NAMES AND MINTMARKS AT THE MINT OF DYRRHACHIUM (c.270-60/55 BC): A CASE STUDY

Abstract – The Dyrrhachium drachmas, struck by the city for about two centuries, are an interesting coinage showing a remarkable system of control marks, whose study permits to make hypotheses on the organization of the city’s mint. This system of control marks will be the focus of this article. Two names appear on the obverse and reverse of the coins and different symbols are also applied. These control marks will be examined in order to show their function as well as the way they are related to one another. The study of the coins proves that the two persons whose names appear on coins play distinctive roles in the minting process and they have different responsibilities. Also, symbols are linked to only one category of names. Some important conclusions will be reached on the basis of the various observations made on the coins, and a new schema for the organization of the mint will furthermore be proposed.

This article examines the coins of Dyrrhachium, more precisely the drachma issues of the city. Located on the Eastern coast of the Adriatic Sea, the city was founded as a colony of Corinth and Corcyra by the end of the seventh century BC (Thucydides, 1, 24:2; Appian, Bellum Civile, 2.39). Despite its early foundation, the city only struck its first coins by the end of the fifth century, though only few specimens of some Corinthian type staters are known from its first issues. The attribution of these coins to Dyrrhachium is made solely on the basis of the appearance of the letter epsilon below the Pegasus. It has been suggested that it refers to Epidamnus, the original name of the Greek colony (Kraay 1976, p. 84; Kagan 1998, p. 170). It was only by the middle of the fourth century that the city started to mint coins regularly. Its first staters were of the Corinthian type. Studies show they were minted to respond to the appeal made by Corinth to her colonies to strike coins to finance the Corinthian expeditions to Sicily, around 344 BC (Kraay 1976, p. 127-128). This coinage was soon abandoned to give way to a new type of stater that follows the principal Corcyrean type. A cow suckling a calf and a floral pattern are represented on the obverse and reverse of the coins, and the legend ΔYP for Dyrrhachium, as well as a club on the reverse, are added to the main type. Some smaller denominations were minted parallel to these staters: the Heracles/Pegasus type, and a bronze denomination representing Heracles on the obverse and an arch, a club, and a quiver on the reverse. This series was

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abandoned in about 270 BC (Gjongecaj 1998, p. 100-101) and replaced by some new smaller denominations, of which the principal was the drachma.

This article will focus on a peculiar and remarkable aspect of the latter, its system of control marks. The aim is to explain how these control marks were linked to each other and to describe how they can help to understand the mint organization. This will be done by presenting these control marks and the way they relate to on another. Previous studies and hypotheses made with regard to them will be discussed, whereupon the results of my own recent studies will be explained, in order to propose a new explanation about the mint organization.

The drachmas of Dyrrhachium are of the Corcyrean type. They depict a cow suckling a calf on the obverse and a square floral pattern as well as the city’s legend ΔΥΠ on the reverse. They weigh approximately 3.40 g (Picard & Gjongecaj 2000, p. 137-138 & 2001, p. 248). Different hoards containing these coins permit us to identify five different minting phases: 270-230/225, 230/225-168, 168-120/100, 120/100-80/70 and 80/70-60/55 BC [1]. The system of control marks applied on the drachmas of Dyrrhachium consists of two names in the nominative and in the genitive cases, respectively on the obverse and the reverse of the coins. Initially, the obverse names were abbreviated and occasionally rendered as a monogram. It was only from the second phase until the end of production in the middle of the first century BC that all names are written in full. Later on, probably by the end of the first quarter of the second century BC, various symbols were added to the obverse of the coins. The same features are to be seen on the half-drachmas minted by the city. These bear the front half of the cow on the obverse and a square floral pattern on the reverse. A name, usually abbreviated (most probably because of the small surface of the blank), is engraved on the obverse of the coins and a full name in the genitive case on the reverse. In some cases other symbols appear as well on the obverses. It is noteworthy that the obverse and reverse names on the half-drachmas as well as the symbols appearing on them are the same as those on the drachmas. This fact suggests that the same persons were in charge of the minting of the two denominations. Moreover, this suggests that the two were contemporary.

Moneyers’ names. An obverse name can be associated with different reverse names and vice versa (fig. 1-5). It seems reasonable to suggest that the issues having the same obverse and/or reverse names being repeated are subsequent or close in the chronological sequence of minting. It is also evident that the coining of drachmas and half-drachmas in Dyrrhachium, as in other Greek cities (Mørkholm 1984, p. 29-42; Thompson 1961, p. 546-599), was entrusted to a group of people, whose duties are, as it will be shown further on, specific and different from each other. A careful study of the obverse and reverse names shows that, with the exception of two names (Filotas and Meniskos), in none of

[1] This chronology considers the previous works done on the subject (see Ceka 1965, p. 19-29; Picard & Gjongecaj 2000, p. 137-160 & 2001, p. 246-248) and has been revised by the author of this article in the context of her research upon the Dyrrhachium drachmas.
the cases an obverse name appears on the reverse and vice versa. This observation is important and leads to the conclusion that the persons whose names appear on coins belonged to two different social categories. Previous studies of the drachmas of Dyrrhachium and Apollonia [2] have contributed to the theory that the names on the coins' reverse are to be identified with the 'prytane' of the city elected every year (Maier 1908, p. 1-33; Ceka 1965, p. 46-53) or with an annual magistrate in charge of the mint (Conovici 1985, p. 35-43; Petranýi 1994, p. 67-75; Giovannini 1978, p. 107). The main argument sustaining this was the appearance of the names in the genitive case, leading to the supposition that they were the city's eponymous magistrates (the thesis was first proposed by F. Lenormant in the late 19th century; see Lenormant 1879, p. 249). Hasan Ceka supported the theory with other evidence, the appearance on tiles of some names preceded by the preposition ἐπί (see Anamali 1957, p. 57), which are also to be found on the reverse of the drachmas (Ceka 1965, p. 52).

Scholarship has shown that it was likely that any special magistracy was created to oversee the minting of coins in Greek cities, and the persons in charge for this process were elected ad hoc (Robert 1966, p. 83-88 & 1973, p. 48; Hackens 1987, p. 5; Fröhlich 2004, p. 217; Picard forthcoming; see also de Callataÿ in this volume). The well-known decree of Sestos informs us that two persons were appointed by the city for the striking of a new bronze coinage and that these were prominent citizens (Robert 1973, p. 50). To return to the drachmas of Dyrrhachium, there is no reason to believe that there was a particular magistracy involved. Moreover, there is no proof that the names on the reverse of the coins are the magistrates of the city. No literary or epigraphic evidence exists to suggest this. Furthermore, neither the writing of the names in the genitive case, nor the common names on tiles and coins prove that they are the magistrates either. It would be very hazardous to make such assumptions merely on the basis of the coincidences of some names which, as a matter of fact, are very common Greek names, like Philodamos, Philon, etc. (see Anamali 1957, p. 31-62). The coins have provided a list of names in common for the drachmas of both cities, Dyrrhachium and Apollonia, but in none of the cases do they indicate the same person [3]. Also, in our opinion, the

[2] Apollonia struck drachmas of the same type as Dyrrhachium and a monetary alliance existed between the two cities. Moneymen's names also appear on Apollonian drachmas. See Ceka 1955, p. 32 & 1965, p. 61; Gjonëcaj & Picard 1999, p. 92 & 1995, p. 177 & 2007, p. 85-91. However, no link between the coinages has been found: the names on coins are different and Apollonian drachmas have no symbols as on the Dyrrhachium ones.

[3] Our research showed that the names in common for the two cities either minted coins in different periods or they appear only on the coins of one city and have been wrongly attributed to both cities. This is because in most of the cases Ceka's list of moneymen (Ceka 1965, p. 140-152) assembled the names published by Maier, without having seen the coins he was referring to. The existence of hybrid false drachmas (showing an obverse typical for Apollonian drachmas and a reverse of Dyrrhachium ones; see Sâslanu 1987, p. 209-219) is another explanation for this confusion of the names in common for the two cities.
presence of names on the coins of Dyrrhachium should not be linked to any liturgy, as proposed in some instances for other coinages (Thompson 1961, p. 584-599; Gauthier 1975, p. 175-178).

**Symbols.** Symbols are always depicted on the obverse of the coins. The coins show that symbols on the Dyrrhachium drachmas are linked to the names on the reverse. Thus, a reverse name is associated with one or more precise symbols which are repeated as many times as the reverse name is used, even though the obverse names they are associated with are different. For example, the reverse name Lysion is always associated with one symbol: a cornucopia. This moneyer is related to three different obverse names (fig. 3-5). We can exclude here the possibility that these symbols are some kind of ‘honour mark’ of the persons whose names appeared on the reverse, as proposed by some authors (Gauthier 1975, p. 175). There is certainly no doubt that the appearance of the names and the symbols on coins is intentional, but none of the categories appears because of the preference of individual moneyers to put their names or signs on coins. In fact, in most of the cases the presence of names and symbols or any other mark on coins is linked to a system of control created by the cities in order to have power over the production of their own coinages, as well as to recognise the responsible of the issues in case of any falsification (Picard 1987, p. 11 & 1988, p. 260).

It is to be noticed that the appearance of the symbols on the Dyrrhachium drachmas is gradual. They appear by the middle of the second phase and during the latter they are not always present on the coins. It is only from the third phase of drachmas, so after the 70s of the second century BC, that symbols appear regularly on the obverse of the coins. It is important to emphasize that there is an evident improvement in the design of symbols from their first appearance to the issues of the third phase. The first symbols were produced in very low relief making them sometimes difficult to distinguish. Their gradual appearance might also be due to this stylistic improvement.

By the end of the third phase (168-120 BC), until the middle of the first century, the use of symbols multiplied. Usually two symbols, but in some cases even three, are engraved on the obverse of the drachmas (fig. 6-7). This feature is not present for the half-drachmas, probably because their blank surface is considerably smaller than that of the drachmas. However, the number of symbols used on the latter is not progressively increased, which means that it can be different for two successive issues. Thus, the use of three symbols for one issue does not imply the use of the same number in the following.

It is interesting to note that the period when the symbols are multiplied is characterized by the increase of the quantity of the issues. During the years 120-60/55 the Dyrrhachium and Apollonia drachmas circulated throughout the Balkans (Gjongecaj & Picard 2005, p. 139-154), especially in the territories of modern Bulgaria and Romania (Conovici 1986, p. 76). More than 12,000 drachmas of both cities have been found in these territories (Glođariu 1971,
p. 77). Those of Dyrrhachium are four times more numerous than those of Apollonia \(^4\) \((\text{Poenaru} \& \text{Bordea 1983, p. 233)}\). The massive circulation of the drachmas in these territories where the coins of Dyrrhachium were not spread before, as well as the composition of the Balkan hoards, have led to the suggestion that these issues were minted to finance the Roman military campaigns in this region \(\text{(Meta, forthcoming)}\). Most of the issues from the Balkan hoards are characterized by the presence of more than one symbol. This coincidence between the multiplication of the symbols and the increase in coin production is of particular interest. Most probably, the intensification of the issues required a more ‘sophisticated’ system of control to make forgery more difficult, by making it easier to identify bad coinage. Apparently this was realized by the multiplication of the number of symbols on coins. Further, the Balkan hoards show that local imitations of the Dyrrhachium drachmas were produced and interestingly they circulated together with the original coins minted by the city itself with no distinction from them. Apparently, their Balkan users did not mind if the drachmas were a production of a local tribe or issued by the Dyrrhachium mint. On the contrary, in the other territories where the drachmas of the city circulated, that is in Dyrrhachium itself, in Apollonia and especially in the Illyrian hinterland, imitations were apparently not accepted. The fact that no Balkan imitation has been found in the Albanian hoards of the same period affirms this. The multiplication of the mintmarks (symbols) on the coins from Dyrrhachium could also be a measure to distinguish this category from the Balkan imitations and to guarantee the non-Balkan users of the drachma, who apparently continued to use them until the end of their production (four hoards comprising drachmas of the last phase of Dyrrhachium have been found in Albania; see Čeka 1966, p. 3-36; Picard & Gjongecaj 2000, p. 145-148) of the authenticity of the coins.

Furthermore, the coins show that some stylistic details are linked to the reverse names. Thus, the issue with the reverse name Kleitiorios shows a reverse square with curved lines rather elongated \(^5\), even though the obverse names can be different \((\text{fig. 8-10)}\). In some cases, some of the obverse design details also change with the changing of the reverse names, more precisely some details of the cow suckling calf type, like the dimensions of the calf, the arch of its neck, the shape of the cow’s tail, and the representation of the cow’s body, are sometimes differently designed. This phenomenon is once more mostly observed for the series minted during the last two phases, from 120-60/55 BC. The explanation for this distinction between the phases should be found in the style’s improvement. The first two phases show a clear improvement of the design: the calf and the cow are very schematic in the first issues and become well executed during the following ones. In other words, the first phases of

\(^4\) The same ratio is to be noticed in the Albanian hoards.

\(^5\) This shape of the reverse square is frequent on the Apollonia drachmas and rare on the Dyrrhachium ones.
drachmas testify to a kind of trial of the design and the engraving. Once the style has been established and the engraving of the dies well mastered it became easier to ‘play’ with the details of the design, such as the engraving of a curved or linear tail, a long arched or a small elegant neck, etc. In addition, the intensification of the rhythm of coin production during the last two phases made perhaps necessary the elaboration of the design element’s differentiation as a way to distinguish the reverse moneyers from one another. Also, we should not exclude the possibility that the remarkable stylistic similarities between the issues having the same reverse names may be due to the same engravers producing the dies. The close succession of the issues suggests that the engravers (even when they are different) are rigorously following the design of the previous dies.

We must also mention the way an obverse name is written in some cases, either in a single line or in two lines, depending on the reverse name they are associated with. For example, the name of the obverse moneyer Philostratos is written in one single line when it is associated with the reverse name Kleitorios, but his name is divided in two when in association with the reverse moneyer Damen (fig. 11-12). The same phenomenon is observed with the obverse name Eymeimon, whose issue with the reverse names Kleitorios, Phaniskos, Menekkas, Amyntas, Damages, is written in one single line above the cow. Differently from these issues, the association of Eymetemon with the reverse name Damen shows his name written in two lines. In other cases, the association of a reverse name with different obverse names can change the way the reverse names are engraved on the reverse.

**Die links.** During research on the drachmas, several interesting obverse die links came to light. Before the appearance of symbols on the obverse of the coins, there are two cases in which different reverse names use the same obverse die. The appearance of symbols on the obverse usually avoids the use of an obverse die by different reverse moneyers, each of them using different symbols. However, some exceptions are to be seen. In some few cases, the same obverse die is used for the issues of two different reverse names. For example, the issues of the obverse moneyer Maxatas with the two moneyers Aristarkos and Parmeniskos use as symbols, respectively, a corn ear and the head of Helios (fig. 13-14). It is curious to discover that in one occasion the series Maxatas/Aristarkos uses a die with the head of Helios as a symbol (fig. 15), just like the one of Maxatas/Parmeniskos. There is no doubt that the two reverse moneyers have shared the same die. What is also curious is that the other dies used for the series Makatas/Aristarkos have as a symbol the corn ear. There are more examples showing the same phenomenon. In a few other cases reverse die links are found. Thus, the obverse moneyers Maxatas and Erodotos have shared one reverse die of the moneyer Parmeniskos. Also, Theodotos and Kleon have shared a reverse die of Falakrion.
**Further Observations.** The study of the hoards containing the Dyrrhachium drachmas shows that contemporary hoards include issues bearing the same obverse names. This is noticed at all periods of production of the drachmas (Picard & Gjongecaj 2000, p. 149) and is particularly evident among the issues contained in Balkan hoards. Table 1 shows the distribution of the issues contained in hoards of the last phase. Most of these hoards are contemporary and they are mostly composed of the issues of Philon, Xenon and Meniskos, moneyers of the last phase. Sometimes the issues of the same reverse names can be found in non-contemporary hoards. This is the case of the reverse name Damen whose issues are included in two different categories of hoards: 1) the group of hoards dated around 120-80/70 BC (issues with the obverse moneyers Antioxos, Eyktemon, Philostratos, Perigenes, Dazio, Ktetas, Zopyros, Monounios, Phereneikos) – 2) the hoards with the last emissions of drachmas dated around 80/70-60/55 BC (issues bearing the obverse name Xenon). The stylistic similarities of the coins of this moneyer are remarkable. This observation, as well as the presence of the same symbols on all the issues, regardless of the obverse names, suggests that the name Damen of all the issues identifies the same person. This distribution of the issues of the same reverse names in non-contemporary hoards, leads to the conclusion that the issues can be traced by the obverse names.

There is another observation to examine. Several of the reverse names appearing on the drachmas are to be found on the reverse of the bronze coins of Dyrrhachium. A hoard found in Leshan, in central Albania, brought to light 2,561 bronze coins of Dyrrhachium. Its publication showed that most of the reverse names appearing on these bronze coins are the same with the reverse names of the drachmas (Gjongecaj 2007, p. 110-111 & 2009, p. 116). It is to be mentioned that some of the names in common for the two metals appear in all the different bronze denominations minted till the middle of the first century BC.

**Organisation of the Mint and the Role of Individuals.** It is evident from the above observations that the two individuals whose names appear on the Dyrrhachium drachmas exercised different duties. Some previous studies, as was mentioned at the beginning of this article, support the theory of the reverse names being an annual magistrate who generally oversees the issue. These studies create the chronology of the issues on the basis of two suppositions: first, that drachmas were produced in the city annually, and second, that the number of the reverse names would give the total number of years during which they have been produced (Petranyi 2006, p. 263-264; Giovannini 1978, p. 110-113). These chronologies of the issues (Conovic 1985, p. 59-74 & 1986, p. 69-88 & 1989, p. 21-22 & 1991, p. 49-67; Petranyi 1994, p. 72 & 1996, p. 3-18 & 2008, p. 73-80) were widely examined in the context of my research on the drachmas and the numerous following problems were detected.
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Table 1 – Distribution of the last phase issues in the Balkan Hoards
Firstly, the coins show a very irregular rhythm of production, which excludes the annual minting of drachmas. The graph below shows the approximate number of the issues of drachmas known until now for each phase. It is evident that the number of issues struck for the first two phases is lower than that of the following ones. It reaches its peak during the period 120/100-80/70 which is the period of the Balkan circulation of the drachmas. The last phase is shorter than the others and is characterised by only four issues which are the best represented in terms of quantity of coins in both Balkan and Albanian hoards. It is incontestable that the city has not minted coins yearly, the rhythm of production being irregular and depending especially on the silver available.

![Graph 1 – Number of issues for each phase](image)

Furthermore, these successions of issues established on the basis of the reverse names have considered only the fourth and fifth phases contained in the Balkan hoards. No study has been done on the other phases and on the hoards found in Albania. Also, the proposed lists are not complete even for the two phases taken into consideration. Only the combinations of names on the obverse and on the reverse included in the Balkan hoards have been taken into account, ignoring the fact that other associations of these names are known (see the list of moneyers appearing on drachmas of Dyrrhachium in CIGIME, p. 124-128). As a result, many reverse names (e.g. Aristomenes, Aristarkos, Arinnastos, Aristomakos, Eortaios, Menekrates, Nebriskos, Parmeniskos etc.) appear on the reverse of the drachmas of these phases and are not listed. Consequently, the number of reverse moneyers is higher than that cited. Finally, the two lists ignore completely the obverse names appearing on the coins. A
complete list of the reverse names and all their associations with different obverse names would show that the repetitions of the latter are very irregular and inexplicable. These missing elements have led to the construction of a chronology which is incomplete and moreover hides the problems deriving from it.

As these chronologies presented various problems, an attempt has been made to create a new chronological sequence of the issues on the basis of the reverse names (presuming that the latter are responsible for the issues, excluding of course their being the eponymous or whatever kind of magistrate). This again entails various problems. Firstly, it became apparent that the only way to list the issues was by following the repetitions of the obverse names (as an obverse name is associated to different reverse names, then numerous reverse names can be associated with the same obverse name). This was because, while the symbols and some stylistic details change with the reverse names, none of these elements was helpful to precisely fix the succession of the issues within each phase, as element changes are neither gradual nor regular. Thus, close issues found in contemporary hoards may have a different number of symbols. This means that an issue with three symbols can be followed by another with only one symbol. For example, the reverse moneyers Amyntas, Menekka and Kleitorios appear associated with more or less the same obverse names. This observation suggests that the three participated in the minting of close or perhaps even subsequent issues. However, the number of symbols each of them uses is very different: two for Amyntas, one for Menekka and two symbols and a monogram [6] for Kleitorios. The absence of a certain rule applied from one issue to the other makes the number of symbols used for the issue an irrelevant criterion for the succession of the issues. The same phenomenon is noticed for the stylistic elements. Thus, the designation of a calf with a long head or a curved tail is not sufficient to find the place of the issue in the chronological sequence, so long as these details change continuously and in an irregular way.

The attempt to see the reverse names as the officials in charge of the mint presented another problem. An obverse name is repeated far too many times. Thus, the obverse name Aristodamos is associated with twelve reverse names, which in this case means that he was in charge for twelve different issues. The moneyer Mnasen is engaged with eight issues. Both of them struck coins during the second phase. As the production rhythm is neither annual nor regular, it can be admitted that the moneyers Aristodamos and Mnasen were in charge as technicians for more than respectively 12 and 8 years. Similar results are obtained for each phase. It is reasonable to suggest that technicians stay in the mint longer (see de Callataï in this volume), however, this time would have been limited.

[6] The issues of Kleitorios are the only ones having a monogram in exergue, the latter being very current on the Apollonia drachmas.
The sequence obtained showed that, especially for the issues of the last two phases of drachmas, there is no way in fact to distinguish which of the issues belongs to which phase because the distribution of the coins in the hoards can be traced only by the obverse names. Also, the other problem with this sequence is that it shows no distinction in terms of frequency of minting between these two periods. This does not fit with the pattern of the Balkan hoards. The latter show a clear distinction between the issues of the period 120-80/70 and those of the last phase, 80/70–60/55 BC. The hoards of the first period are fewer than those of the following period and they comprise a long sequence of issues represented by only a few coins. The Dieci hoard (IGCH 594; Sășianu 1980, p. 109–111) is a pure example of that: it is composed of 35 issues each represented by a few coins. On the contrary, the last phase is characterized by the presence of many hoards, all mainly including only four emissions, those of the obverse moneyers Silanos, Philon, Xenon and Meniskos (again here the identification of the issue can be done only by the obverse name). These issues are the most frequent and numerous in hoards. Their analysis shows that the number of dies used for them is indeed very considerable. The die link study I have undertaken for the constitution of the corpus of the Dyrrhachium drachmas showed that over 292 obverse dies have been used for striking a total of about 440 coins belonging to these four issues.

The other problem noticed concerns the common names appearing on bronze and silver coins. The chronological sequence of the bronze issues is different from that of the drachmas. Of course, it might be suggested that the same persons may have been in charge for the different metals in different years. Nevertheless, the distance between them should be reasonable.

These contradictory results led to the development of another explanation about the organization of the mint in Dyrrhachium. For this, the opposite supposition was made, to consider the obverse names as the responsible of the issue. This theory was successfully applied to the drachmas of Apollonia and a similar schema was proposed for Dyrrhachium. In this case, an obverse name shares his duty with a number of persons possessing the technical skills necessary for the minting of coins. Their names appear on the reverse of the coins. A chronological succession was achieved on the basis of the coins’ distribution in the hoards, the stylistic elements, as well as the repetitions of the reverse names. It seemed logical to admit that issues with the same reverse names and similar stylistic details are subsequent or close. On this basis, it was possible to identify the issues of each phase and, where possible, to establish their chronological succession. Each obverse name is associated with a group of different reverse names, of which some are repeated in the following or close issues. It is noticed that these repetitions are more frequent during the period of the drachmas’ Balkan circulation. This is in perfect accordance with the data received from the hoards showing a high quantity of issues being struck during that period. Curiously, the names are repeated from five to seven
times (exceptions are possible), the majority, however, being repeated less. Sometimes, they are repeated in a group, which means that two or three reverse names are to be found again in successive or close issues. In general, the repetitions of the names make more sense. Further, the chronology obtained is also in accordance with the rhythm of production. It is evident from the hoards that the first two phases have fewer issues. They become more frequent during the third phase, reach their highest number during the period 120-80/70 BC, and are few but very abundant during the last phase. The succession obtained shows the same pattern. Graph 1 shows clearly this distinction of the production rhythm.

It was surprising to discover that there is a concordance between the number of reverse names participating in the minting of one issue and the number of the obverse dies used for the issue. In other words, the increase of the number of the reverse moneyers participating in the minting of one issue is accompanied by an increase of the number of the dies used for the latter. Certainly, there is no formula to calculate this increase or this relationship. The number of dies for each issue depends on the demand for coins and especially on the silver available for the issue. However, it is incontestable that the more people engaged to strike coins, the more obverse dies have been used for the issue and the greater the abundance of the issue. Moreover, the number of the obverse dies used for an issue is in accordance with the data on that issue obtained by the hoards (it is the case of those issues contained in the hoards). For example, the coins of the obverse moneyer Aristodamos are the best represented in the hoards of Jubica and Bakërr (see Picard & Gjongecaj 2000, p. 144 & 2001, p. 234-235). The number of reverse moneyers producing this issue is higher than that of the other issues of the same phase. At the same time, this moneyer has used the highest number of obverse dies for this phase. Also, it seems that the number of dies used for each association of an obverse name with a reverse name depends on the obverse name. Thus three different issues having the same reverse name have used a different number of obverses dies, each depending on the obverse name. This observation shows clearly that an issue can be defined and distinguished only by the obverse names and that they are responsible for the issue.

What is then the function of those who signed the reverse of the coins by their names? Are they simple technicians with the necessary skills to work the metal, as it was proposed for Apollonia? The appearances of their names on the coins, their attachment to some stylistic details, their association with the symbols, as well as their appearance on the bronze denominations suggest that they played an important role in the minting of the issue. It would be difficult to see simple technicians in charge of all these responsibilities. For all these reasons, it seemed reasonable to identify them with the mint masters. The character of the mint master fits well with the tasks exercised by them. It is not surprising to see a mint master being engaged for the striking of a few close
emissions. He owns a workshop where to mint the coins, and can hire the necessary people who have the skills to work the metal, bronze included. On the other hand, his association with one/few specific symbols would make him responsible for the coins produced in his mint. The attempt to distinguish them from one another would make more sense if they worked for the minting of one issue under the direction of the same person elected by the city to be the responsible for the minting of the coins. The repetitions of the reverse names for different issues could be explained by the fact that the various mint masters could have been engaged for the minting of successive issues. They have the necessary skills to fulfill this work and have already given proof of their “loyalty” to the whole city at their first minting, so there would be no surprise to see a mint master being in charge of the minting process for more than one issue. It is also worth reminding that the repetitions of the reverse names become more frequent during the third and fourth phases when the production rhythm is more intense. The high frequency of the issues for a relatively short period made perhaps more evident the need to distinguish them from each other by the use of different symbols and a specific style. The few cases of the use of the same obverse die by different reverse names may prove that these coins are contemporary. On the other hand, the use of the same reverse dies for two different issues (minted by two different responsible persons – obverse names) is explained by the use of the same die for more than one year (Mørkholm 1982, p. 211 & 1983, p. 11-23). These die links have been very helpful in recognising subsequent issues.

It is very difficult to know the details of the mint organization and how these mint masters were hired. Recent studies show that moneyers dealing with the technical aspects of the minting (‘monétaires métallurgistes’) have two main duties: the production of the blanks for which a certain accounting is necessary for the transformation of the metal into blanks, and the striking of the coins (Picard, forthcoming). Probably the person elected by the city for the minting of the coins dealt with finding the necessary silver for the issue, hiring the mint masters and guaranteeing the whole process. The number of assigned mint masters probably depended on the quantity of silver provided. There is no way of knowing if all the mint masters working for an issue were assigned at the same time or if some of them started first and others were called up once another quantity of silver was provided. Also, it may be possible that in some cases a responsible moneyer (person appearing on the obverse) might have been in charge for the coin production more than once. However, these cases should have been very limited.

The proposal to identify the reverse names with the mint masters brings us automatically to the conclusion that silver and bronze denominations in Dyrnahchium were produced in the same mints. As a matter of fact, recent experiments show that the minting of the two demands different technical skills and that the persons hired for the minting of the two metals were diffe-
rent (Faucher et alii 2009, p. 61). This affirmation does not present a problem for the organization of the mint proposed here, as the mint masters were not the persons who struck the coins. They looked after the whole process of minting in their workshop. The fact that the two metals were minted at the same place does not imply either their being minted by the same technicians, nor their being contemporary. The issues of the two metals, having the same reverse names, may have been minted at different moments of the year or even in different years, if not at a very great distance from one another. It is also probable that the persons elected by the city for the minting of the silver and bronze issues are different (‘les commissaires politiques’, see Picard forthcoming). However, there is no clear rule concerning this matter, each city apparently having its own mint organization. It is necessary to make a few more remarks. It is fundamental to make here a clear distinction between the mint masters and the die engravers, the two categories being different. It seems also improbable to regard the mint masters as any kind of artists as it has been proposed for other coinages (Cahn 1999, p. 103-107). Furthermore, the die engraving and the minting of the coins are certainly done in different places (Picard forthcoming).

In conclusion, it can be assumed that the Dyrrhachium drachmas were minted by a group of people of which one is the person appointed by the city to be in charge for the issue. His name appears on the obverse of the coins. He exercises his duty with the help of a number of mint masters who care about and guarantee that the technical work of the minting is done properly. Their names appear on the reverse of the coins and each of them is associated with one or more symbols. In some of these workshops the bronze denominations are also produced. The mint masters sign the latter with their name. Probably, the technicians striking silver and bronze coins were different.
CORPORA


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**KEY TO THE IMAGES**

1-2. The Lissus hoard, preserved at the Coin Cabinet of the Albanian Institute of Archaeology, Inv. 20, 34.

3-5. Collection of the Coin Cabinet of the Albanian Institute of Archaeology, Inv. 1584, 2562, 2631.

6. Naville, vente vi (1923), Cat. 955.

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9-11. Grčki, grčko-kolonijalni i keltski novak, Muzeja Slavonije Osijek 2004, Cat. 244, 190, 233.


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