

António Carlos Valera (Ed.)

# FRAGMENTATION AND DEPOSITIONS

## IN PRE AND PROTO-HISTORIC PORTUGAL

(LISBON, 14 OCTOBER 2017)





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## PRESENTATION

In the last decades the Portuguese Archaeology has been growing an interest for the subject of fragmentation and for the multiple social practices of intentional deposition in Recent Prehistory and Proto-History, following trails developed in international research. However, reunions to specifically debate such issues and the theoretical frames that have been used to address them are unusual in the national context and even at an Iberian scale.

Considering that these social practices were deeply rooted in Prehistoric societies and are central to the interpretation of their archaeological remains, and aiming to stimulate the debate of these matters in the country, the research unit (NIA) of Era Arqueologia, in partnership with the Interdisciplinary Centre for Archaeology and Evolution of Human Behaviour of Algarve University, organized a workshop entitled “Fragmentation and Depositions in Pre and Proto-Historic Portugal”, at Museu do Carmo in Lisbon (courtesy of the Portuguese Association of Archaeologists) in October 14<sup>th</sup> 2017.

Several Portuguese researchers that, in a way or another, have been dealing with these subjects were invited to participate and present talks addressing theoretical problems, contexts and materials related to the issue. This book reunites seven of the ten presented papers.

The first chapter, by António Valera, highlights the structural relations between the practices of fragmentation and of depositions and the cognitive processes of classification, seen as historically contingent. It is argued that many of these practices, but also of space and time perception and organization, rest in cognitive “versions” that promote a strong permeability between categories and notions of reversible time and qualitative space. Rejecting any kind of structural determinism, it is argued that cognitive approaches are central to the understanding of the Neolithic life and social practices.

Chapter two, by Ana Vale, explores the concept of “structured depositions” using as case study the Castanheiro de Vento walled enclosure, dated from the Chalcolithic. The practises of structured depositions are characterized as assemblages composed by different fragmented elements that may incorporate links to other assemblages. They are considered to be part of the dwelling of the site, participating in the processes space organization and, therefore, becoming part of the site’s architecture.

In chapter three, Lucy Evangelista and António Valera address the depositions of human remains in ditches during the Chalcolithic, focusing in the case of Perdigões and integrating it in the global Iberian scenario for such practices. These depositions are presented as part of complex social practices that involve human remains and other materialities, traducing more fluid and permeable categorizations of the world that tend to engender mixing contexts. They are considered to express less bounded and more instable self-definitions, committed to permanent negotiation where identity is constructed by the relations established in each context.

In chapter four, A.F. Carvalho, D. Gonçalves, F. Alves-Cardoso and R. Granja address the Middle Neolithic funerary practices at the Bom Santo cave (in Montejunto mountain, at north of Lisbon). Differences in the ritual procedures between two sections of the cave show the coexistence of diversified practices of body treatment, incorporating primary and secondary depositions, body intentional segmentation and manipulation of human bones. Homologies between the patterns of body handling and the patterns observed in grave goods are suggested. The site is used to present a more complex image of the funerary practices of the period, resulting

from the interaction between communities occupying and exploring a vast territory in both sides of the river Tagus.

Lídia Baptista and Sérgio Gomes, in chapter five, highlight the importance of the study of fragmentation patterns to interpret the negative structures and their fillings in the Alentejo region (South Portugal), during the Chalcolithic and Bronze Age. Reassembling studies allowed the reconstitution of links between structures and structures fillings, at the same time they help to build a more diversified image of the practices involved in these processes, showing that the study of fragmentation and distribution of fragments has high heuristic potential.

Chapter six, by Ana Catarina Basílio and Nelson Cabaço, presents the study of a specific context in Perdigões enclosure, dated from the end of the 3<sup>rd</sup> millennium BC: a deposition of an assemblage of faunal remains in a pit covered by a stone cairn. Interpreted as the result of feasting, the investment in the construction of a cairn over the pit is seen as a process of memorization, combining the ephemerality of the ceremonies with the endurance of the stone structure, that provides a degree of monumentality to the depositions. Considering the late chronology, integrated a period of decline of Chalcolithic societies in the Southwest of Iberia, it is suggested that this context, in continuity with traditional practices of deposition in the site, could express some form of resistance in a period of social change.

Finally, in the last chapter (Chapter 7), Raquel Vilaça and Carlo Bottaini address the hoard of metal objects during the Late Bronze Age, focusing in the depositions of deliberately broken metal artefacts. Different procedures were identified, which led the authors to consider the absence of a general pattern for Late Bronze Age metal depositions. The variety of fragmentation and deformation of metals is seen as a social practice that expresses world visions and that requires itself some levels of expertise.

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## CHAPTER 7

# **BREAKING METALS AND HANDLING IDEAS ABOUT BRONZE AGE HOARDS FROM WESTERN IBERIA. MATERIAL PATTERNS, INVISIBLE BEHAVIORS AND POSSIBLE INTERPRETATIONS.**

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### Abstract

The hoarding of metal objects, mainly of copper alloys, reaches a remarkable quantitative and qualitative expression in Portuguese territory during the Late Bronze Age (circa 1200-800 BC), similarly to what happened in Europe. The interest about Portuguese metal hoards increased in the last two decades, partly because of that richness and partly due to the scientific community's acceptance of anthropological approaches that allowed overcoming the traditional theoretical opposition between utilitarian and votive deposits. Studying these hoards allows pursuing many research paths, some with great potential for better understanding the cultural dynamics behind the deposition of metal objects, deliberately concealed by communities and never retrieved.

This text analyses a very relevant but hitherto undervalued aspect of Late Bronze Age Portuguese hoards: the deposition of deliberately broken metal objects. In fact, known findings show that a significant amount of hoards include objects that no longer possess their original technological and morphological characteristics. Therefore, from an economic and pragmatic view of ancient metallurgy, they are considered ordinary scrap. The study, however, reveals a more complex and subtle reality, identifying different depositional models involving broken pieces that show different handling pattern. This paper explores those handling evidences and reflects about the social function of fragmentation practices in the Late Bronze Age of the Iberian West, particularly in Portuguese territory.

Keywords: fragmentation; selection; deposition; metal; Late Bronze Age; Portuguese territory

## 1. Introduction: concept potential and changes

Metal hoarding and deposition during Bronze Age, especially by the end of that period and transition to Iron Age, is one of the most expressive cultural phenomena in European territory, particularly in the Atlantic Europe. The interest about this practice, having Chalcolithic roots, is translated in abundant bibliography, published since the second half of the 19<sup>th</sup> century (e.g. Evans 1881; Childe 1930; Hamon, Quilliec 2008). Simultaneously, several scientific meetings were held, pursuing different approaches and revealing how the subject is actual and relevant to the archaeological scientific community<sup>1</sup>.

The study of bronze deposition practices (expressed in very different ways in the past, sometimes interlinked or case specific) has been continuously present in the researcher's agenda. Therefore it has been subject to distinct theoretical-methodological approaches, differing analytical scales, supported by contextual and spatial perspectives. Contextual perspectives went through a deep renovation with the combination of typology, archaeometry and micro-topography analysis in artefact studies, thus allowing access to past artisans' gestures and technical know-how. Spatial analysis opened up the interpretive range of interactions between communities and space, or with other communities, through bronze handling.

Depending on the hoards' contents and the site where they showed up, these finds were traditionally interpreted as resulting from economic practices linked to metal production and circulation (founder's or merchant's hoards), or votive offerings (ritual deposits). More recently, however, it was understood that such a dichotomy was no longer able to explain the complex, heterogeneous and ambiguous realities of hoards. Therefore, they began to be seen as entities with an higher dynamic, particularly after the novel ideas of Richard Bradley (1985; 1990) reinforced by the work of many other researchers (e.g. Gosden, Marshall 1999; Whitley 2002; York 2002; Osborne 2004; Joy 2009).

According to this new approach hoards are seen as manifestations of deliberate and intentional actions. Therefore, they would have been formed in accordance to well defined and socially shared social rules, and structured by principles defining what was deposited (and what was disposable), how it was deposited and where it was deposited (e.g. Vilaça 2006: 25-29; Târlea 2008; Bottaini 2012: 257-268). Choosing what was to be deposited implied selection and determining how it was deposited involved metal concealment, which sometimes was deliberately broken, fragmented. The act of depositing could consecrate a place. On the other hand, the existence of a special place would justify that certain depositions happened there and not elsewhere.

In this sense, it is important to emphasize that all hoards are individual contexts, have a specific structure and several other aspects that may give them meaning. These may include the act of depositing, the selection of object combinations (or lack of combinations) and the objects physical state (that is to say, the marks of their "experiences"), as well as the particularities of depositional spaces (that can be related and connected to other significant places, anthropic or not). Recognizing intentionality allows seeing hoards as a specific type of "structured deposition", similar to other types of object depositions like pottery sherds, animal or human parts, grinders, moulds, etc., a subject that was recently reappraised in depth (Garrow 2012).

This text analyses the phenomenon of bronze hoards in the Iberian West, particularly in Portuguese territory, from the point of view of object fragmentation. It also briefly reflects upon some potential meanings behind it.

## 2. Hoards in Portuguese territory: brief notes

The study of bronze hoards in Portuguese territory has been less intense than in other European countries. Nonetheless, it accompanied their tendency, registering publications since the second half of the 19<sup>th</sup> century. The researchers that firstly interpreted these hoards emphasized their earthly nature (e.g. Veiga 1891; Fortes 1902; Pereira 1903; Fortes 1905-1908a;

<sup>1</sup>Reference should be made to the recent conference: Connecting Worlds Bronze-and Iron Age Depositions in Europe, hosted by the Deutsches Archäologisches Institut at Berlin (19-21 of April 2018).

Viana 1938), and, less frequently, their votive character (e.g. Bettencourt 1988; Silva, Gomes 1992; Cardoso 2004)<sup>2</sup>.

The first comprehensive overview of this subject, however, was only published in 2006. It was based in the systematization of a great amount of empirical evidences and was greatly invested in conceptual and methodological questions. Some aspects until then understudied were also approached, like the internal context of hoards and their relation to surrounding space, in a global perspective (Vilaça 2006). This work renewed the interest of the Portuguese scientific community in the study of metal hoards. Therefore, more publications on the subject began to arise, providing new readings of old data and retrieving unpublished information. Another large-range monograph work (Bottaini 2012) contributed, amongst other aspects, to reveal the richness of practices expressed in metal depositions throughout the Bronze Age and particularly in its final stage.

Nevertheless, the study of Portuguese hoards has been deeply limited by the small amount of compositional analysis available and by a lack of knowledge about the circumstances of their finding. In fact, most of them are ancient finds, dating before the mid-twentieth century (Vilaça 2006: 30-33), and were individually found by chance, without the presence of archaeologists. These circumstances did not allow recording many elements that would be significant to understand their micro-contexts. In fact, in several cases the information reported is quite vague concerning aspects like: the precise location of the finding, the constitution of the deposit (number, typology, breakage state of the pieces), the observation of structures (negative or positive), the relative disposition of pieces, the presence of other material remains or the presence of charcoal and wooden remains (which sometimes some recordings suggest). In this sense, the archaeology of bronze hoards in Portuguese territory has to work not only with the limitations known to archaeology, but also with the obstacles arising from the peculiar reality here summarized.

Regardless of the many interpretations that this phenomenon may raise, a broad overview shows that the hoards under study are structured very differently. They comprise a dissimilar number and type of objects, the pieces have distinct physical characteristics (newly produced, having use-wear traces, fractured, fragmented, twisted, etc.), the total and partial weight of metal deposited varies, the internal organization and conditioning of pieces (when known) differs, the typological associations are different, as are the places chosen to be the setting to depositional practices and their relation to their surroundings.

An aspect shown by the available data is that almost all types of artefacts were deposited: weapons, tools, ornaments, feasting objects, ingots, as well as axes and palstaves. Having minor exceptions, the objects deposited are mainly locally produced, reflecting the Atlantic world and expressing the deep involvement of indigenous communities in bronze deposition practices. Rarely, however, their morphology refers to other geographical and cultural spheres, like the Mediterranean world (Vilaça 2006: 83). Some examples are two fibulae fragments ascribed to the hoards of Moreira (Viana do Castelo) and Porto do Concelho (Mação)<sup>3</sup>, the group of bronze weights from Baleizão (Beja), and the tongs from Cabeço de Maria Candal's hoard, a unique finding of extraordinary importance (Melo 2000: 65; Vilaça 2011: 152; Vilaça *et al.* 2012: 332-334).

The presence of fibulae, weights and other Mediterranean related elements, like depilatory tweezers, iron objects, glass, etc., is also found in habitat contexts (Vilaça 2013), alongside testimonies of indigenous products and their production materials. Thus, it is possible to say that, in Portuguese territory, the process of bronze deposition by indigenous communities was selective and culturally discriminatory. Apparently not all settings were as open to novelties as some habitat contexts. In this sense, Late Bronze Age hoards are deeply closed, conservative and adverse to multiculturalism, being contexts of resistance to Mediterranean influences (Vilaça 2006: 85).

<sup>2</sup>The range of similar situations is vast. It was partly compiled in Vilaça 2006: 44, to which should be added the cases of two palstaves from Quinta da Comenda (Arcos de Valdevez) (Pereira 1898: 88), ten double looped palstaves from Paul (Covilhã) (Vasconcelos 1917: 328, note 2) and the metallic mould for double looped palstaves found at Vila Boa (Teixeira 1939: 127). Also see Vilaça 2006: 34, 52, 88 and Fig. 50.

<sup>3</sup>For more considerations about the metal sets from Porto do Concelho, Moreira and on the presence of fibulae fragments see, correspondingly, Melo 2000: 64-65; Vilaça 2006: 40-41 and Bottaini *et al.* 2017.

In this respect, Portuguese territory differs from the Mediterranean area. In the Mediterranean the typology of some objects from hoards clearly refers to the Atlantic realm, namely of Portuguese origin (e.g. palstaves, socketed axes and “Rocanes” type sickles from the hoard of Monte Sa Idda, in Sardinia), as shown by the work of Claudio Giardino (1995) and Fulvia Lo Schiavo (2008), amongst others.

### 3. Fragmentation in hoards from Portuguese territory: evidences and diversity

The presence of deliberately broken, or fragmented, objects is an important aspect of the phenomenon of bronze deposition in Portuguese territory. The concept of “fragmentation” is here used in its broad sense, including different strategies of metal handling. Table 1 is not exhaustive but shows a representative idea of the distribution of fragmented and deposited bronze objects. Those cases where there were reports that finders broke or disfigured artefacts at the time of their discovery were excluded from the table (or are clearly mentioned, like in the case of Cola, see below). Thus, it is important to notice that the quality of data here presented is diverse. In fact the artefacts are geographically scattered, some were lost, and we must emphasize that we did not observe them all directly.

Table 1: Hoards with fragmented objects from Portuguese territory. North: north of the Douro River. Centre: between Douro and Tagus Rivers; South: south of the Tagus River (T: tools; W: weapons; OR: ornaments; OT: others).

Numbers in the Fig. 1	Hoards	Localization	Function (fragmented objects)				Bibliography
			T	W	OR	OT	
1	Carpinteira	North	X				Fortes 1905-1908b
2	Viçosa	North	X	X			Neves 1962
3	Catelinha	North	X				Cortez 1951
4	Cabeluda	North	X				Nunes 1957a
5	Paredes de Coura	North	X				Pereira 1903
6	Areosa	North	X				Monteagudo 1977
7	Lama Chã	North		X			Júnior 1968
8	Solveira	North				X	Bottaini <i>et al.</i> 2015
9	Vilela Seca (Barrenhas)	North	X			X	Villas Bôas 1948
10	Valbom	North			X		Lemos 1993
11	Fonte Velha	North				X	Fortes 1905-1908a
12	Lugar do Telhado	North		X			Cardozo 1971
13	Abelheira	North	X				Sarmiento 1888
14	Vila Cova de Perrinho	Center	X	X	X		Brandão 1963
15	Ferreira de Aves	Center	X				Veiga 1891
16	Quarta-Feira	Center	X				Melo <i>et al.</i> 2002
17	Moura da Serra	Center	X				Nunes 1957b
18	Coles de Samuel	Center	X		X		Bottaini <i>et al.</i> 2016
19	Quinta do Ervedal	Center	X	X		X	Villas Bôas 1947
20	Pinhal do Urso	Center	X				Kalb 1998
21	Marzigueira	Center				X	Coffyn 1985
22	Cabeço de Maria Candal	Center	X	X			Vilaça <i>et al.</i> 2012

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23	Reguengos do Fetal	Center				X	Ruivo 1993
24	Porto do Concelho	Center	X	X	X		Bottaini <i>et al.</i> 2017
25	Fonte de Alviela	Center	X				Vilaça 2006
26	Casal dos Fiéis de Deus	Center	X	X	X		Melo 2000
27	Cacilhas	Center/South		X			Silva, Gomes 1992
28	Évora	South		X			Brandherm 2007
29	Alqueva	South		X			Cardoso <i>et al.</i> 1992
30	Safara	South		X			Vasconcelos 1915
31	Castro da Cola	South		X			Vilhena 2006

The empirical data allows observing the following:

- i) Concerning geographical distribution, hoards with fragmented objects follow the pattern already outlined for hoards in general (Delibes de Castro, 2007: 16), being mainly concentrated in central and northern Portugal (Fig. 1);
- ii) Only in the south of Portugal there is some sort of preference for fragmenting certain metal object types, the weapons, whereas in other regions the objects fragmented are typologically more diverse;
- iii) In the same hoard several typologies of fragmented objects may occur (e.g. Viçosa, Quinta do Ervedal, Casal dos Fiéis de Deus, Porto do Concelho, etc.);
- iv) The cases where the same hoard presents more than one fragment of the same piece are a minority (e.g. Vila Cova de Perrinho, Herdade do Sobral da Várzea);
- v) Fragmentation occurs in hoards with multiple objects of the same type (e.g. Paredes de Coura), in those showing different typologies (e.g. Solveira, Freixianda) and in individual depositions (e.g. Cacilhas);
- vi) Technologically, the objects deposited may be ternary alloys (e.g. Abelheira) or binary alloys (e.g. Solveira, Freixianda, Coles de Samuel) (Bottaini 2012);
- vii) Fragmentation is not limited to used objects (although sometimes they were intensely used), or ready to use objects (e.g. the tongs from Freixianda, the axes from Coles de Samuel) and it also occurs in seemingly newly produced and unfinished objects (e.g. the casting jet from Abelheira);
- viii) While in the North of Portugal most cases correspond to the deposition of a single type of fragmented metal objects per hoard (usually palstaves), in the Centre, there is greater typological/functional diversity;
- ix) There are no known hoards that exclusively present fragmented objects, unlike in other regions of the Atlantic world.

### 4. Discussion: to break, to mutilate, to select, to gather, to deposit

The presence of broken objects in Bronze Age metal hoards or in other type of contexts has been discussed by several authors (e.g. Nebelsick 2000, Bradley 2005: 161-163, Gabillot 2004, Perea 2008, Tarbay 2017; Brandherm 2018), remaining a topic insufficiently studied in Portuguese territory.

The first information to keep in mind is that nearly all metal formal types known in the region on which this work focuses have been fragmented, being this phenomenon particularly evident in the period ranging between the end of the 2<sup>nd</sup> and the beginning of the 1<sup>st</sup> millennium BC, similarly to other European regions (Bradley 2017: 133). The fragments of palstaves and

socketed axes which were deposited were either the hafting ends or the blades (e.g. Vilela Seca, Paredes de Coura, Coles de Samuel, Quinta do Ervedal, Cabeço de Maria Candal). Similarly, the parts deposited from sickles of both Rocanes and socketed types were the blade edges (Porto do Concelho, Coles de Samuel) or the hafting ends (Moura da Serra). The same situation is shown by the flesh-hook from the hoard of Solveira, with one of the prong that was broken (Bottaini 2012: 54-55) (Fig. 2).



Figure 1 - Distribution of hoards with fragmented objects.

As for as swords, they can be restricted to the hilt or to the distal end. However, concerning the latter, the deposition of blade point fragments is predominant, meaning that the hilts had some other destination<sup>4</sup>. Consequently, it is difficult to identify predefined and recurrent models of fragmentation within the same functional types. The fragmentation pattern vary across different artefact categories, as is also shown by spearheads, for example (see below).

A second problem to highlight is that the concept of fragmentation, in its strictest sense, is too narrow to describe all the realities observed. In fact, in certain cases the objects were not only broken, but were cut (with a chisel or by friction), bent, twisted, deformed, subject to fire, mutilated or desecrated. In other words, they were intentionally damaged in different ways, leaving deep marks, superficial ones, or only light cracks, as consequence of the destructive actions. Actually, as Bradley has recently stated “breaking or damaging objects was a very different process” (Bradley 2017: 130).

<sup>4</sup>See Brandherm 2007 for more detailed references on swords.

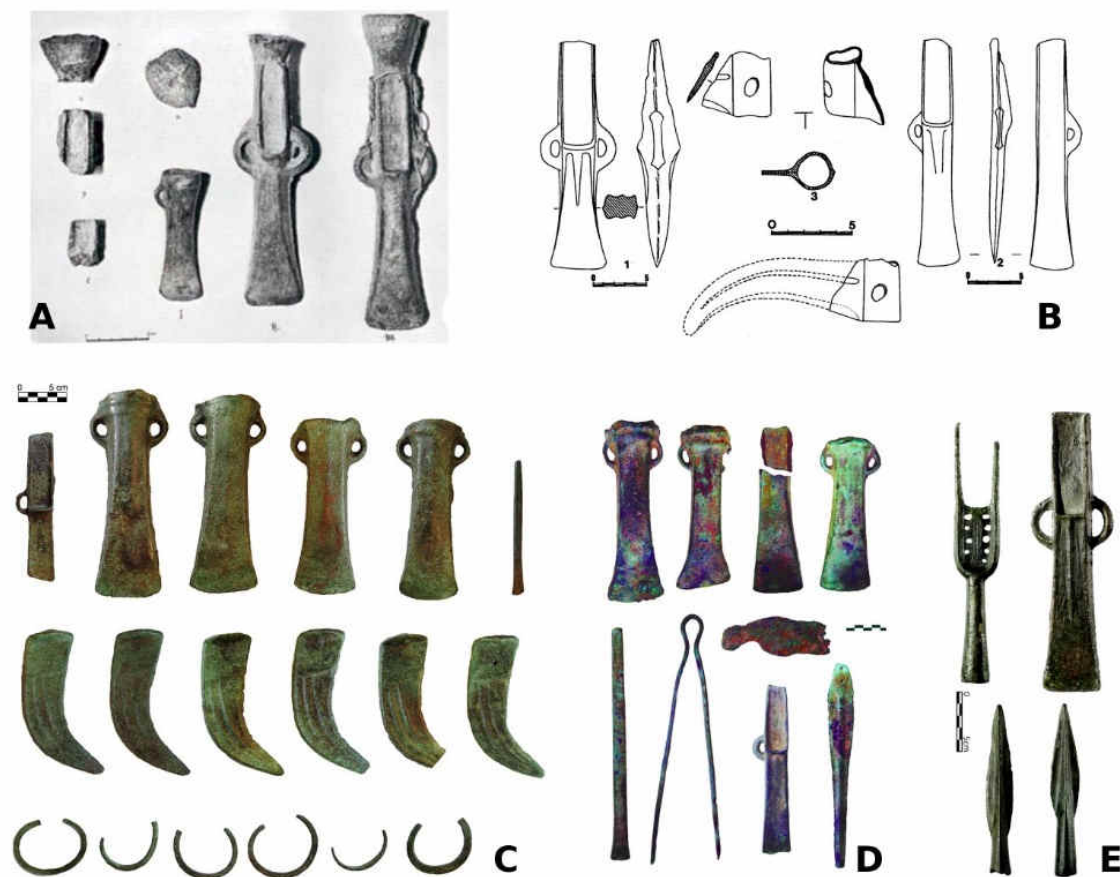


Figure 2 - A) Barrenhas or Vilela Seca hoard (according to Villas-Bôas 1948, Lám. 2); B) Moura da Serra hoard (according to Coffyn 1985, planche XLIII: 1-3); C) Coles de Samuel hoard (according to Bottaini *et al.* 2016: 346); D) Cabeço de Maria Candal hoard (according to Vilaça *et al.* 2012: 305); E) Solveira hoard (Photo credit: MDDS, Braga).



Figure 3 - The flat axe from Sabugal showing deep cuts on the blade edge and marks on the sides (Photo credit: Museu do Sabugal and Bruno Santos).



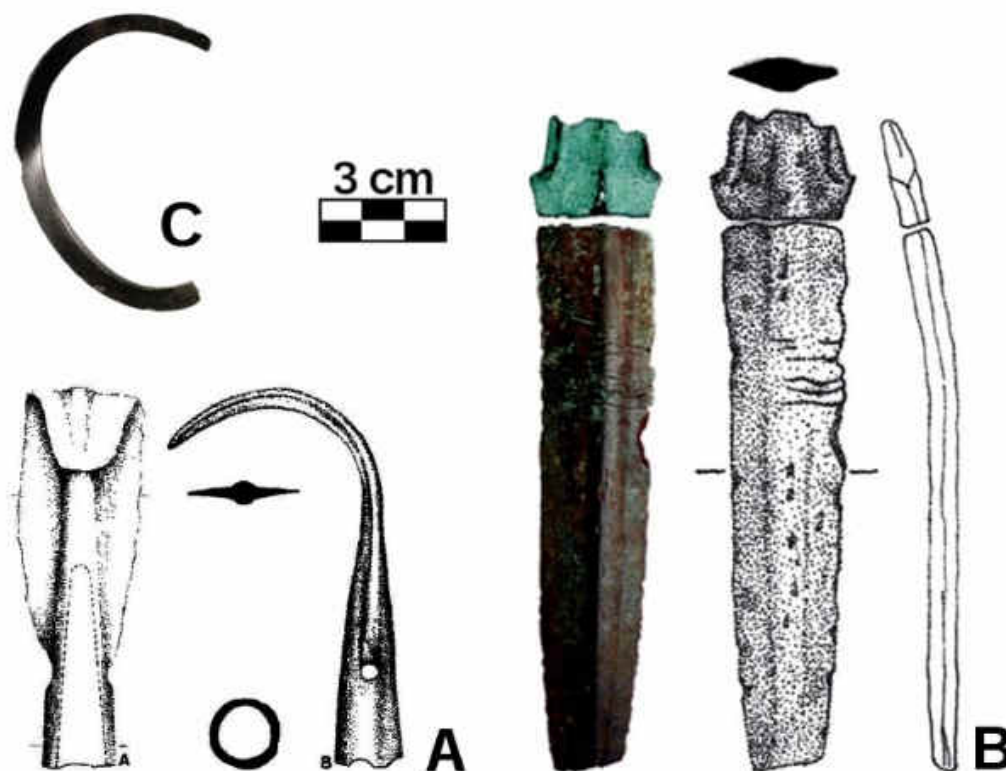


Figure 4 - A) Spearhead from Baiões (according to Silva *et al.* 1984: 102); B) Dagger from Vila Cova de Perrinho (according to Bottaini *et al.* 2011: 31); C) Bracelet from Porto do Concelho (Photo credit: Carlo Bottaini).

According to Nebelsick (2000), such deliberately violent actions of metal objects' destruction were part of the ritual practices of LBA, although they may have had an earlier origin. The flat axe from Sabugal is interpreted in accordance to this perspective. It was collected in unknown circumstances (in that village or its surroundings) and was found violently destroyed. The object is complete but shows deep cuts on the blade edge and several other cut marks on the sides (Fig. 3), revealing the brutal aggressiveness it was subjected to without an apparent practical purpose.

Besides fragmentation and mutilation, violence upon artefacts was exerted in other more subtle ways: certain objects were physically deformed. An example is one of the spears from Baiões. It was very carefully folded in a controlled way so that it would not break (Fig. 4A) (Silva *et al.* 1984: 102). On the contrary, one of the daggers from Vila Cova de Perrinho (Fig. 4B), equally folded, had a fracture and marks of that action in the middle of the blade, showing violent cracks. Furthermore, physical deformation is shown in one of the bracelets from Porto do Concelho. The bracelet was twisted, also without apparent practical reason (Fig. 4C).

Concerning the spearheads, in the cases of Bouças (or Monte Viçosa) (Melgaço) (Coffyn 1985: planche XXXVI) only the blades were deposited. The spearheads from Penedo de Lexim (Mafra) (Arnaud *et al.* 1971; Sousa *et al.* 2004) and Porto do Concelho (Bottaini *et al.* 2017) show cracks in the blade and in the socket, a condition also found in other hoards exclusively composed of spearheads. It is the case of the hoards from Lama Chã (Junior 1968) and Lugar do Telhado (Cardozo 1971) (Fig. 5), whose spearheads showed visible cracks in the sockets, along the blade edges and at the point.

The cases described above are undoubtedly intentional, since their creation required technical expertise and skill in fragmentation and distortion. Nevertheless, it isn't always easy, or possible, to identify the origin of some marks. It is undeniable that they are related to different fragmentation models, implying that the reasons behind fragmentation must have been equally different.



Fragmentation is performed to condemn an object, as a social strategy. But is fragmentation also done to recycle? Or is it because artefacts were already broken (by other reasons) that their fragments are sent to recycling? These situations are very different because they imply different purposes at their roots. In the case of recycling, the extensive analysis of empirical data and contexts clearly shows that the size of broken parts is not adequate to the capacity of crucibles. They are always quite small and could only have been used to melt small pieces (Vilaça 1998: 354-355 e fig. 2).

Either natural breakage or intentional fragmentation produces object fragments and fragmented objects. These different results imply different degrees of fragmentation, which may also be important in understanding the actions and motivations for fragmentation.

Let us now focus on one of the most remarkable and symbolic creations of the Bronze Age: the swords. An approach that combines different scales, macroscopic and micro-topographic, shows a huge diversity of situations and, therefore, of motivations. Some researchers (e.g. Kristiansen 2002; Quilliec 2008: 81-83) observed that the intensive use of swords blunts the points, produces cracks in the blades and small cuts on their edges; the breakage of a sword's blade in half (leaving the rest intact) reveals an accidental action, possibly resulting from combat; if there are many separate fragments it reveals that actions were intentional, regardless of the motives.

Some LBA swords from Portuguese territory illustrate these features. For example, the swords from Vilar Maior, Elvas, Safara, Évora and Cacilhas (Fig. 6A-E) have no point. They maintain physical identity but not their integrity, since the points were damaged or show intensive use. Intensive use is also visible in blade irregularity as is shown by a short sword preserved at the Museum of Lousã and found somewhere in the Centre of Portugal (Vilaça, Lima 2006). A similar case comes from Tapada das Argolas (Fundão) (Vilaça *et al.* 2002-2003). The blade fragment shows wavy dents (Fig. 6F) that reveal its effective use in defence or attack in a violent context of real confrontation or parade.

A second sword from Évora was split in half. The hilt was left intact and the blade fracture line shows signs of bending, revealing that breakage was forced (Fig. 6A). The sword from Castro da Cola was also bent when it was found (Fig. 6G). However, it was straightened against a large stone by its finders (Vilhena 2006: 78). In those cases the objects are usually complete. Nevertheless, in hoards that present several types of artefacts, such as Quinta do Ervedal or Porto do Concelho (Fig. 6H), sword fragments seem to be "lost" from their other parts, which are missing. According to these fragmentation and selection patterns, it is admissible that not all parts of an artefact might have had the same value. Thus, only some were mutilated and preserved. The mutilation of the points and blade edges in weapons (and axes) takes on a special meaning, since it would cancel their practical efficiency. Therefore, it would physically condemn them, eliminating their function and even sacrificing them.

On the contrary, fragmentation and preservation of swords' hilts may show the high practical and symbolic value of that weapon. Bradley (2005: 155) suggests that hilt preservation could be explained by it being the closest part to the owner, thus remaining as a relic while the remainder would become recycling material. The remainder, that is, the blade, is the part that kills or confronts and, therefore, should be destroyed.

As seen, artefact selection for deposition comprises complete or undamaged objects and fragmented ones. Such a selection involved separation, either by removing objects from their previous contexts, or by setting aside some fragments from the remaining object parts, which are now missing. The latter have followed unknown destinations, impossible to control. Many were possibly recycled, others deposited, or even re-deposited. Therefore, fragmentation creates different fragment biographies.

In this regard, Bradley reports the finding of two fragments from the same sword in different locations, separated by a river (Bradley, Ford 2004). Both fragments mark different spots in the landscape, because they were placed on top of distinct mounts, which, nevertheless, could see each other. Thus, although fragmented and separated, the connection between the two parts of the same sword was emphasized by the sites chosen for each deposition. The authors then use the concept of "*enchainement*" (Chapman 2000) to propose that these two fragments could symbolically establish a relationship between two people, between two communities, between

their life histories. By enacting this relationship both parts would be reunited. This concept is inspired in ethnographic studies from Melanesia and values the connection between objects (with their mnemonic, metaphorical and metonymic references) and people (having their own life histories). Since its application its implications have been subject to interesting debates (e.g. Brück 2006).

The diversity of fragmentation in Portuguese territory is also characterized by the union of distinct object parts in the same depositional contexts. Although some hoards do not have intact objects, the whole object is sometimes present in its broken parts: the objects are complete, although fragmented.

The most recent example came from the reappraisal of the hoard from Herdade do Sobral da Várzea (Santiago do Cacém). It includes two bronze flat axes that were complete, but divided in four fragments (Soares *et al.* 2016). It should be highlighted that, in each case, the fragmentation model created a fracture that divided the blades in half.

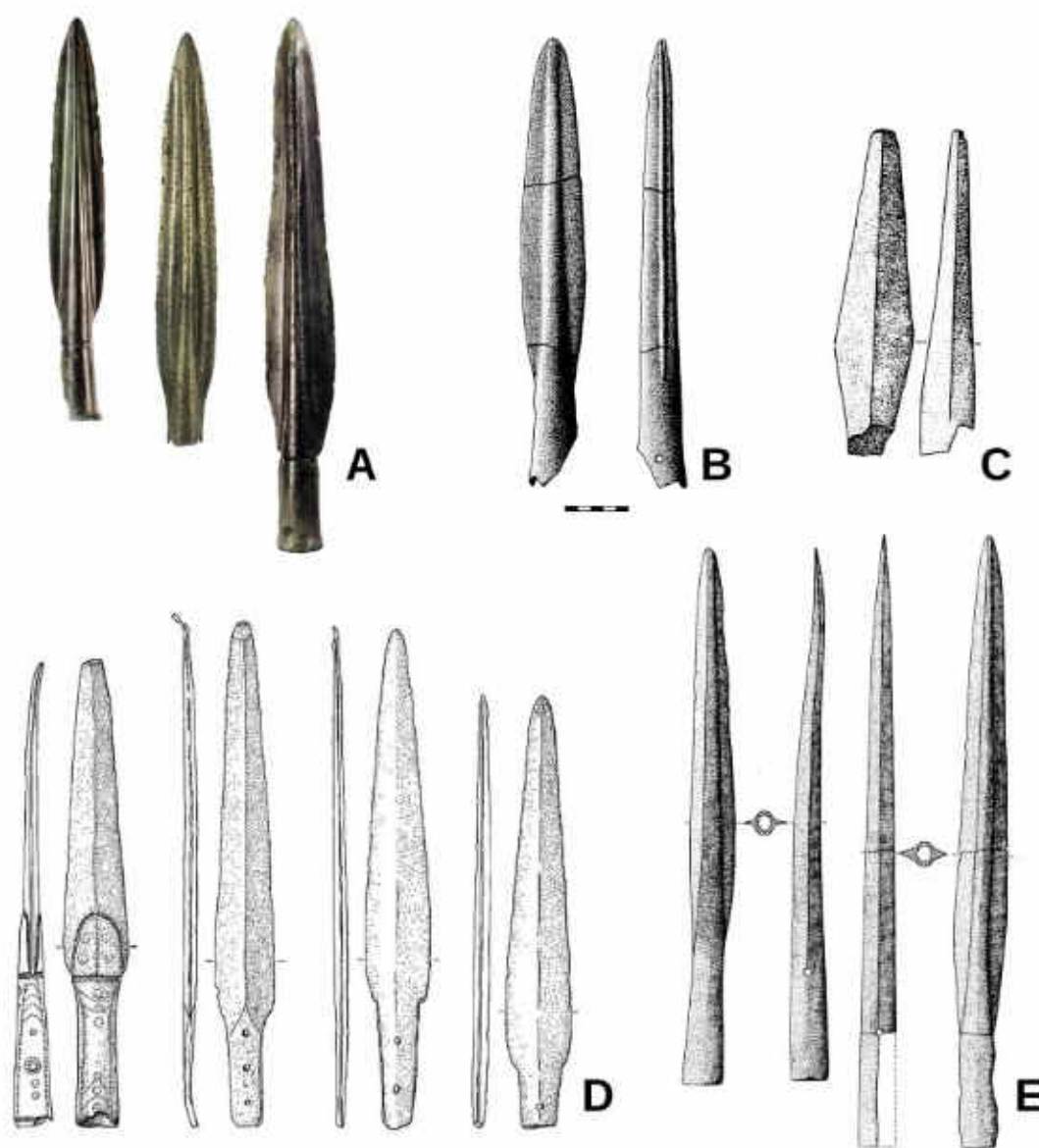


Figure 5 - Spearheads from Porto do Concelho (A) (Photo credit: Carlo Bottaini), Penedo de Lexim (B) (according to Sousa *et al.* 2004: 113), Viçosa (C) (according to Coffyn 1985, planche XXXVI: 6-8, “Bouças”), Lama Chã (D) (according to Kalb 1980: 41) and Lugar do Telhado (E) (according to Coffyn 1985, planche LII).

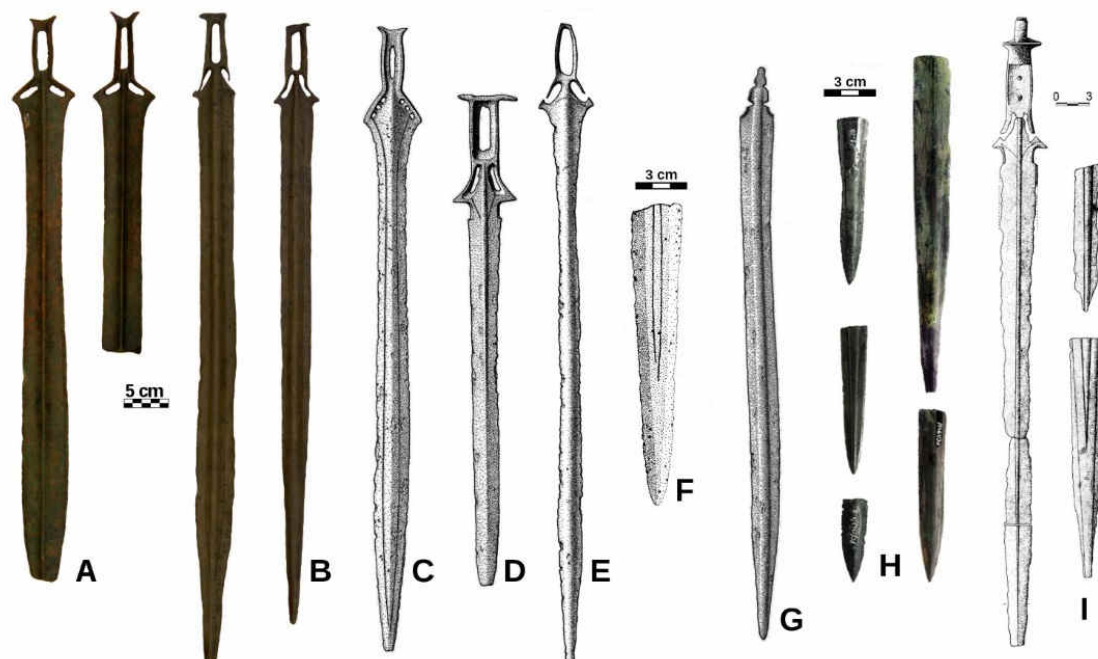


Figure 6 - Swords from Évora (A) (Photo credit: Carlo Bottaini), Safara (B) (Photo credit: Carlo Bottaini), Vilar Maior (C) (according to Brandherm 2007, lámina 3: 18), Elvas (D) (according to Brandherm 2007, lámina 27: 166), Cacilhas (E) (according to Brandherm 2007, lámina 7: 35), Tapada das Argolas (F) (according to Vilaça *et al.* 2002-2003: 185, modified), Castro da Cola (G) (according to Brandherm 2007, lámina 28: 176, “Nossa Senhora da Cola”), Porto do Concelho (H) (Photo credit: Carlo Bottaini), Casal de Fiéis de Deus (I) (according to Coffyn 1985, planche XLVII, modified).

Another equally revealing case is the sword from the hoard of Casal dos Fiéis de Deus. This hoard has many unique characteristics, as Ana Melo (2000) rightly emphasized in an important study. The hoard contains weapons (swords and a dagger), ornaments (bracelets) and tools, specifically a fragmented axe. One of the swords (now restored but missing the point end) was divided into three blade fragments at the time of its finding (Vasconcelos 1919-1920). The three fragments were not scattered and, on the contrary, were (re)united in the same deposition context, despite being physically separated from each other (Fig. 6I).

The reunion of broken parts in a single context was therefore also practiced by communities at around 3000 years ago. This practice is the opposite of the one described before. Therefore, fragmentation strategies may involve fragment mobility, but also the opposite, that is to say, fragmentation without dispersal.

Also noteworthy is another manifestation of the complexity of this phenomenon: the intentional union of distinct objects, literally involving a "chaining" mechanism. The objects are whole but required physical union to express new meanings. This situation is testified by three pieces from the hoard of Quinta do Ervedal (Fundão). The hoard stands out within Portuguese deposits due to the large amount of objects, 43 (complete or fragmented), with 16,759 kg of metal (bronze and copper) (Villas-Boas 1947; Coffyn 1985). Amongst other complete and fragmented objects, plano-convex ingots, there is a single looped palstave and two open rings with overlapping ends, one of which shows incised decoration. The rings are chained together and one of them is hooked to the palstave loop. Such a union mutually invalidates the practical function of each object (Vilaça 2006: 81) and it also connects functional and conceptually distinct objects as a single entity. Cases like this are quite unusual and, in the Iberian Peninsula, there is only another known example, comprised by two axes from the hoard of Arroyo Molinos (Monteagudo 1977: 182, 261, Tafel 123). However, this exceptional characteristic also happens across Europe, since it was reported, for example, in the Hungarian hoard of Dunaújváros-Kosziderpadlás (Hansen 2016: 186).

Certain objects experienced a clear metamorphosis, shown by fragmentation, deformation, use wear and violent use marks. Their transformation, however, can be expressed still in another way. As many other authors, we agree that recycling was a recurrent practice in the Late Bronze Age. Recycling, however, was not limited to recasting and could also comprise repurposing old objects into "new" objects or "*outils de seconde intention*" (Boutoille, Milcent 2006). In fact, reclaiming metal that is seen as raw-material not to be wasted also encompasses the adaptation of old objects, or their fragments, into new objects. The latter are then naturally limited by the shape of the previous ones. For example, there are evidences of such a metamorphosis in the dagger from the hoard of Cabeço de Maria Candal (Ourém) (Fig. 2D). In this case, prior to being a dagger, the object was a sword blade point, possibly of a "carp tongue" type (Vilaça *et al.* 2012). The same seems to have happened with the small dagger from Tapada das Argolas, which was also adapted from a sword fragment (Vilaça *et al.* 2002-2003).

The physical transformations that created these "new" artefacts may have been merely opportunistic or circumstantial, as it seems to be the case of a small dagger fragment of the Porto de Mós type, found at Castro do Cabeço da Argemela (Fundão) (Vilaça *et al.* 2011). Although dated to the Late Bronze Age, it showed up in a use context of the 2<sup>nd</sup> Iron Age. It may have been salvaged and used, without recasting, due to the value of metal at a time when bronze was difficult to get.

As to the dagger from Cabeço de Maria Candal, it raises a broader range of interpretations, ranging from those strictly utilitarian to others reflecting the symbolic character or historiographical charge that swords acquire when they are seen as "noble weapons". The metamorphosed sword was reborn, having a different appearance at a new stage of its life-cycle. In other words, its "cultural biography" (Kopytoff 1986, Gosden, Marshall 1999) was still in the making.

## 5. Final Remarks

This paper aimed at organizing some data about the presence of deliberately cracked, broken or incomplete objects found in Late Bronze Age hoards found in today's Portuguese territory.

The evaluation of empirical data showed, in the first place, that despite past social habits concerning what was deposited and the places of deposition, today it isn't possible to recognize a general pattern explaining the fragmentation of deposited bronze artefacts. The lack of a recognised general pattern also results from the many methods used to cancel the function of objects (e.g. folding, breaking, twisting, marking, repurposing, etc.) and to the fact that destructive actions occurred over the edges, the points, the blades, the hafting parts, etc.

A second aspect to notice is that there doesn't seem to be any formal type whose function is more frequently cancelled, neither there are object types whose fractures show up exclusively in specific parts. Swords are exemplary in this respect. They were deposited in many conditions: whole, without the point, limited to the point and usually having blades with a wavy profile.

It is also important to keep in mind that the diversity in fragmentation strategies and their structural contexts go well beyond the idea that breaking was performed in order to recycle. This is not the case in many examples, as was shown. Conversely, metal (and other objects) fragmentation should be seen as a social practice, allowing people to express their "being" in the world through handling broken objects and object fragments in many ways.

A final remark is necessary to highlight that intentional fragmentation was planned and, therefore, would not be within everybody's reach. On the contrary and as noticed by other researchers, fragmentation (seen in the broad sense that this paper assumed) required technical expertise. In fact, metalworkers were, probably and simultaneously, object creators and changers.

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