



جنبه‌هایی از باستان‌شناسی «ماد» و عیلام نو. نگاهی نو به برخی از یافته‌های فلزی ارجان، جوبجی و کلماکره برونو جنیتو و لوچیا چرولو

چکیده

این نوشتار بر آن است تا بار دیگر توجه متخصصین دوره هخامنشی و پیشاهخامنشی فلات ایران را به مشکلات مطالعه آثار فرهنگ مادی و فیگوراتیو جلب کند. این مشکل به ویژه در مورد آثاری که از بافت باستان‌شناسی مطمئن به دست نیامده‌اند یا اشیایی که به دلایل مختلفی به طور کامل مستندنگاری نشده‌اند، صدق می‌کند.

یک مفهوم مهم در باستان‌شناسی، مفهوم «بافت» است یعنی تا زمانی که هیچ چیز بهم نریزد و این مفهوم چندان مورد توجه عموم نیست. برای باستان‌شناس، بافت به معنای مکانی است که یک اثر باستانی در آن یافت می‌شود؛ نه فقط مکان، بلکه خاک، نوع محوطه، لایه‌ای که شی از آن یافت می‌شود و هر چیز دیگری که در آن لایه قرار دارد. محل یافت یک اثر بسیار مهم است. محوطه‌ای که به درستی کاوش شده به ما درباره مردمی می‌گوید که در آنجا زندگی می‌کردند و اینکه چه می‌خوردند؟ چه اعتقادی داشتند؟ و چگونه محیط اجتماعی خود را سازماندهی می‌کردند؟ سراسر گذشته ما، به ویژه دوره پیش‌ازتاریخ، همچنین دوره تاریخی، با بقایای باستان‌شناسی گره خورده، و تنها با در نظر گرفتن یک محوطه باستان‌شناسی است که می‌توانیم به درک درستی از گذشته برسیم. زمانی که یک اثر از بافت اصلی آن خارج می‌شود در واقع در حد یک دست‌ساخته زیبا تنزل می‌یابد که اطلاعات سازنده آن از بین رفته است.

واژگان کلیدی: ماد، عیلام نو، ارجان، جوبجی، کلماکره.

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Aspects of “Median” and Neo-Elamite Archaeology. New Considerations on Some Aržan, Jubaji and Kalmakarra’s Metal Findings¹ Bruno Genito^a and Lucia Cerullo^b

Abstract

This paper intends to bring, once again, to the attention of those who study the Achaemenid and pre-Achaemenid period on the Iranian plateau, the difficulties of method and merit that are encountered in dealing with, and studying objects of material and figurative culture. This especially if those objects do not come from reliable archaeological contexts or from those which, nonetheless, for various reasons have not been sufficiently documented.

An important concept in archaeology and one that is not given a lot of public attention until things go awry, is that of the “context”. Contexts to an archaeologist, mean the place where an artifact is found. Not just the place, but the soil, the site type, the layer the artifact came from, what else was in that layer. The importance of where an artifact is found is ample. A site, properly excavated, tells you about the people who lived there, what they ate, what they believed, how they organized their social setting. The whole of our human past, particularly prehistoric, but historic period too, is tied up in the archaeological remnants, and it is only by considering the whole entirety of an archaeological site that we can even begin to understand what our ancestors were about. Take an artifact out of its context and you reduce that artifact to no more than pretty. The information about its maker is gone.

Keywords: Median, Neo-Elamite, Aržan; Jubaji; Kalmakarra.

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1. This article has very kindly been solicited by dr. Yousef Hassanzadeh from the Iran National Museum Journal. To him and to the Director of the National Museum of Tehran Dr. Jebrael Nokandeh go the best warmest appreciation for this invitation and for having accepted our proposal. We do hope very much that the article will be also welcomed by readers. The article is composed of two parts, the first, more general and introductory elaborated and written by Bruno Genito, and the second by Dr. Lucia Cerullo PhD candidate in our PhD courses entitled “Asia, Africa e Mediterraneo” of the Università di Napoli “L’Orientale”. This second part is the result of the research work that the Lucia Cerullo is carrying out for her doctoral thesis, aimed at studying many of the objects kept in the Tehran Museum and that thanks to the availability of the Museum management, the PhD candidate was able to directly examine, photograph, draw and study.

Preliminary Considerations

This contribution, intends to bring, once again, to the attention of those who study the late Iron and pre-Achaemenid age and the particular passage between the protohistoric to the first state societies in Iran, the difficulties in dealing and studying objects of material and figurative culture of the period. This is especially the case if those objects do not come from reliable archaeological contexts or from those which, nonetheless, for various reasons have not been sufficiently documented.

The general picture of late Iron Age, especially in northwestern Iran, has presented many cases, mostly related to the Median period in which the archaeological context, with the exception of some cemeteries in Luristan, unfortunately, is not documented or is only partially described². Most recently also in southwestern Iran some other archaeological evidences have been found, mostly related to the Neo-Elamite period, which in different aspects pose, more or less, the same problems.

This particular situation itself is not very surprising; archaeological research worldwide is full of cases of this kind and the majority of scholars who have dealt with them could be divided into two groups. The first is more favourable to minimizing the contextual uncertainty from which those objects mentioned above derive, leaving intact the possibilities of their study and of a correct interpretation. The second is more favourable, instead, to consider that uncertainty as an absolutely negative value capable of completely prejudicing the interpretation of the same objects.

2. An important concept in the modern archaeology and one that is not given a lot of public attention until things go awry, is, nevertheless, just that of the "context". To an archaeologist, "contexts" mean the place where artefacts are found. Not just the place, but the soil, the site type, the layer the artefact came from, what else was in that layer. The importance of where an artefact is found is very ample. A site, properly excavated, tells you about the people who lived there, what they ate, what they believed, how they organized their social setting. The entire human past, particularly the prehistoric, but the historic too, is tied up in the archaeological remnants, and it is only by considering the whole of an archaeological site that we can even begin to understand what our ancestors were about. Take an artefact out of its context and you reduce that artefact to no more than pretty.

Such an archaeological documentation of the late Iron and pre-Achaemenid age in northwestern and southwestern Iran could be, in the future, useful to approach those issues from a completely different view. Beyond the quality and nature of the Median and Neo-Elamite archaeological remains available, as we will see below, the methodological approaches used for the so-called "archaeological correlates", especially by the New Archaeology and for prehistoric societies and in very different geographical areas from the ancient Near East, could insert them in an ampler interpretative frame, which up to now, have been mainly used in the anthropological archaeology.

In a general interpretation, with these "archaeological correlates" one may mean that wide spectrum of indicators collected on the field, capable of qualifying the different aspects of settlement patterns (spatial distribution, geographical location, nature of the sites), architectural monuments (location, civil and religious functions, interaction with other monumental spaces), social and political realities (presence of family, clan, chiefdom, ranked society, state) and of material or figurative culture as well (production, iconographical and iconological meanings, political and dynastic use, etc.), which are not always very well documented for Median and Neo-Elamite contexts.

Inferring aspects of a given social organization is the main aim of any anthropological approach to archaeology, while economic, political, social, exchange interactions and networks are all based upon and mediated by the framework provided.

Extensive ethnographic research has demonstrated that numerous aspects of social life, such as family, clan affiliation, kinship structures and ceremonial organization, form a complex social network that facilitates solidarity within and between groups.

In the methodology of the New Archaeology approach, archaeologists have tried to extensively investigate those relationships, particularly amongst different groups of peoples (Longacre 1964, 155-170). In particular, those relationships have been investigated through settlement and kinship patterns, which are

generally defined as the rules specifying where an individual lives, whereas housing units are broadly reflective of socio-political and economic organization, offering unique insights into the patterns of regional interaction and the development of social complexity.

These regional and extra-regional interactions are critical for the establishment of political alliances, trade and other economic exchange networks, and regional defence systems. In this methodology, living and mortuary practices are investigated using cross-cultural comparisons of architectural variability, population genetics models, applied to data also from human skeletal remains. Both lines of evidence suggest different types of society, and the implications for living practices are discussed for the development of religious centralization and its effects on the socio-political complexity.

Deetz (1960) is commonly credited as the first archaeologist to systematically examine the relationship between artefact variability and living patterns, even if in different geo-cultural contexts. He attempted to demonstrate that there is a connection between individual pottery design attributes and changes in social organization, treating the stylistic attributes separately with regard to the manner in which they form clusters. Deetz argued that the high degree of clustering is the result of transmission of ceramic production traditions, using ethnographic analogies. He also thought that pottery production was typically performed by women, and thus the lack of change over time is consistent with the expected patterns of matrilocality (Deetz 1965). The increased randomness in the distribution of ceramic characteristics suggested a change in the pattern of transmission and a corresponding change in the pattern of life ways.

Longacre (1964, 157-170) demonstrated that particular design elements clustered in specific rooms. He suggested that these clusters represented transmission of pottery-making knowledge among lineal descent groups and assumed that since pottery-making was typically a female activity amongst human groups, this non-random distribution represented matrilineality.

The "ceramic sociology" approach pioneered by Deetz and Longacre was quickly criticized by archaeologists on several grounds. Allen and Richardson (1971) argued that living rules are more complicated than the standard categories typically applied by archaeologists. Additionally, this approach assumes that rules of living are consistently followed. Lastly, they argued that variation in ceramics tracks a number of other social factors, such as technique of production and economic interactions rather than living. Stanislawski (1973) argued that the ethnographic analogies for pottery production are inappropriate, because the methods of potters are neither as standardized as presumed, nor was transmission of pottery making techniques limited to members of clans or lineages. Lastly, Plog (1978) pointed out that such approaches ignored the depositional history of ceramics. Subsequent ethno-archaeological research demonstrates that spatial and stylistic variation in pottery assemblages reflects a diversity of processes beyond residence rules.

Ember (1973) proposed an alternative line of evidence for inferring the spatial correlates: the average house-floor area for samples of different types of societies. He warned that while house-floor area is strongly correlated with sociological aspects, practical application requires independent lines of evidence.

Another approach used to infer spatial patterns comes also from human skeletal remains. The basic operating assumption is that the sex demonstrates more phenotypic variability. Since traits of the human cranium and dentition are moderately to strongly heritable, they can be used as a reasonable proxy for genetic transmission. While early studies focused on univariate, between sex comparisons within and between cemetery populations, multivariate studies that compare overall within-group variation provide a better representation of the overall genetic structure. This method has subsequently become the most commonly applied bio-archaeological technique to examine between-sex variation.

Both average house-floor area and between-sex biological variation approaches were used to investigate patterns, suggesting which

type of sociality was practiced, based on cross-cultural research. Centralization of authority may have been accomplished by a few male aggrandizers manipulating common ritual symbols. These symbols were then encoded in both the material culture and architecture. Combining recent bio-archaeological analyses with studies of warfare in extant groups suggests that there is no evidence for large-scale, external warfare. Instead, patterns of violence are suggested to reflect sacrifice and performance-based violence.

All these aspects in the late Iron and pre-Achaemenid age on the Iranian plateau are very difficult to reconstruct for the reasons set out above and, therefore, this case seems the most available for using those innovative approaches. Some of those aspects for the Neo-Elamite period are hardly recognizable and only on the basis of the epigraphic evidences and the architectural, material and figurative culture. For the Median period as well, all those characteristics do not have any concrete archaeological evidences and are practically unknown, as well as the socio-economic and political reconstruction which is as well substantially under scrutiny.

Pre-Achaemenid Period

During the pre-Achaemenid period in western Iran, there is no doubt that what we call "Median" and "Neo-Elamite" in the chronological and ethno-historical sense have always attracted the attention of scholars.

This happened with cyclic repetitiveness because those two cultures are placed prior to the Achaemenid dynastic period, and their contemporaneity and geographical contiguity (especially in the northern area of the "Neo-Elamite" presumed political domain and in the southern area of the "Median", i.e. Luristan area) were enough to establish the existence of direct contacts between them.

Of course, it should be noted, however, that those two historical-archaeological cases are profoundly and substantially different in differing and important aspects. For the Medes, we are faced with abundant indirect historiographic mentions (the Biblical, Assyrian,

Neo-Elamite, Greek, Roman, and Neo-Babylonian sources), giving information of their presence in north-western Iran, with a largely elusive figurative production and archaeological traces. From the Neo-Elamites we have, instead, a consistent direct historiographic documentation, a widely evident regional historical centrality in the ancient Near East, very clear material and figurative evidences, and urban traces as well, not to mention the architectural and historical-religious ones.

The Medes and the Neo-Elamites

These two historical-archaeological reference poles of the Medes and the Neo-Elamites for the late Iron Age on the Iranian plateau have partially monopolized the debate between scholars of different provenance and origin in the last decades. Within the cultures of the Iron Age and the long formative processes of a state formation such as that of the Achaemenids, strong elements of both continuity and discontinuity have been, however, identified. The first are basically represented by the territorial processes of a strong socio-economic integration, pottery morphology, typology and production, the second are represented, instead, by the affirmation of an unknown, up to that time, stone architecture, use of stone columns, realization of new type of meeting room, such as the hypostyle hall, which admittedly was also in use earlier in a wooden form.

These elements make those two reference poles of the Medes and the Neo-Elamites as the grounds of study around which scholars have always questioned themselves.

The difficulties encountered some decades ago in limiting the vast bibliography collected concerning the culture of the Medes (Genito 1986) had always prevented me from carrying out the original plan: to prepare an analytical bibliography on the Medes. The fact that it was impossible to give shape to a bibliography, meant, therefore, that the Medes could only appear as a remote, abstract point of reference. However, this negative realisation little by little gave way to a new approach to my studies on the matter (Genito 1995; 2005; 2020). Whether the original approach to the problem had

turned out to be impracticable, because of the incompatibility of my plan with the documentation, then this was the issue to be analysed and interpreted within a vaster historiographic dimension. I tackled this, following a methodological line based on the contrast between everything that has ostensibly been written on the Medes, and what could be actually defined as such³. The fact that most of the historians concentrate on the urban aspect of such a Median political formation still of uncertain nature telling the truth⁴ and the phonetic correspondence between "Ecbatana" and "Hamadan"⁵ have favoured an archaeological approach to the Medes according to which it has, therefore, been supposed that any excavations carried out in the area of Hamadan, could have provided data more or less related to that people. However, the expectation that the excavations there conducted⁶ could solve all the problems (Frye 1963, 99)

3. The attribution of material cultures to a given ethnic group is almost impossible if its peculiar character cannot be definitely ascribed to that group. Of course, this will be possible only when the cultural features of each group are very well known, and such cases are not so common in the historical documentation. It is also possible when the archaeological context shows epigraphic traces that allow more precise information which could be utilizable for the reconstruction of the material culture. Not even pottery, which was until recently considered a most reliable guide, can guarantee the link between pots and people given by the identity of pottery culture with ethnic groups (Kramer 1977, 92-112; Cleuziou 1986, 1-4). As we shall see, the case of the Medes, though not unique, is emblematic of a certain way of conceiving the relationships between given materials and peoples.

4. Herodotus in particular shows the transition from village life to the city during the hypothetical period of the Deioces' existence (Her. I 95-97). There are no clear references, nonetheless, in the Assyrian sources to the existence of great cities in the surrounding area to their political domain; only fortresses and villages seem to be mentioned (Luckenbill 1926, vol. II).

5. This led to the supposition that Ecbatana of Herodotus may correspond to the present Hamadan, Hangmatana (ancient Persian), Agmatan(u) (Babylonian), Akmethi (Biblical); these terms all seem to have to do with 'meeting place' or 'assembly place' (Diakonoff 1985, 109, n. 2).

6. Apart from the works of De Morgan (1896), French assyriologist Charles Fossey (1869-1946) directed the first excavation in Tepe Hegmataneh for six months in 1913 (Chevalier 1989), which brought to light most of the objects belonging to the so-called 'treasure of Ham-

has tended to push into the background some historically better founded reasons for increasing an archaeological activity in the presumed territory of the Medes (ibidem, 98-102).

The complex and crucial nature of the period spanning from the end of the 7th century to the first half of the 6th century BCE (Muscarella 1973, 76) in the Iranian plateau, has prevented modern historians from shedding sufficient light on events that can be chronologically correlated with the development of the so called Median "confederation"⁷. And basically did not allow ones to find useful correspondences between the few, scarce and very

adan' (Vanden Berghe 1959, 108-10; Muscarella 1980). Erich Friedrich Schmidt (1897-1964), a German and American-naturalized archaeologist, took some aerial photos from Hamadan between 1935 and 1937. Further exploratory digs have taken place later at Tepe Musalla, the hill south-east of the present Hamadan, but the results have been disappointing; cf. Mehryar (1972), Azarnoush (1975) and again by Azarnoush more recently. The first Iranian expedition worked in Tepe Hegmataneh for 11 successive seasons under the supervision of Sarraf (1989; 1996) from 1983 to 2000, these excavations led to discovering some parts of an enclosure in central, southern and western workshops. Sarraf could not find reliable answers for the already mentioned questions. Second round of excavation (12th to 15th seasons) was undertaken by Azarnoush for four seasons from 2004 to 2008, the aim of these excavations was to clarify the dating and stratigraphic sequence of the site. In 2021, Dr. Malekzadeh explored a place in front of the current and temporary Hegmataneh Museum, where French experts had opened a workshop in 1913, known as the Chaal Shotor ("Camel's Hole"), three trenches measuring 2.5 by 2.5 meters have been opened, and at a depth of 320 cm, there were found the remains of a stone wall. Cultural elements, estimated to date back to Iron Age II C (700 - 586 BCE), which was almost concurrent with the Median era (around 678 BCE-around 549 BCE), were unearthed during the 22nd archaeological season carried out in Tepe Hegmataneh. In this season, the discoveries were relatively satisfying, because signs of Median architecture period and pottery were present. On the same issue cf. also Frye (1984, 76, 80).

7. This information comes from Herodotus too (Her. I, 101). Apart from the difficulty of linguistic interpretation of the names of the six tribes in which he divides the Medes (Bousai, Paretakenoi Strouxates, Arizantoi, Boudioi and Magoi) the social and political nature of the confederation is unclear. It seems possible to relate an Iranian etymology to Paretakenoi, Magoi and Arizantoi (Frye 1984, 67); in this sense see D'jakonov (1985, 74-75) who offers the theory of limited and occasion unity rather than a stable, lasting alliance.

difficult to be interpreted archaeological horizons and periodization of Iron Age, especially the late phase, with the history of dynastic and political events. However, the archaeological research of the 70s of the last century has already provided findings that help to view the problem from a substantially different perspective.⁸

I would like to frame these notes mostly within the dynamics of the archaeological and art historical research activities, which have proved to be followed very much in a great deal of studies on the Medes. And I am still very much convinced that a historical-archaeological investigation of ancient Iran must review the material and figurative productions of such a relevant period already discussed and variously interpreted (Muscarella 1977a, 1977b). In the light of a critical review of this sort, taking into account the already uneasy relationships between the methods of the archaeological and art historical research activities⁹, certain approaches to research on the reconstruction of the history of the Medes, based on exclusively

8. We are referring to the archaeological discoveries at Tepe Nush-i Jan (Stronach 1968-1969; Stronach, Roaf 1973; Stronach, Roaf 1978; 2007), Godin Tepe (Young 1969; Young, Levine, 1974), and Baba Jan (Goff 1968; 1969; 1970; 1977), all of which occurred in the area which ancient sources assigned to the Medes.

9. This does not seem the right place to recount the history of this relationship. Suffice it to say that it was at the end of the 60s, with the so-called 'New Archaeology' growing out of the American anthropological school, that the break with the old-style arthistorian methodology was most striking. The publication of *Analytical Archaeology* (Clarke 1968) starkly revealed the differences between the approaches, but it also set out to be a political and ideological manifesto, proclaiming the 'loss of innocence' of the archaeological research activity. According to this programme, it was no longer enough to carry out a historical reconstruction of the events and economic structures of ancient societies, but study extended to the patterns of behaviour that could be deduced from material remains, and these were in turn organised according to anthropological schemes. The echo of this break away from earlier ideologies and methods came much more recently in Italy (Carandini 1975; 1979) and the chances of restoring a sense of continuity still seem remote. Taddei (1979) had some interesting remarks to make on the subject, legitimately defending the complete independence of the art-historians from the historian of the material culture who is also concerned with the economic implications.

stylistic analysis of objects that have not been precisely dated, appear insufficient.

If historiographical research over a period of almost one century and half has revealed its limits, and the purer art-historical approach has turned out to be inadequate to tackle the problem, especially at the methodological level, archaeological investigations may begin to offer new perspectives in order to view the Median issue.

Encouraged by discussions and exchanges of ideas with many Italian and foreign colleagues, I have worked in the last years from these preliminary considerations towards the idea of making a total review on the studies on the Medes. I also intended to draw the attention to the most controversial aspects of the question in an attempt to trace all the features of a real archaeological-historical case.

The almost non-existent archaeological correlates of the Medes as well as those from the Neo-Elamite (with the limitation already dealt with by myself above) can be certainly limited as linked to the iconographical and motifs depicted on the Achaemenid stone reliefs, where a possible representation of that group of people, can be reasonably seen. Those stone reliefs, nonetheless, are in a general way currently interpreted as celebrating the Achaemenid political and kingship and as inspiring new concepts of power and the expression of a precise supranational political-state ideology. They constitute a sort of cursive and an ethnographical anthology of the entire existing knowledge of the peoples at that time.

This knowledge must not, however, be understood as if we were dealing with the works of an author like Pliny for the Greek-Roman era (*Naturalis Historia*), but, instead, as an admirable iconographic synthesis where ethnographic aspects mix with those of material culture and even with the figurative one. In my opinion, it would be improper to interpret this combination as the precise mirror of reality, but it should be seen, instead, as a very particular means, which is that of the visual imagery, which tends to magnify and make meta-historical what originally could also have been historically given.

Meanwhile the “imperial and dynastic” character of the material, figurative and architectonic culture of the Achaemenid period is visible in a few cases of specific architectural-territorial units and not on a larger scale, as in the case of other imperial forms of the ancient world. The Median period remains, furthermore, much more known in historical documentation (direct or indirect) and completely unreliable in terms of the material, figurative and architectonic culture (Genito 1986).

The Median and Achaemenid periods have been much investigated, though with different perspectives, by historians and archaeologists. In more recent years, a particular necessity of a better understanding of the Median and of the Neo-Elamite period, has been put to the attention by different scholars. Contributions such as those of Potts (1999; r. 2016)¹⁰, Liverani (2003, 1-11) and Henkelman (2003, 181-231) have provided confirmation of the scanty archaeological evidence of the period, which did not fit very well into the historical reconstruction of the Median political-state formation. Historical sources, however, seem to fit much better into the history of the region and of the peoples, as based on the ancient Near Eastern and Mesopotamian sources. As one will more easily understand, the only real and concrete organized political power of the period with a certain influence on the area and the surroundings was certainly Elam (Diakonoff 1985). The late Elamite period, apart from its long historical and linguistic tradition, appears more convincing and consistent from an historical point of view than that of the elusive Medes.

From an archaeological point of view, the whole Median question should be seen in a completely different light, unlike the historical and philological lines of interpretation. One needs very much to be able to distinguish what could belong to the Medes as a people or possibly even as a “dynasty” and what only to the related

period. The archaeological and historical-geographical re-examination of that period during the 1970s could be considered as the breaking point of the traditional approach to the study of north-western Iran in the first half of the 1st millennium BCE (Levine 1973; 1974; 1977a; 1977b; Young 1965; 1967; 1978; 1985).

The archaeological discoveries in ancient Media (between Kermanshah and Hamadan) such as Godin Tepe in the Kangavar Valley,¹¹ Nūsh-i Jān in the Malayer area¹², and Bābā Jān in the Delfān Plain in eastern Pish-i Kūh in Luristan¹³, as already mentioned, remain the basic archaeological sites from where to start any more modern related discussion.

The number of sites datable to the Median period has been enormously increased in the last years. I can mention Ozbaki (in Tehran province) (Majidzadeh 1378/1998; 1378/1999), Gunespan in Luristan (Malekzadeh, M., R. Nazeri, A. Nazeri 2016), Haji Khan (Hemati, 1397/2019-2020; 1397/2018), Mush Tepe in Hamadan province and others. In all these sites there is an architectural evidence similar to the citadels found in the 70s of the last century (Nush-i Jan, Baba Jan and Godin Tepe), and also not few dissimilarities with them.

Although they have brought to light a rather important military architecture, those sites have been, nonetheless, unable to provide information regarding the real consistency of the Median “political-state formation” and its socio-cultural related aspects. The presumed capital Ecbatana/Hamadan would obviously have been the key site for the period, but the ancient traces of settlement uncovered there and also recently re-excavated, seem to mostly belong to a post-Achaemenid period (i.e. Seleucid, Parthian

10. He first made a modern scientific synthesis of the archaeology of one of the major peoples of the ancient Near East, the Elamites, which had at that time been so little studied. That people lived in what is today south-western Iran, and had a major impact on the course of history from c. 2600 BCE to the 6th century BCE.

11. The articles of Young (1969; Young, Levine 1974) are fundamental and still up to date.

12. The site was one of the most important discoveries of the last century on the Median issue from historical, architectural and historical religious points of view; cf. Stronach (1968-1969; 1979), and Stronach & Roaf (1973; 1978; 2007).

13. In addition, this site, although slightly distant from the actual Median territory, could represent an important geographical expansion of the Median culture because of its different material and architectonic evidence; cf. Goff (1968; 1969; 1970; 1985).

and Sasanian) with very rare exceptions still to be completely detected. Up to now, a real “Median” level has not been found either (De Morgan 1896; Calmeyer 1975; Azarnoush 1975; Sarraf 1989; 1996; Boucharlat 1998) (cf. note 11)¹⁴.

Any further discussion on the “Median archaeology” cannot deal once again, without coming back to the particular and significant finds from north and north-western Iran.

The cases of the objects from Sialk¹⁵, Luristan¹⁶, the treasures of Ziwiye¹⁷, Hamadan, Oxus¹⁸, the sites of Kalar Dasht¹⁹, Amlash²⁰,

14. This is not surprising, because the same settlements of the Achaemenid period, as is known, more archaeologically documented than the Median, are not at all sufficiently known, apart from the very special case of Dahāne-ye Gholāman in Sistan (Genito 2001; Genito 2012).

15. Ceramic features in Tepe Sialk bear witness to the cultural richness of the Iron Age in central Iran, in particular the cemetery B, present on one of the hills of the site, attributed to the Median period (8th-7th century BCE). The site, as is known, has been attributed to the Medes also as far as its material culture and architecture is concerned (Malekzadeh 2003; 2005).

16. The famous find of the Luristan bronzes also opened an intense scientific debate (Godard 1931; 1950; Muscarella 1988; 1989), which is still non sealed off.

17. A supposed hoard finding said to have been discovered in Kurdistan province in 1947 but whose provenance and homogeneity are compromised by the fact that the 341 objects were sold on the antique market. The same trend of iconographical development is found in the objects collected by chance in Ziwiye and attributed to the “animal” content in character of some of them, to the Scythian cultural environment. For a brief summary of related research and controversial scientific debate, see Muscarella (1977a; 1977b; 1980), Ghirshman (1950) and Barnett (1956).

18. Also the numerous question raised from the Oxus treasure have been dealt with by many scholars with different touches (Dalton 1905; r. 1926; r. 1964; Litvinskiy, Pichikyan 1981; 1983; 1984; Zej'mal 1979).

19. Kalar is a village in Sanjabad-e Sharqi Rural District, in the Central District of Khalkhal County, Ardabil Province. Mazandaran region, where many important finds were collected. Amongst these one may mention the famous “Hyracanean Golden Cup” with three lions with heads in very high relief, datable to the 1st half of the 1st millennium BCE (Stark 1934, 211-217; Dimand 1950, 146).

20. Amlash, now a county in Gilan province, was a small village in southeastern Gilan. The name originates from the nearby Alborz valleys where archaeological artefacts were discovered during an illegal excavation. The artefacts range from the late 2nd millennium BCE through the Partho-Sasanian period, but most of the objects are dated to the 9th-8th centuries BCE. The dating and significance of the known objects (bronze weapons and

Amarlu²¹, Kaluraz²², Marlik²³, have dominated the scientific debate of the 1960s, based on the more or less reliable character of the finds. That debate belongs to the historical-archaeological tradition of studies on early Iran already discussed and dealt with by numerous scholars in the last decades and repeatedly put in relation with the history and archaeology of the Median period.

Neo-Elamites

It is the time in this occasion to shortly outline and mention a few other cases of objects which in the last decades were brought to the attention of scholars in south-western Iran. These have been uncovered in Khuzestan in Arjan near Behabhan²⁴, in Luristan in very particular

animal figurines, human statuettes of terra cotta and bronze, pottery animal effigy vases, and burnished black, gray, or orange pottery vessels) is complicated by insufficient archaeological contexts (Parrot 1963, 236-41; Ghirshman 1967, 31-38; Biscione 1974). The Amlash site and culture consist of an assortment of historic materials and periods in Gilan and west of Mazandaran, in the north of Iran and to the geographical region from which some archaeological objects of certain types come. These objects that are attributed to Amlash have been shown in many exhibitions in Europe and the United States and may often be seen in catalogues.

21. Amarlu district is in Rudbar County, Gilan Province with one city, Jirandeh, and two rural districts (dehestan): Jirandeh Rural District and Kalisham Rural District (National Museum Teheran 2010).

22. Kaluraz is an archaeological site situated in the center of the lower Kaluraz valley (Darra Kaluraz) near Jalaliye (Jalāliya) village, 1,1 km west of Rostam Ābād city, 11,7 km northeast of Rudbār in Gilan Province (Hakemi 1968; 1973; Kaluraz 1969; 1970).

23. Marlik is an ancient site near Rudbar in Gilan, north of Iran with a royal cemetery, and artefacts found at this site date back to 3,000 years ago. Some of the artefacts contain amazing workmanship from gold (Negahban 1983; 1996; Kuročkin 1993).

24. Behbahan is a city and the capital of Behbahan County, Khuzestan Province, Iran. To the north of the city lie the ruins of the ancient city Arjan, built during the Sasanian period, where important remnants from the Elamite era can be found. The people of Behbahan (Behbahanis) speak a distinct Persian dialect closely related to the Sasanian language (Middle Persian), and may still use words of Khuzi origin, the language of the original inhabitants of Khuzestan. Behbahanis claim various lines of descent, including from the ancient Aryans - the Persian nobility

contexts as Kalmakarreh²⁵, where also some interesting Neo-Elamite inscriptions have been found. These inscriptions complement those found in Ramhormoz²⁶, and Qalaichi Tepe and other sites in West Azerbaijan where Aramaic inscriptions have been found as well²⁷.

25. Kalmakarreh finds were discovered in a cave perhaps in 1989 by a local hunter about 13 km to the northwest of Pol-e Dokhtar, Lurestan Province. The collection consists of different metal objects, including vessels, rhytons, animal and human figurines, masks, plaques, and adornments. The presence of Neo-Elamite scripts on some artefacts makes it uniquely easy to date. The names on the scripts indicate a close connection to the cultural horizon of the Neo-Elamite period. The inscriptions deciphered by Lambert, Vallat and Bashash, together with archaeological analyses by the author (Khosravi 2013a), revealed a new unknown local dynasty in Lurestan, concurrent with the Neo-Elamite period which has given rise to new discussion in investigating archaeological issues and the art history of this period in western Iran. Discovered objects are mostly made of silver. There is also a particular small human statue, which is now in the museum of Falak-ol-Aflāk Castle, made by the casting method and then decorated by chasing. Objects show a local tradition affected by different exotic issues, especially those of Elam and Assyria (Baššāš-Kanzaq 1997; 2000; Khosravi 2013a, 34-39; Henkelman 2003). Some Neo-Elamite inscriptions have also been identified on many objects from Kalmakarreh. The inscriptions occur in many objects, in particular on plates and cups. Of about 65 objects from the Falak-ol-Aflāk Museum in Khorram-Ābād, about 20 have inscriptions. Nine of those published are identical and show DIŠam-pi-ri-iš EŠŠANA sa-ma-tir -ra DUMU da-ba-la- na, “Ampiriš king of Samati”. The same inscription is also found on two inscriptions in Turkey, in Tehran, New York, in the Louvre and in the Mahboubian collection, and refers to the kingdom of Samati which is equally mentioned in the Susa Acropole tablets. (Henkelman 2003, 106-118).

26. Ramhormoz is the capital city of Ramhormoz County, Khuzestan Province, Iran. At the 2006 census, its population was 49,822, in 10,966 families. In ancient times it had been known as Samangan, established during the Sasanian period, although an Elamite tomb has been found as well. The historical territory of Ramshir is located in this area, only 3 kilometres (1.9 mi) away from the city. The residents of the city are primarily Bakhtiari (Ahmadinia, Shishegar 2019).

27. Qalaichi Tepe (also known as Haidar Khan Qal’e), Qal’e Bardine (Hassanzadeh 2009) in the county of Bukan and in Rabat Tepe in the county of Sardasht, in Western Azerbaijan province, as well as at the cemetery of Kul Tarike in Kurdistan province now represent some of the very few sites of Mannean attribution. Most distinctive among the materials excavated at Qalaichi and Rabat are the multi-coloured glazed tiles depicting animals and

These items and the partially doubtful contexts where they come from have been, as the other old-aged case, for a long time considered as mostly representative of the figural world of protohistoric Iran (including the Median culture) and as reference points for any artistic production conducive to the Medes or to the Median period. They, undoubtedly, constitute masterpieces made of gold, silver, electrum, bronze and terracotta. Their related historical and chronological context cannot be used as reliable chronological and cultural reference points; in consideration of the scarce and scanty archaeological evidence of the period, they have been, nonetheless, used. Their figurative content, in any case, express ideological reflexes of the profound social and economic changes which were to develop on the plateau between the end of the 2nd millennium BCE and the beginning of the 1st millennium BCE. It will find their precise historical-cultural result during the Achaemenid time. Though not precisely datable, those objects express at various degrees of interpretation, technical, stylistic, iconographic and iconological contents of a more and more complex society, which with the arrival of the Iranians would have shortly seen the realization in the plateau of some of the most significant socio-political breakages of the ancient Near East. These objects carry cultural content linked to the symbols of economic and productive activities and to myths and ideological-religious beliefs of an agricultural society. Fantastic, natural and monstrous animals, including gryphon, sphinxes etc., are combined with the natural landscape in order to create fear, and need of protection. This aspect is, as known, particularly evident in every culture of the ancient Near East of the same period and for that it would have been incredibly interesting to have at disposal a “real” Median artistic production where to verify, once

composite creatures and used to decorate walls. However, the most spectacular find is certainly a broken stone stele from Qalaichi with 13 lines of incised Aramaic inscription. The so-called Bukan Stele is dated to the early 8th century based on the palaeography of the Aramaic letters and parallels to the inscriptions from Tell Fekharih in northern Syria. Unfortunately, only the curses at the end of the text survive (Fales 2003, 131-147).

again, this assumption. Unfortunately, as is evident from this contribution, such evidence is still missing and for the moment, only hypotheses can be made²⁸.

Bruno Genito

Findings from Aržan, Jubaji and Kalmakarra

Working on some objects presumably coming from the past undoubtedly leads to asking some questions about their provenance, use and composition. A single object, in general, collects intrinsic and extrinsic properties capable of gaining a series of very useful information for researchers. Over the years, the objects from Aržan, Jubaji and Kalmakarra have aroused many scholars' interest attracted by their characteristics and the contexts of discovery that have increased their charm. In the same way, many questions and problems related to them have been raised. The first question concerns the numerical and topographical characterisation of the objects. From the moment of their discoveries, the objects coming from those "treasures" never yielded secure information about the number of objects and where they were effectively found. Indeed, the most problematic case is represented by the group of objects found in the Kalmakarra cave. Most objects are nowadays in Iran, exhibited and stored in the National Museum of Tehran and the Falak-ol-Aflak museum of Khorramabad, but we do not know the actual number of objects in this collection. In the same way, according to Henkelman (2003), Mahboubian (1995; 2002) and Khosravi (2013b), an unknown quantity of objects presumably coming from Kalmakarra are distributed worldwide as in the Hirayama Ikuo Silk Road Museum, Miho Museum, Barakat Gallery, Christie's auction house, Mahboubian's private collection, Musée du Louvre, and the Azerbaijan Museum of Tabriz.

The second question concerns the lack of archaeometallurgical information about the

composition, weight, residual traces of oxidation of many objects of these "treasures." As for the "treasures" of Aržan and Jubaji, the complete lack of metallurgical analyses corresponds to the absence of technical and stylistic information about Neo-Elamite metallurgical production (to which the two tombs on stylistic and epigraphic basis have been dated) (Helling 2018, 192)²⁹.

The lack of archaeological contextualisation and controversial data raised many doubts about most objects' authenticity and antiquity. This is the third and last question. For many years, and even today, objects of this level travel through the antique market's channels. This naturally generated forgeries and the attribution of genuine objects to alleged "treasures" to increase their value on the market (Muscarella 2018, 134-139).

The objects coming from the Kalmakarra hoard and those coming from the Aržan and Jubaji tombs have provided the art-historical documentation of Iran in the Iron Age with copious artefacts rich with figurative decorations and workmanship complexity that some scholars have estimated as to the forerunners of the Achaemenid cultural customs. Those objects and their partial investigation have raised numerous other doubts and very few certainties, prompting some scholars to presume a cultural acculturation between Elamites and Persians, including the Medes. This kind of connection, nevertheless, still requires explicit and convincing historical and archaeological evidence.

For this reason, an in-depth study of the objects from the three corpora set out below was started to define the possible characteristics of these acculturation processes and to

29. The need to do not destructively affect the metal vessels has led us to hypothesize a non-invasive approach on the object, which cannot consequently return too detailed information. We aim to obtain the information concerning the composition of the metals used and the processing techniques. XRF spectroscopy is very useful to us to respond to the need to understand the composition of objects and the percentages of metals used, through its versatile features such as the full range of elements that can be analysed, the possibility of defining multi-elements with a single measurement, the high sensitivity of detection and clearly its ability to perform compositionally and screening analyses without destroying or altering the sample.

28. One of the grounds on which the research activities on Median art and architecture were easily oriented were the rock-graves spreading over the area between Iran and Iraq. The studies made by Gall (1966; 1974; 1988) are now completely revised and the tombs are mostly considered of post-Achaemenid and even Hellenistic age.

define the link that the three contexts can have clearly. The following research is preliminary and considers only some types of objects that have immediately shown characteristics worthy of broader considerations³⁰.

Kalmakarra Hoard

After the discovery of the Kalmakarra hoard, in 1989 and 1993, two official delegations entered the cave (Ghazanfari 1989; Motamedi 1994) and local authorities confiscated several objects probably coming from the hoard. According to Motamedi, the archaeological investigations revealed several damages by local villagers and treasure hunters.

Those found and attributed over the years to Kalmakarra are metal objects (silver, bronze, gold)³¹. Most are rhyta, goblets, cups with and without long spout, plates, lobed bowls, masks, bracelets, anthropomorphic and zoomorphic elements, or animals engaged in hunting scenes. Some objects bear inscriptions in the Neo-Elamite language. These inscriptions carry some names associated with the kingdom of Samati. Vallat (1996) connected the Samati kingdom with the inhabitants of Samati occurring in the Acropole texts of Susa, suggesting a sort of connection between the Elamite central city and the local power of Samati. So, he placed the inscriptions on palaeographic grounds in the 6th century BCE. This means that the inscriptions on the Kalmakarra objects are likely to be contemporary with the Acropole archive.

30. The following research is part of the doctoral project started in 2019 at the Università degli Studi di Napoli “L’Orientale” and is supervised by Professors Bruno Genito, Adriano V. Rossi and Gian Pietro Basello to whom my immense esteem goes. The work involves the study of metal vessels from the contexts of Kalmakarra, Arjan and Jubaji with the aim of defining as much information as possible on the extrinsic (typology, processing technique and decoration) and intrinsic (metallurgical analysis) characteristics to provide information on the functional categories, the productions and cultural influences of the time comparing also other similar geographical-chronological contexts. The intent is to demonstrate that, beyond the numerous problems presented and the doubts derived from their discovery, these objects appear relevant in order to formulate answers to questions that have been posed for years.

31. Any attribution to one type of metal rather than another is used uncertainly as these objects - as well those from Aržan and Jubaji - lack of metallurgical analysis.

The original function of the cave is unknown. The most commonly proposed interpretative hypotheses suggest that the cave was used as a place of occupation for short periods or storage. Bruno Overlaet’s idea (2011, 124-127) is that the Kalmakarra cave was not a temporary hiding place but merely a permanent depositary of votive offerings and utensils (something like a roman favissa). It seems probable that the objects may have been deposited at various moments rather than all simultaneously; this is also due to the presence or absence of concretions deposited on the metals. In this case, the objects were probably made from prescribed weights of silver/gold and could have been stored or exchanged as local power currency (Curtis et al. 1995, 151-152). Another hypothesis concerns the cave’s sacred connotation, referring to building sanctuaries in caves and venerating Ahura Mazda in the open air on the top of the mountains (Mahboubian 2002, 25). Kalhor (2019, 32-37) identifies several features that include Mithraism elements in the cave, such as the rocky mountain, water, bulls and antelopes in objects’ iconography. In particular, those objects are represented by some winged zoomorphic vessels typical of the Achaemenid repertoire. Some vessels are composed of groups of two or three animals equipped with some drains at the nostrils level. Of this kind, sprinklers are relatively distinctive and would respond to the ritual need to let liquid flow, connected to water’s sacredness. They are characterised by small hollow sculptures depicting whole animals or in the act of struggle. Beyond the iconography and function of objects, however, the idea of a temple in the mountain, in this case, seems unlikely due to the location of the cave and the difficulty used to reach the entrance.

Aržan and Jubaji’s Tombs

What is called “Aržan’s Tomb” was found by chance in the autumn of 1982. During the construction of a road that would lead to the Marun dam (Behbahan), the discovery of a cavity took place. Such a cavity would later turn out to be the tomb where a bathtub-shaped coffin and conspicuous funerary objects inside and out-

side were found (Álvarez-Mon 2010; Wicks 2015; Towhidi, Khalilian 1983). Outside the coffin, ten bronze chalices, two bronze and silver vases, a bronze stem candelabrum, a bronze lamp, a beaker decorated with lions' heads and a large bronze bowl were found. Inside the coffin, personal luxury items were found, such as 98 gold bracts that had to be sewn initially to the robe that the deceased wore, fragments of a cotton fabric that was to cover the inside of the coffin and the body, a sort of power ring in gold placed on the chest of the deceased near his left hand, a filter with a silver cannula, an iron dagger with a bone handle placed on the left side. The specific position of the objects both inside and outside the coffin cannot be determined with certainty as at one point, the chamber was partly submerged by the water reaching over half a meter in height. The water probably penetrated the coffin, moving the objects arranged inside it, changing their original position (Alizadeh 1985, 52; Vatandoust 1996, 70; Wicks 2015: 24). Four inscriptions have been found in Aržan's tomb, consisting of Kidin-Hutran son of Kurkuš repeated on the bronze cup and stand candelabrum, on the gold power ring and the silver jar. From an epigraphic point of view, the four inscriptions appear to be contemporary with the Acropole tablets from Susa (6th century BCE), while from an artistic and stylistic point of view, the objects seem to belong to a broader chronological range. Álvarez-Mon proposed to define a chronological frame between 630 and 550 BCE (Álvarez-Mon 2010, 271-273).

Jubaji's Tomb (or "Ramhormuz's Tomb") was accidentally discovered in April 2007 during the construction of a pipeline on the Ala River's left bank. The tomb is located near the village from which it takes its name, 7km south-east of Ramhormuz and 7km north-east of Tepe Bormi (Shishegar 2008, 4). The discovery of the burial led to some looting, following which the authorities' intervention was seen as necessary and some rescue activities conducted by Arman Shishegar (2008; 2015) of the ICAR (Iranian Center of Archaeological Research) were started. Inside the burial, an extraordinary quantity of objects of various kinds was found,

including gold ornaments such as jewels, power rings, pinpoints, buttons, pottery, vessels and ornaments in silver, iron, bronze, stone, bitumen and faience. However, due to the destruction of the burial for looting and the pipeline's constructions, many of the objects have been moved from their original location, precluding most archaeological and even functional analyses concerning a possible funeral rite. As with Aržan's tomb, Jubaji's burial also contained the remains of two bronze bathtub-shaped coffins with two presumably female individuals and a series of objects inside.

Both tombs contained some objects inscribed in cuneiform. Regarding Jubaji, a total of four inscriptions have been identified, which consist of the name of Shutur-Nahhunte son of Indada on a gold power ring, the Akkadian name Kurigalzu on a pin and unreadable Sumerian writing on its reverse, the word *la-ar-na* inscribed on a gold bracelet or ring of power that has been interpreted as a female name or with the meaning of "belonging to the officiant", and finally a bracelet with agate bearing *a-ni-nu-ma/ku* which is generally identified as a female personal name (Shishegar 2015, 20-21; Wicks 2015, 29-30; Henkelman 2008, 271). Based on these few inscriptions, Shishegar has proposed a dating around the 6th century BCE associated with considerations regarding the glazed and unglazed pottery found in the burial (Alizadeh 2014, 240).

Lobed Bowls

Egg-shaped lobed bowl without omphalos – Kalmakarra – Inv. no 9665: (Ø 14.8cm; h. 4.8cm; w. 220 g) Small lobed bowl. Hammered out of one sheet of silver and defined by chiselling. It has an oblique rim perfectly preserved. The bowl has eight oval lobes separated by eight stems ending in three minor lobes arranged in a fan or flower. Similar to Inv. no 9744, this bowl does not have the engraved profile of an animal on the rim, it does not have a rosette engraved in the centre, but it did have an omphalos which has been lost. In fact, in the centre of the bowl, the abraded traces of a welding or application point are preserved. The object appears intact, except for the lack of the central

omphalos. The inner and outer surfaces of the metal have been polished and cleaned of any traces of oxidation.

Egg-shaped lobed bowl with omphalos and engraved animal – Kalmakarra – Inv. no 9744: (Ø 22.2cm; h. 6.2cm; w. 492 g) Large lobed bowl. Hammered out of one sheet of silver and defined by chiselling. It has an almost horizontal rim that is slightly deformed. The bowl has ten oval lobes separated by ten stems ending in three minor lobes arranged in a fan or flower. There is a left profile of a dog, boar or lion's head on the rim's inner surface. A twenty-three-petal rosette was imprinted at the inner surface's centre (three petals have one circle engraved in the upper part). Omphalos hammered in the shape of a flower was applied at the centre of the imprinted rosette. All the central decoration is enclosed in four imprinted concentric circles. The object appears intact, even if some lobes are deformed. The inner and outer surfaces of the metal are covered with a bright grey-yellow patina.

Drop-shaped lobed bowl without omphalos – Kalmakarra – Inv. no 9726: (Ø 24.3cm; h. 6cm; w. 456 g) Large lobed bowl. Hammered out of one sheet of silver and defined by chiselling. It has a flared rim that is slightly thickened around the edge. The bowl has twelve drop-shaped lobes separated by twelve stems ending in triangular tips. The lobed bowl has no other type of decoration. In the centre, some traces suggest the probable presence of a central omphalos that has been lost. Except for this detail, the object appears whole, well restored and cleaned of traces of oxidation. The inner and outer surfaces of the metal are covered with a grey-yellow patina. Evident traces of restoration in the inner central part.

Drop-shaped lobed bowl with decorated omphalos – Kalmakarra – Inv. no 9727: (Ø 15.1cm; h. 4cm; w. 398 g) Small lobed bowl. Hammered out of one sheet of silver and defined by chiselling. It has a flared rim, slightly thickened at the edge. The bowl has twelve drop-shaped lobes separated by twelve stems ending in triangular tips. There is a truncated-cone shape omphalos at the bowl's centre with a fourteen-petal rosette enclosed in two

five-pointed stars. The object appears whole, well restored and cleaned of traces of oxidation. The inner and outer surfaces of the metal are covered with a grey-yellow patina.

Drop-shaped lobed bowl with small circles on the rim – Kalmakarra – Inv. no 9743: (Ø 23.3cm; h. 5.6cm; w. 450 g) Large lobed bowl. Hammered out of one sheet of silver and defined by chiselling. It has a flared rim, slightly thickened at the edge and deformed. The bowl has thirteen drop-shaped lobes separated by thirteen stems ending in triangular tips. In the centre, some traces suggest the probable presence of a central omphalos that has been disappeared. Under the rim, six small circles are engraved outside the bowl: five in a horizontal position along the rim and one below. The object appears whole, well restored and cleaned of traces of oxidation. The inner and outer surfaces of the metal are covered with a grey-yellow patina.

Cups and Chalices

Small lobed cup – Kalmakarra – Inv. no 9747: (Ø 7.6cm; h. 6.5cm; w. 140 g) Small lobed cup. Hammered out of one sheet of silver and defined by chiselling. It has a short neck and a flared rim that is rounded and slightly thickened around the edge. The cup has eight leafy and tiny lobes separated by eight smaller and triangular lobes. The lobes converge towards the base forming a base and support the structure. The object appears whole, well restored and cleaned of traces of oxidation. The metal's outer surface is covered with a grey-yellow patina, and some purple dust is on the inner surface. This cup is similar to Inv. no 9752, and, in terms of structure, it recalls the egg-shaped lobed cups.

Small lobed cup with unstable base - Kalmakarra - Inv. no 9752: (Ø 8.7cm; h. 7.1cm; w. 203 g) Small lobed cup. Hammered out of one sheet of silver and defined by chiselling. It has a short neck and a flared rim that is rounded and slightly thickened around the edge. The cup has eight leafy and tiny lobes. The lobes converge towards a rounded base that does not allow the cup to remain firmly standing. The object appears whole, well restored and with small traces of oxidation. The metal's outer surface

is covered with a grey-yellow patina, and some purple dust is on the inner surface. This cup is similar to Inv. no 9747 from Kalmakarra.

Small cup with rounded base - Kalmakarra - Inv. no 9753: (Ø 8cm; h. 9cm; w. 112 g) Small oval cup. Hammered out of one sheet of silver and defined by chiselling. It has a short neck and a flared rim that is rounded and slightly thickened around the edge. The cup has smooth and round walls, devoid of any decoration. The cup has a rounded and pointed base, which does not allow it to remain standing. The object appears intact, well restored and with small traces of oxidation on the inner surface. The outer and inner surfaces of the metal are covered with a grey-yellow patina.

Chalice with concave walls - Jubaji - Inv. no 2890: (Ø 17.5cm; h. 12cm; w. 521 g) Chalice. Hammered out of one sheet of bronze and defined by chiselling. It has a flat base and a concave body with flared walls and a rounded rim at the mouth. The chalice has no decorations and has a simple shape. Although it underwent a restoration process, the strong oxidation compromised the object showing it deformed in some points. The chalice is similar to Inv. no. 2973 from Aržan.

Small cup with flared body - Jubaji - Inv. no 2938: (Ø 8cm; h. 5.3cm; w. 69 g) The cup has a truncated-cone shape body with thin walls that descend from a large diameter mouth towards a smaller, round and flat base. The cup has no neck, and the walls' clean-cut obtains the straight and irregular rim. The object appears whole, well restored and with small traces of oxidation on the inner surface. The outer and inner surfaces of the metal are covered with a grey-yellow patina.

Chalice with concave walls - Arjan - Inv. no 2973: (Ø 14.9cm; h. 11.4cm; w. 182 g) Chalice. Hammered out of one sheet of bronze and defined by chiselling. It has a flat base and a concave body with flared walls and a rounded rim at the mouth. The chalice has no decorations and has a simple shape. Although it underwent a restoration process, the strong oxidation compromised the object showing it deformed in some points. The chalice is similar to Inv. no 2890 from Jubaji.

Zoomorphic Plaques

Circular plaque with goats and sphynxes - Kalmakarra - Inv. no 9755: (Ø 14.8cm; h. 4.8cm) Circular plaque hammered out of one sheet of silver and defined by chiselling. The plaque's outer band is decorated with a circular motif of lotus flower buds/pine cones connected with wavy shoots. There are two prominent winged goats at the centre of the plaque, rampant and specular with a front leg bent and resting on the chest, the other leg raised to touch that of the opposite figure. The figures are in profile, but the horned heads look towards the observer. Instead, the back legs are supported on the heads and the wings of two sphynxes placed on a lower register and smaller dimensions. The sphynxes are seated on their back legs, in profile, and specular. One front leg is resting on the ground while the other touches that of the opposite figure. The wings cover the chest. The head with an elaborate hairstyle and surmounted by a small rosette is turned backwards. The entire decoration is embossed and chiselled, except for the heads of winged cows that are three-dimensionally decorated and applied. Beyond the rim a crenelated band. Rectangular merlons have two holes for studs. The object appears whole, well restored and with traces of oxidation on central decoration. The outer and inner surfaces of the metal are covered with a grey-yellow patina.

Plaque with standing winged griffin - Kalmakarra - Inv. no 9671: (Dim. 20.4 x 15.8cm; w. 200 g) Triangular shaped plaque with rounded upper vertex hammered out of one sheet of silver or bronze and defined by chiselling. The central figure is circumscribed in a register that takes up the shape of the plaque. The central decoration consists of an animal that looks like a lion, winged, and raptor's legs. The figure is standing on a rectangular element and has one arm raised in firing a blow and the other down, both slightly bent. The snout, in profile, shows the jaws and the eyes wide open. The wings are four, two at the top and two at the bottom. Each wing features three rows of feathers. The animal's coat is enriched with a dotted decoration. Nail holes are visible around the plate. The object appears fragmented into several

parts, with evident traces of restoration. There are traces of oxidation and red-grey patinas. Similar to Inv. no 9667 (Dim. 21.4 x 15.3cm; w. 225 g), which recalls its shape but is devoid of decoration.

Fragment of plaque with animal - Kalkmakarra - Inv. no 9680: (Dim. 3.4 x 3.4 x 0.5cm; w. 0.1 g) Small square plaque with rounded corners, fragment. Single silver/bronze sheet on which an engraving has been made. Depiction of a standing animal, with a lion's body, raptor's legs and a tail ending in a snake's head. On the abdomen, another element recalls a male attribute from which the semen comes out. The object is fragmented and corroded. The position of the animal resembles that of the lion in the plate Inv. no 9671.

Discussion

The lobed bowls from Kalkmakarra stored in the National Museum of Tehran have an open and rounded shape with low walls, with a diameter between 15 and 24 centimetres. The lobed body was hammered into a single sheet of thin silver, with chiselled or applied decorations. We can distinguish two types of bowls from those examined: oval-shaped and drop-shaped bowls. The oval-shaped lobes (Fig. 1) have higher walls, an almost horizontal rim, and a shallower and refined embossed decoration. On the other hand, the drop-shaped lobes (Fig. 2) have lower walls, a flared rim, and an embossed decoration that is evident but not too shallow. All bowls must have originally an omphalos applied to the centre, some still preserved, enclosed in an engraved rosette. This omphalos was initially meant as a finger grip when holding the vessel for libation purposes, but it could become a merely decorative addition to its interior (Carter 2001, 171)³².

In some cases, the bowls are covered with a grey or yellow patina that is more or less bright. Just one of these bowls had the left profile of a

dog, boar, or lion's head engraved on the rim's inner surface (Fig. 3) (Inv. no 9744)³³. These engraved signs could be the craftsman or ownership marks, and they are rarely repeated in other vessels (Demange 1996, 13; Mahboubian 2002, 98). Some other bowls are preserved at the Miho Museum in Kyoto and in some private collections such as the Mahboubian in London. These also seem to belong to the treasure of Kalkmakarra. According to Mahboubian's two publications (1995; 2002), sixteen silver bowls also belonged to the hoard. Nine bowls have a decoration with drop-shaped lobes and stem ending in tips and lotus buds (like Inv. nos 9726, 9727, 9743 in the National Museum of Tehran)³⁴. Four bowls have a decoration with oval lobes separated by stems ending in minor lobes arranged in fan or flower (like Inv. nos. 9665, 9744 in the National Museum of Tehran). Regardless of their decoration, some of these bowls still preserve the omphalos at the centre. These elements are decorated with a rosette enclosed in pointed and lobed stars (like Inv. no 9727 in the National Museum of Tehran) or with a reproduction of snarling lions curled inwards upon itself (Mahboubian 2002, p.76 pl.19; p.90 pl.27, p.130 pl.47; Khosravi 2013b, 51-52)³⁵.

There are several other bowls with similar shapes and decorations attributed to the Achaemenid period. They date from the reigns of Darius, Xerxes, and Artaxerxes I, according to the trilingual inscriptions (Old Persian, Elamite, Akkadian). Some of these were considered

33. A similar profile was also engraved on a lobed bowl with a globular body and elongated neck (Inv. no 9745A) but the realization is very different and less detailed.

34. Three bowls have a decoration with drop-shaped lobes, lotus flowers and buds connected with shoots (like Inv. no 0627 in Falak-ol-Aflak Castle).

35. An example that recalls this type of decoration can be found in a seal ring of the Oxus "treasure". About this decoration, Dalton said that the coiled attitude of the lion belongs to Scythian art. This is seen, for instance, in the bronze ornament from one of the tumuli of "The Seven Brothers" in Kuban which is more similar to the lion curved on itself on the omphalos of Kalkmakarra type bowls, unlike the lion of the Oxus which has its legs extended on both sides of the central body to decorate the shoulders of the ring (Dalton 1964, 30, fig. 60 no 111; Minns 1913, 254, fig. 214 no IV).

32. There is also a third variant of bowl which is nevertheless shown in Mahboubian's publications and is depicted on the silver bowls - presumably from Kalkmakarra - exhibited at the Falak-ol-Aflak museum in Khorramabad (Inv. no 0627). The lotus flowers and buds with drop-shaped lobes are the largest bowls, with a diameter exceeding thirty centimeters.



Fig. 1. Egg-shaped lobed bowl with central omphalos from Kalmakarra (Luristan). Silver. National Museum of Tehran (Inv. no 9744). Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano.



Fig. 2. Drop-shaped lobed bowl with central omphalos from Kalmakarra (Luristan). Silver. National Museum of Tehran (Inv. no 9727). Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano.



Fig. 3. Animals' heads engraved on two vessels from Kalmakarra (Luristan). Silver. National Museum of Tehran (up: Inv. no 9744; down: Inv. no 9745A Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano).

genuine and authentic following the X-ray fluorescence (XRF) and the Neutron activation analysis (NAA) (Curtis et al. 1995, 150-151; Gunter and Jett 1992, 72; Carter 2001, 169-71). It is the case of four silver bowls of Artaxerxes I found by Herzfeld in Hamadan or Persepolis. The British Museum acquired one of these bowls in 1994 (VA1ea). The bowl has a flared rim and embossed buds and lobes decoration motifs around a central omphalos. Around the inner rim, there is a long-engraved inscription in Old Persian, which has been translated by Herzfeld (1935, 1-8) and would testify that the “drinking-cup” (bātugara) was made in the house of Artaxerxes, son of Xerxes (Curtis et al. 1995, 150). However, this inscription has raised many doubts from Schaefer, Schmitt, and Sims-Williams since it would seem that the term bātugara is not attested elsewhere in Old Persian (Sims-Williams 2001, 191-192).

Shallow bowls of this type were common in West Asia and the eastern Mediterranean

during the 1st millennium BCE. Examples made of glass, ceramic and metal have been recovered from excavations or acquired through the antiquities market. The bowls were used, presumably, for drinking and pouring (Howes Smith 1986, 1-88). Although it is unclear whether they were meant to function together as a set of banqueting or ritual objects, the possibility of their connection with metrology has been widely discussed. They were probably made from prescribed weights of silver and could have been stored or exchanged as a local power currency (Curtis et al. 1995, 151-2; Curtis 1984, 17-9). This hypothesis could somehow confirm Overlaet's idea (2011, 124-7) that the Kalmakarra cave was not a temporary hiding place but simply a permanent depositary of votive offerings.

Supposing that the inscribed bowls of the Achaemenid period are genuine – as the metallurgical analyses would confirm for some of these (Curtis et al. 1995, 151-2) – we can

consider the drop-shaped lobes (Inv. nos 9726, 9727, 9743) from Kalmakarra to be the closest stylistically to the tradition of the 5th century BCE. The flared rim and decoration would be due to the elements' characteristics and arrangement, although those of the Achaemenid period is more refined³⁶.

The small cups and chalices stored in the National Museum of Tehran and coming from Kalmakarra, Aržan and Jubaji, are divided into open and closed shapes and have a diameter between 7.6 and 17 centimetres. The body was made by hammering a single sheet of silver or bronze and finished with a chisel according to the object's shape. The cups (Fig. 4) have a body enriched by thin and leafy lobes or smooth and straightforward walls without decorations. The chalices (Fig. 5), on the other hand, have all the same everted shape with a wide mouth. This form recurs in the vessels found in Aržan (10 chalices)³⁷ and Jubaji (12 chalices) (Álvarez-Mon 2020, 443, 491).

36. Regarding the bowls with lotus flowers and buds decorations (Khorramabad Inv. no 0627), the influence seems to come from far away. According to Carter (2001, 172-3), this type of decoration has an Egyptian origin that spread throughout the Near East beginning in the late second millennium, becoming particularly relevant in Assyrian culture. Professor Lloyd Llewellyn-Jones (Pers. Comm., April 2019) suggests that the flowers may be pomegranate flowers closer to the Persian tradition.

37. Alizadeh (1985, 55) numbers 10 chalices, while Álvarez-Mon (2010a, 165) says there are 13 chalices. It is the opinion of the author, after having seen directly the chalices, that they correspond to the number of ten, as also confirmed by Wicks (2019: 112, 198).

rez-Mon 2020, 443; Shishegar 2015, 282-283, 330-333; Wicks 2015, 148; Wicks 2019, 198).

As for the lobed bowls mentioned above, the context of the discovery of cups and chalices found in Jubaji and Arjan played a fundamental role in hypothesising a probable functional category. Specifically, focusing on these vessels, it was assumed that these belonged to a functional category relating to the funerary ritual. Providing food and drink for the deceased, the act of *kispu*³⁸ (Ghirshman, Steve 1966, 8; Hinz 1973, 65), formed a central component of Elamite funerary practices. Approximately 25 chalices were found, some of which, as we have said, come from Aržan and Jubaji, while others come from Susa (Álvarez-Mon 2020, 443, 491). The chalices and cups analysed, except for those from Kalmakarra, belong to a much broader category that refers to the funerary assembly where, by necessity, the elements combine.

For example, it is common to correlate the chalices to the so-called "inkwell", as often the two types of vessels occur together (Shishegar 2015, 332-366; Wicks 2018, 130-133). These are small cups hammered from a single bronze sheet with a diameter of 8-14cm for a height of 7-12cm. The "inkwells" take on different

38. *Kispu* is the Akkadian term for nurturing the dead. In Elam it recurs in an Akkadian language tablet from the period of the Sukkalmah from Susa and which would seem to identify a practice of funeral offerings of a daughter at the moment of her father's death (Basello 2014; Bayliss 1973, 120).



Fig. 4. Three small cups from Kalmakarra (Luristan). Silver. National Museum of Tehran (from left to right: Inv. nos 9747, 9752, 9753). Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano.



Fig. 5. Two chalices from Arjan (left) and Jubaji (right) (Khuzestan). Bronze. National Museum of Tehran (left: Inv. no 2973; right: Inv. no 2890). Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano.

forms based on their geographical location. Some have a more or less open mouth with everted or straight edges. The neck can be narrow, high, concave or wide, while the shoulder is broad and sloping. A central narrowing tends to divide the body into two sectors where the lower one is often, the shorter and wider one. The base can be flat or take a concentric ring shape (Wicks 2018: 1). Those of Jubaji have a flat or ring base, a slightly wider and lower body with segments that involve oblique or square walls. The body tapers in the upper part, creating a constriction for the neck, which tends to close and then open in favour of an outward sloping mouth and an everted hem.

As we said, Jubaji's funerary equipment was removed during the work and recovery phases, so we do not know the original arrangement of the objects inside the tomb. Some of the inkwells that remained in situ were found against the north wall, between the two coffins, along with other metal vessels such as bowls, “pans”, and goblets (Shishegar 2015, 282, 499-498). Precisely this close location tends to presume a possible simultaneous use of the two types of vessels, whether to pour or receive the liquid content (Wicks 2018, 7). In Luristan, we find very similar inkwells from the Iron Age III's funerary contexts in Pusht-i Kuh and Karkhai (Haerinck - Overlaet 2004, 61; Wicks 2018, 2-5).

It is interesting to note how, again at Jubaji, there is a sort of evolution of the form of the inkwell or, in any case, the exploitation of the same form for two different objects. This is the case of the so-called “teapots” in silver and bronze, where a tubular and curved handle and a Z-shaped metal spout with a ring at the base is applied to the almost identical body of the inkwell (Shishegar 2015, 341; Álvarez-Mon 2020, 443, Pl. 198)³⁹. This element appears to be unique in Elam and finds no correspondence elsewhere.

In association with chalices and inkwells, teapots, and drinking vessels in general, we cannot fail to mention the filters found both in the tomb of Jubaji and in that of Aržan. The bronze filters from Jubaji have a conical shape, with a wide mouth similar to a funnel with a perforated base and used as a sieve. The shape that has been given to it seems to suggest the idea that the filters were placed on the mouth of chalices, inkwells or teapots. In Aržan, however, we find a silver straw with a diameter of 0.6cm and a residual length of about 45cm fragmented into three parts. The tip, conical and elongated, has a series of holes and had to be placed in the mouth or inside the vessel to bring the filtered liquid directly into the in-

39. A teapot has a slightly elongated bronze body while the handle and spout are made of a different material. This teapot can be considered a precursor to the inkwell?

dividual's mouth (Álvarez-Mon 2010, 120-121; Álvarez-Mon 2020, 443).

Finally, returning to the small lobed and smooth cups from Kalmakarra analysed previously, we do not have substantial similarities from other contexts. Except that the lobed cups would appear to be a smaller, closed shaped view of the lobed bowls. It is interesting to note that two out of three of the cups analysed do not have a base that allows them to remain standing. This would suggest that they were cups for immediate consumption of the liquid within them or functioned concerning support. A purple encrusted powder was found on the inner surface of the cups analysed by Kalmakarra. It would be interesting to conduct a series of analyses on the residues inside it to understand if this oxidation is related to a particular drink, oil, or paste.

If we analyse the zoomorphic plates listed in this paper and stored at the National Museum of Tehran, we can obtain a series of crucial information, especially if we recover the individual elements of which they are composed. The winged mythological figures with anthropomorphic connotations are widespread in the ancient Near East up to Greece. We find them on stone stelae, on seals, on city and building entrance doors, and many metal objects. The rampant griffin in plaque Inv. no 9671 (Fig. 6) can be compared to numerous examples made of various materials. The elements of which it is composed find comparisons in several cultures which, put together, can recall a possible stylistic syncretism. Starting from the top, the griffin has a lion head separated from the neck by a line made up of small pointed ovals and engraved dots that simulate the animal's fur. On the forehead, in low relief concerning the leading figure, a raised and curved back forelock marks the beginning of a mane that descends orderly along the neckline, stopping at the shoulder. Between the tuft and the mane, there are probably some equine ears or horns that have been partly lost due to the breaking of the plaque. Underlined by arched and marked eyebrows, the look appears wide open and

almond-shaped. The mouth has a C-shaped opening and the details of the muzzle and the cheekbones-moustache are very marked. The teeth, although not very defined, are pointed, and the tongue emerges from the mouth. The elements such as the hair, the ears and more generally, the face's conformation undoubtedly recall the representations of Tiamat of the Late Assyrian palaces. However, the tuft belongs more appropriately to the tradition of Luristan and Elam during the second and particularly the 1st millennium BCE, the period in which the lion-headed griffin develops more in those areas (Alizadeh 1985, 63; Kantor 1946, Pl.7-8; Ghirshman 1964, figs 63-72; Moorey 1974, 85). A similar image is placed on the discs of the famous Arjan ring (Álvarez-Mon 2010, 73-118; Álvarez-Mon 2020, 464-466), in this case, the two engraved griffins are specular and converge in the centre where there is a palmette tree. They have a pair of head wings instead of two pair, lion's paws instead of raptor's paws and the paws both converge towards the centre



Fig. 6. Plaque with rampant griffin from Kalmakarra (Luristan). Silver or bronze. National Museum of Tehran (Inv. no 9671). Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale, ISMEO, Ministero degli Affari Esteri Italiano.

while the Kalmakarra griffin has a much more aggressive stance as one of the paws is raised as if ready to hit someone. The fragment of the plaque from Kalmakarra Inv. no 9680 (Fig. 7) may belong in some way to the same genus of the rampant griffin. The fragment shows only the lower portion of the animal, but substantial differences are already evident in addition to the raptor's legs which are the same as the plaque 9671. The fundamental difference lies in the male attribute symbol of fertility and the curved tail with snakehead, which contrasts with the trapezoidal bird tail. In this case, rather than identifying the animal as a griffin, a snake-dragon-amphibian's characteristics are associated with another hybrid or monster type. This type's properties are generally absent in griffin depictions and recall elements such as water and the underground (Álvarez-Mon 2010, 99-100).

Some gold plaques from Ziwiye have decoration of winged creatures (caprids, cattle, lions, sphinxes) in procession and converging towards a central tree of life, arranged on several registers. The plaque Inv. no 9755 (Fig. 8) stored in the National Museum of Tehran has some interesting connotations that link it to some elements coming from Ziwiye. The frame's arrangement and realisation in the shape of lotus flower/pine cones on a breast-

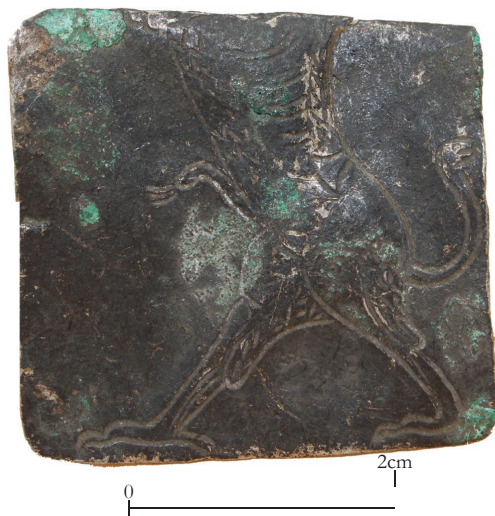


Fig. 7. Plaque with rampant animal from Kalmakarra (Luristan). Silver or bronze. National Museum of Tehran (Inv. no 9680). Copyright National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano.

plate from Ziwiye (Godard 1950, figs. 10, 13, 15-18, 20-24) recall precisely those on the plaque of Kalmakarra (Fig. 9). Although the object does not have a circular shape but rather recalls a crescent, the frame completely retraces the edge enclosing two registers of zoomorphic and anthropomorphic figures inside.

Conclusions

In light of these discoveries, the 1st millennium BCE's metal production appears less prosperous than that of the previous millennium. The first millennium BCE production brings a series of affinities that seem to connect Khuzestan, Luristan and north-western Iran. As for the Neo-Elamite culture, the few elements from Susa are completed with the finds of the funerary equipment from Aržan and Jubaji and the still highly doubtful context of Kalmakarra. Even if this material does not reveal specific innovations from a technical point of view, it re-proposes an artistic vitality that is undoubtedly renewed and which, as we have seen, had already developed in its fullness since the previous millennium. The ability to draw on various sources and correlate them with each other does nothing but anticipate what would have been the syncretic character typical of the Achaemenid period. This would have been where a greater refinement in the realisation and the expressed themes would have been developed and sought, converging past skills with ideologies of the Achaemenid present.

The cases of Kalmakarra, Aržan and Jubaji, which were proposed here, could introduce a new chapter of our understanding of Achaemenid art production's genesis through the assimilation of technical and stylistic aspects. As mentioned by Henkelman (2003, 196-201), recent exploration of Median and Elamite points of contact suggests instead Elamite-Iranian acculturation, and not specifically Elamite-Median. Some authors have presumed an Assyrian influence in Achaemenid artistic production via the Medes. For example, Michael Roaf (2003, 16) sees Media "as the most plausible conduit through which Assyrian influence travelled to Persia".



Fig. 8. Circular plaque with goats and sphynxes from Kalmakarra (Luristan). Silver. National Museum of Tehran (Inv. no 9755). © National Museum of Tehran, Università degli Studi di Napoli "L'Orientale", ISMEO, Ministero degli Affari Esteri Italiano. (photo: Nima Fakoorzadeh)

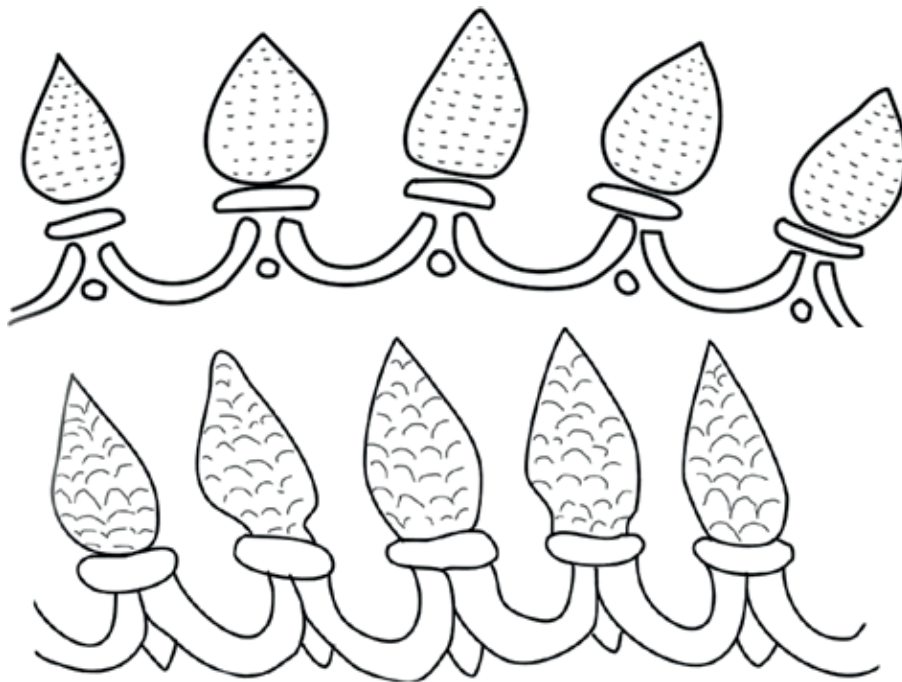


Fig. 9. Details of the decorative frame with lotus flower buds/pine cones on the silver circular plaque from Kalmakarra (up) and on the Ziwiyeh golden pectoral (down). Drawing by Lucia Cerullo.

The dividing line between the pre-Achaemenid and the Achaemenid period is therefore challenging to identify. This is due to the scarce archaeological contextualisation, the suspicious information on the discovery of most of the objects and the lack of obvious iconographic and stylistic breaks with the subsequent period.

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