. p. 8: "The Scythian kings chose the Dioscuri as their primary coin type (paraseimon)".

<sup>73</sup> COJOCARU 2009 (cf. 2007).

<sup>74</sup> For 'Scythian' coins, DRAGANOV 2015 may be considered as a working tool only for Dobrudja.

<sup>75</sup> Cf. DE CALLATAÏ 2019: 266: "But the main problem with the 3-steps evolutionist *scenario* "1) barter, 2) commodity shaped monetary tokens, 3) coins", in which each step is an original development of the last one, is the emphasis put on trade and commerce. Infused by Marxist ideas, a vast literature has developed about intensive trade between societies in which, as elsewhere, it is likely that the very concept of monetization was implicitly taken as a proxy for development *tout court*".

(tertiary context).<sup>76</sup> The archaeological and written sources (especially inscriptions) provide a basis for a simplified model describing money functions in the north-western Black Sea area on various levels (circulation, transformation and deposition) in the Archaic, Classical and Hellenistic periods.

I believe there are at least nine means by which coinage flowed from the Greek cities on the Black Sea coast to their *chorai* and further to the inland tribes (Pl. III.2):<sup>77</sup> 1. Money as medium of exchange. 2. Individual finds of the lost or intentionally deposited pieces as a result of peoples' mobility. 3. Annual tribute paid mainly in gold, as for instance by Olbia to Saitapharnes. 4. Diplomatic gifts, which played an important role in the indigenous networks of gift exchange. 5. Payment to mercenaries, for instance, by Histria to king Remaxos and his son Phradmon. 6. Ransoms for prisoners, usually paid in gold and particularly common in Hellenistic times. 7. Occasional raids of the *poleis* by some barbarian dynasts, as for instance by Burebista, even though written sources do not report they would have obtained money in this way. 8. Money hoarding (accumulation) for various purposes, including storage of coins as potential metal source. 9. Finally, Greek copper money, starting with arrowheads and 'dolphins', also seems to have played a role in rites of passage as funeral offerings.

To conclude this study, I would like to return to the 'arrow-money' and 'Scythian' coins. It appears that the Ionian Greeks, in their search of a *modus vivendi* with the 'Good Savage' of the colonized lands, discovered an effective means of exchange in the form of arrowheads; this facilitated their trade relations with the Thracian world and the Iranian masters of the North-Pontic steppe. Is it an irony of history that a few centuries later, the sedentary Scythian dynasts embraced the power of persuasion inherent to Greek coinage, when searching for tools to enhance their legitimacy?

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<sup>76</sup> KEMMERS, MYBERG 2011: 90.

<sup>77</sup> Cf. MUNTEANU 2013: 367-372, who has previously discussed six non-commercial possible ways, by which Greek coins fell into the hands of 'Barbarians': 1. Tribute (single or annual) and payment of amounts required by alliance treaties; 2. Military payments to mercenaries; 3. Ransoms for the prisoners; 4. Spoil raids; 5. Diplomatic gifts; 6. Peoples' mobility.

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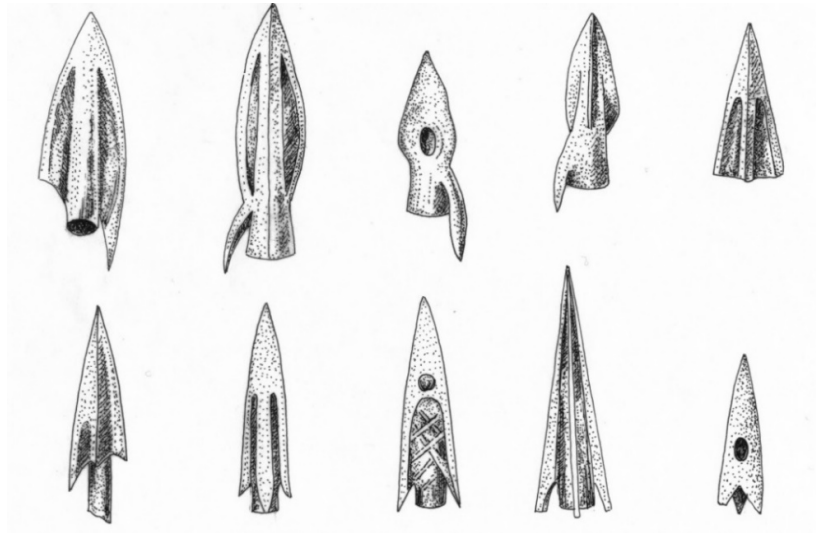
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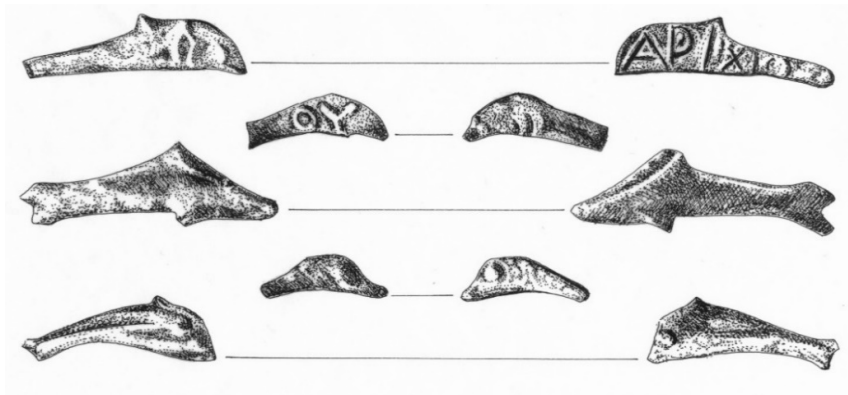




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Pl. I. 1. 'Arrow-money' hoard from Jurilovka [Zhurilovka] (Museum of Archaeology Tulcea, photo V. Cojocaru);  
 2. Early Scythian bronze arrowheads (after GRAKOV 1971a: 90 [not to scale]);  
 3. Olbian 'dolphins' (after ZOGRAF 1951: Pl. XXX.7-11 [not to scale]).





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Pl. III. 1. Skiluros' coins from Olbia (after FROLOVA 1964: 46, Fig. 1 [not to scale]); 2. Coins as a medium of exchanges between the Greek money economy and the 'Barbarian' prestige economy in the north-western Black Sea area.