

Hoard and hoarding from the Alps to the Aegean: a comparative view

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ABSTRACT

The text includes a brief overview on the state-of-the-art of the research on the phenomenon of bronze deposition in the different scholarly environments including the study of continental Europe with the Alps, Italy and the Eastern Mediterranean with the Aegean world. Adopting a comparative approach substantially based on the papers collected in this volume, the author intends to point out the mutual relationships in the phenomenon of hoarding in the different, albeit connected, geographical and cultural regions under scrutiny, with particular reference to the period going from a final phase of the Late Bronze Age or the 12th c. ca. well into the Late Bronze Age/early Iron Age transition.

KEYWORDS

Hoarding; south-eastern Alps; northern Adriatic; Aegean world; Late Bronze Age; bronze circulation; connectivity

RIASSUNTO

Il testo aspira a presentare una sintesi dello stato dell'arte nel campo dello studio del fenomeno della deposizione del bronzo nei diversi ambienti scientifici coinvolti nella ricerca pre-protostorica rispettivamente delle regioni dell'Europa continentale con le Alpi, dell'Italia e del Mediterraneo orientale con il mondo egeo. Adottando una prospettiva comparativa condizionata sostanzialmente dai lavori raccolti in questo volume, il contributo intende mettere in evidenza le strette relazioni reciproche tra le diverse, ma interconnesse, regioni geografiche e culturali prese in considerazione nel volume per quanto concerne il fenomeno della deposizione di ripostigli, con particolare riferimento al periodo compreso tra la fase finale della tarda età del Bronzo, - XII sec. a C. ca. - e la transizione all'età del Ferro.

PAROLE CHIAVE

Ripostigli e tesaurizzazione; Alpi nordorientali; Adriatico settentrionale; Egeo; tarda età del Bronzo; circolazione del bronzo; connettività

1. Introduction

The contributions collected in this volume deal with archaeological contexts from a number of different and vastly distant regions involved in the formation of European prehistory. They focus on the Late Bronze Age in the south-eastern Alps (P. Turk), the northern Adriatic (P. Bellintani, A. Cardarelli, G. Lago) and the Aegean (Ch. Kleitsas; J. Maran), regions that played a prominent role in the interaction between Europe and the Mediterranean *via* the Adriatic Sea towards the end of the 2nd millennium BC.¹ An overview of a number of contexts – namely the deposits of scrap metal –, geographically sparse though thematically connected, provides case studies from central and western Europe (Ch. Huth) and constitutes an additional contribution which offers ground for debate and discussion at large.

The papers, concerned with a homogeneous class of evidence or archaeological sources – hoards –, introduce therefore a comparative perspective, drawing attention to the phenomenon of hoarding, namely to behaviours and practices connected with the removal of bronze from circulation as well as the informative potential of hoards as sources for an overall interpretation of culture and society. By assembling different approaches the volume aspires to widen and reinforce the field of research on metal hoards offering additional data and ideas towards a more profound understanding of the many dimensions of bronzes within the multifarious contexts of their deposition in a European-Mediterranean perspective.²

¹ See *e.g.* BORGNA, CASSOLA GUIDA (eds.) 2009; BORGNA 2013; BORGNA 2017; BORGNA 2019; FOTIADIS ET AL. (eds.) 2017; JUNG 2020; PEARCE 2020; MARAN, STOCKHAMMER 2020 with references, and MARAN in this volume.

² The volume aims to fuel the debate on metal deposition by encouraging confrontation amongst scholars dealing with regions which participated in the European-Mediterranean connectivity of the Late Bronze Age (BROODBANK 2013; IACONO ET AL. 2021 with references). See, for a broad multicultural perspective, HANSEN forthcoming. For the richness in hoards the large Mediterranean islands – Cyprus, Sicily and Sardinia – have a pivotal place; see *e.g.* for Cyprus: CATLING 1964; MATTHÄUS, SCHUMACHER-MATTHÄUS 1986; KASSIANIDOU 2018 with references; DRIESSEN, BRETSCHNEIDER, KANTA 2023; KASSIANIDOU 2023; Sicily: GIARDINO 2005; ALBANESE PROCELLI 1993; ALBANESE PROCELLI 2018; LO SCHIAVO, ALBANESE PROCELLI,

In the following text, after reviewing a series of points concerning the history of the research and state of the art on hoarding in the various regions considered here, a comment will be made on a number of clues relating to intercultural relationships or revealing convergence and similarities in patterns of bronze deposition among these regions, with particular reference to two main phases: 1. an early part of the Late Bronze Age (LBA / Recent Bronze Age 2-Final Bronze Age 1; Late Helladic or LH IIIC Early-Middle; Ha A1, ca. 12th c. BC); 2. a later LBA phase (Final Bronze Age 2-3, LH IIIC Late/SubMycenaean-ProtoGeometric or SM-PG; Ha A2-B1, 11th-10th c. BC).

My contention is that during the early phase the modes of deposition in Italy and the Alpine area seem to have been somehow dependent on pattern of international exchange and ultimately connected with hoarding in the Aegean world. In the later phase patterns of bronze deposition and consumption originating from the transalpine world and the Urnfield culture seem to have affected the regions to the south of the Alps including peninsular Italy and possibly the Aegean.

2. State of the art: European Bronze Age studies

The state of the art concerning the scientific debate on hoards in the areas considered here is relatively uneven. As is well-known, hoards have mostly received attention as primary sources for the knowledge of culture and society in northern and central Europe including the Alpine regions. The multifaceted variety and large quantity of evidence account for the numerous interpretations of materials and contexts, which rely greatly upon theoretical and methodological literature.³ Early research main-

GIUMLIA-MAIR 2018; BORGNA 2021; Sardinia: LO SCHIAVO, ALBANESE PROCELLI, GIUMLIA-MAIR (eds.) 2009; IALONGO 2010.

³ See in general BRADLEY 2013; BRADLEY 2017, with literature; for editions of LBA hoards within regional perspectives see HANSEN 1994; TERŽAN (ed.) 1995; HUTH 1997; KÖNIG 2005; MARASZEK 2006; KYTLICOVÁ 2007; see furthermore BRADLEY 1990; HUTH 2008; HANSEN 2012;

ly explained hoards as treasuries randomly hidden or buried during situations of danger and never retrieved, presuming that they had no special relationship with their context of deposition. Later, the debate acquired a more critical approach, founded on systematic observations regarding selective compositions and the state of preservation of hoarded materials according to chronological phases or cultural areas, so that a simple, albeit naive, classification was constructed, distinguishing between founder's, merchant's and ritual hoards.⁴ Following this categorization approach, explanations emphasized the opposition between permanent and temporary depositions, namely between ritual hoards aimed at the destruction of wealth – either as gifts to metaphysical entities or offerings according to sacrificial patterns –⁵ and economic deposits, representing a collection of items to be distributed, re-used or re-cycled in the metallurgical industry, as seemed to have been the case of scrap metal in particular. More recently, the relevance of such clear-cut distinctions in the functional explanation of hoards – retrievable vs irretrievable, dryland vs wetland, ritual vs economic deposits –⁶ has been deeply criticised and substantially dismissed, particularly by scholars adopting an innovative landscape perspective.⁷

The landscape approach, adopted in regional studies focusing on entire integrated landscapes of deposition rather than single contexts, can be credited with demonstrating that most hoards were linked through an intimate, exclusive relationship to the context of their deposition and the surrounding environment.⁸ Regardless of the ultimate intention of the deposition, either the destruction or the retrieval and re-use of the bronze items, hoards

mainly attest to deliberate acts of socialization of the landscape. From this perspective they could be considered as monuments, as they memorialize events, rituals, and practices framed in meaningful places in the cultural construction of space. Though scholars generally now attribute a religious significance to the act of burying wealth,⁹ the possibility that some hoards may have represented memorials of social events and practices – including activities related to the numerous steps in the metallurgical *chaîne opératoire* –, carried out mostly in the framework of ritualized performative behaviours within a competitive social environment, cannot be ruled out.¹⁰ It would even be possible to accept the idea that some evidence, concerning the output of purely practical and technological activities in the realm of metallurgy, may have remained underground accidentally.¹¹

3. State of the art: studies in Italian bronze deposition

The intense theoretical and methodological debate that characterizes the European scholarly forum is not paralleled in the research field on bronze deposits in the Mediterranean regions.¹² This may be a reflection of the difference in quantitative relevance of hoards from European regions, located at the periphery or margin of the complex societies of the Aegean and the Levant, and those from the so-called 'core' area, characterized by the reigns and empires of the Eastern Mediterranean, where hoards barely amount to substantial systematic evidence and the distribution of deposits seems to have been much more sparse and practically irrelevant for the interpretation of societies at large.

HANSEN 2013; HANSEN 2016a, b; see also the literature in TURK and HUTH, in this volume.

⁴ BRADLEY 2013, pp. 122-124.

⁵ HÄNSEL A., HÄNSEL B. (eds.) 1997; HANSEN 2013; HANSEN 2016a; HANSEN 2020; see observations by HUTH, in this volume.

⁶ Cf. LEVY 1982; BRADLEY 2017, pp. 20-21.

⁷ For a history of the research see e.g. BRADLEY 2013; HANSEN 2012, HANSEN 2016b; FONTIJN 2020.

⁸ HANSEN, NEUMANN, VACHTA (eds.) 2012, HANSEN, NEUMANN, VACHTA (eds.) 2016; BRADLEY 2017; cf. e.g. FONTIJN 2002; BALLMER 2010; BETTELLI, BORGNA, LEVI 2023 with further literature.

⁹ Cf. SOMMERFELD 1994; HÄNSEL A., HÄNSEL B. (eds.) 1997; HANSEN 2012; HANSEN 2013; HANSEN 2016a, b; HANSEN 2019; HANSEN 2020.

¹⁰ For hoarding as a memory act see BORGNA in press; for the ritual behaviour embedded in domestic activities see BRADLEY 2005; cf. FONTIJN 2020.

¹¹ HUTH and TURK, this volume; for re-entry of hoarded material into society see also FONTIJN 2020 with references.

¹² See KNAPP 1988; KNAPP, MUHLY J.D., MUHLY P.M. 1988; KLEITSAS and MARAN in this volume.

From this perspective Italy, lying in the middle, clearly represents the transition between the two environments, including a discrete variety of hoards, roughly comparable with the evidence available in the transalpine regions from early in the Early Bronze Age onwards.¹³ A diachronic perspective allows for the recognition of similar chronological patterns in the combination and state of preservation of the contents of many hoards, and ultimately an outline of similar landscapes of deposition in each chronological phase.

In short, the phenomenon of hoarding in Italy during the Bronze Age is relevant enough to provide grounds for a general social history from the perspective of hoards.¹⁴ However, the intense European scholarly debate has only had a minor impact on the interpretative frameworks adopted in Italy, mainly founded on pragmatic agenda and contextual analysis. By excluding general, univocal patterns of explanation, Italian scholars have longer maintained the opposition ‘ritual vs economic’ and several hoards have been interpreted as closely connected with metallurgical workshops.¹⁵

The acceptance of the ‘economic’ explanation for several Late Bronze Age hoards as shipments fuelling metallurgical production may be partly due to the profound impact that the ‘Aegean connection’ had on the scientific debate, in particular concerning metallurgy, including the supply, circulation and consumption of metals. In the Late Bronze Age, roughly coinciding with the appearance of large deposits of mixed composition characterized by extreme fragmentation and a high occurrence of bun ingots,¹⁶ a growing demand for raw materials including metals would have been fuelled

by Aegean visitors, responsible for change and the introduction of industrial patterns in the organization of several crafts. The impact of the Eastern Mediterranean economies would have initiated a general process of commodification prompting the use of bronze as a commodity or means of exchange, a pattern that would have subverted the traditional notions of value and the associated modes of social exchange in local communities.¹⁷

More generally, in the second half of the 2nd millennium, the increasing search for metals, and in particular bronze, by the reigns and empires of the Eastern Mediterranean was a main component in the phenomenon of cultural homologation on a European and Mediterranean scale, a phenomenon that has been convincingly described as ‘globalization’ and ‘bronzeization’.¹⁸ The industrial pattern of bronze exploitation in some of the mine districts, such as Cyprus, was dependent upon this phenomenon. A role similar to that of Cyprus was played in continental Europe by the southern Alpine mine districts of Trentino Alto Adige/Veneto,¹⁹ presumed to have supplied copper to the metal industries of a wide-reaching area including central and northern Europe as well as southern Italy. Regardless of the ultimate destination of Alpine copper, either limited to peninsular Italy or extended to the Aegean – where archaeometric evidence is admittedly still scarce –,²⁰ the industrial volume of copper exploitation in the mine districts and the impressive amount of bronze in circulation are indirectly shown by the numerous Late Bronze Age hoards located at the periphery of the Alpine mine districts in northern Italy (above, note 16) and the hundreds of bronzes retrieved from wetland sites in the metallurgical landscape of the Garda region.²¹ This may attest to a substantial change in the use and appreciation of metals, as well as in the values attributed to

¹³ BORGNA in press; for Early and Middle Bronze Age hoards see in particular, with references, CARANCINI, PERONI 1999; CARANCINI 2004; DE MARINIS 2016, DE MARINIS 2018, DE MARINIS 2022.

¹⁴ BORGNA in press.

¹⁵ See e.g. BIETTI SESTIERI, GIARDINO 2019 with literature; for a critical reappraisal see BELLINTANI, CARDARELLI, LAGO in this volume.

¹⁶ On Late Bronze Age hoards, dating in particular to the Italian late Recent Bronze Age – early Final Bronze Age, ca. 12th c., see in particular CARANCINI, PERONI 1999, pp. 17–20; CARANCINI 2004; BORGNA 2000–2001; BORGNA 2004; BORGNA in press; recently see, with further references, DE MARINIS 2019; CARDARELLI 2019; LAGO 2020.

¹⁷ BORGNA 2023; IACONO ET AL. 2021.

¹⁸ VANDKILDE 2016; cf. IACONO ET AL. 2021 with references.

¹⁹ PEARCE 2007; BROODBANK 2013, p. 477; PEARCE, BELLINTANI, NICOLIS 2019; BELLINTANI, SILVESTRI (eds.) 2021 with literature.

²⁰ JUNG, MEHOFER, PERNICKA 2011; JUNG, MEHOFER 2013; MEHOFER, JUNG 2017.

²¹ PEARCE 2007; cf. BROODBANK 2013, p. 477.

bronze items. A general process of commodification had a particular impact on the production and circulation of some prestige objects such as swords and weapons, which may have begun to be exchanged as commodities and be included in the formation of stock deposits, usable for re-cycling or as weighed metal in exchange activities.²² One of the main objections to the interpretation of such hoards as economic metal stocks could be the fact that they were never retrieved after deposition, and a votive interpretation may appear more plausible. This option, however, would not greatly change the explanatory framework: the votive scenario would imply a case of *pars pro toto*,²³ namely the offering of a limited amount of metal, a minor part of the whole metal stock, which nevertheless would have circulated primarily in economic or 'mundane' circuits. In this perspective, metrological research has been actively pursued by Italian scholars, searching for correspondence between fragmented bronzes and weight intervals as precise indications of the adoption of weight systems and the use of bronze as proto-currency, regardless of the precise intention, either ritual or economic, of single depositions.²⁴

Another typology of hoards traced to the impact of Aegean influence is represented by the hoards made up of multiple whole exemplars of the same class of objects, mainly shaft-hole axes.²⁵ These hoards were widespread in southern Italy starting in the Final Bronze Age, in regions and places that had been in direct, long-term contact with Eastern Mediterranean visitors.²⁶ Their value seems to be measurable not only by their weight but also by the quantity of items of shared standard shapes, namely tokens of exchange. These contexts may represent

²² BORGNA 2023; PARE 2013, with literature on weight systems; cf. below, note 24.

²³ Cf. HANSEN 2013, pp. 377-378; BRANDHERM 2018, p. 51.

²⁴ For the correlation with an Aegean weight systems see in particular CARDARELLI, PACCIARELLI, PALLANTE 2004; for different systems following the spreading of weighing practices from the Eastern Mediterranean, LAGO 2020; IALONGO, LAGO 2021 with references; see BELLINTANI, CARDARELLI, LAGO in this volume; cf. also LEONARDI 2016; BRANDHERM 2018, p. 56; on weight systems see now RAHMSTORF 2022.

²⁵ CARANCINI, PERONI 1999, p. 20; BIETTI SESTIERI 2010, pp. 346-348.

²⁶ Cf. IACONO 2016, pp. 111-112.

the use of bronze for acquiring goods and fuelling circulation, during the transition towards a new monetary economy.²⁷

Overall, hoards from Italy and the neighbouring areas, which increase in quantity in the early part of the Late Bronze Age, may offer a unique perspective on the nature and modes of interaction between different economic patterns, the command economies of the Eastern Mediterranean fuelling market exchange and the economies embedded in the social life of local communities, where the meaning and value of objects used for exchange varied depending on cultural and social contexts and according to the biography of each single object.²⁸

4. State of the art: hoards in Aegean archaeology

As for the Eastern Mediterranean world, research on hoarding has not factored greatly into the scientific debate; as already mentioned, possible justification for this could be the apparent scantiness of evidence, which limited wide-ranging explanations of society from the perspective of bronze deposition. In the framework of a far-reaching discussion, the case made by David Wengrow is worth mentioning: when searching for an explanation for the discrepancy in the number of hoards – widely diffused in the regions at the periphery of the complex hierarchical societies of the Eastern Mediterranean, and underrepresented in the core area –, the scholar cited the juxtaposition of sacrificial economy to archival economy. In sacrificial economies value is generated by shortage and limited access, with the sacrifice and destruction of metal as typical behaviours contributing to increase its value. In archival economies value is granted and even increased by institutionalized authorities such as temples and palaces, which provide instruments for classification, recording, and counting value, practices favouring the continuous circulation of metals.²⁹

²⁷ Cf. BORGNA 2021.

²⁸ JENNINGS 2014; BORGNA 2023.

²⁹ WENGROW 2011; for a critical comment see HANSEN 2019, p. 205; see also FONTIJN 2020, in particular p. 166.

Upon closer inspection, however, hoards in the Aegean world were not as sparse as often presumed, as can be clearly seen in the updated survey by Ch. Kleitsas in this volume.³⁰

It is even possible to add some new classes or types of hoards to the wide range of surveyed evidence, such as the so-called ‘funerary hoards’, namely groups of valuable bronzes hidden apart from burials in several Mycenaean tombs. These may represent a practice of hoarding aimed at providing a supply or reservoir of value in the ritual funerary domain.³¹

The well-known tablet Jn 829 from Pylos, dealing possibly – though with a great deal of uncertainty – with bronze retrieved from a temple repository for re-cycling, could provide evidence for something similar.³² In such cases the ritual context and nature of the deposition would not exclude the retrieval and re-use of hoarded goods. Therefore a similar suggestion can be made for many hoards that are interpreted as ‘ritual’ also elsewhere, namely in different regions, such as Italy and Europe. Such hoards could have been deliberately deposited in eminent, even sacred places within the landscape or as foundation deposits under the floor of buildings, with the primary intention of removal or sacrifice, without excluding the possibility of retrieval, manipulation and re-use of wealth for various purposes.³³ In other words, permanence underground was sometimes due to a concurrence of factors and cannot be considered the exclusive result of a deliberate human choice at the act of deposition.

Returning to the apparent marginality of hoarding in Aegean social practices, we cannot therefore rule out the possibility that the dearth of evidence could also depend upon depositional factors connected with patterns of continuity in the dynamics of site and regional occupation and along with the memory and maintenance of social places through-

out time. The continuity of social relationships and the stability of social institutions also play a role. In the Italian and transalpine Bronze Age communities, public institutions and social organizations were less structured, more unstable and therefore highly susceptible to change. In such a situation the social environment was characterized by permanent competition among groups and individuals. Hoarding was most often an instrument of such competition, particularly concerning access to metal resources and the role of metals in the mobilization of wealth and acquisition of symbolic and ideological power. Meanwhile, social and settlement instability implied frequent, even sudden, settlement shifting and changes in the modes and dynamics of occupation of the landscape, prompting changes in cultural traditions, as well as oblivion and the loss of collective memory of items and places, thus favouring the permanence in the archaeological record of hoarded goods and hidden items. Discontinuity in human settlement and regional occupation along with the instability of socio-political institutions may therefore have played a role in enhancing the visibility of hoards in the archaeological record, regardless of the actual rate of occurrence and impact of hoarding in ancient societies.

After careful consideration, it is possible to note that even in the Aegean world hoarding as a social practice becomes more visible in the archaeological record in coincidence with chronological and cultural phases marked by phenomena of gaps, ruptures, discontinuity and social instability that left traces in the stratigraphic and depositional contexts.

4.1 Early Bronze Age Aegean hoards

In the 3rd millennium Aegean world, particularly in the north-eastern regions including the Aegean islands, a considerable number of deposits have been found.³⁴ Several of these deposits, datable to the middle or third quarter of the millennium, belong to phases that are presumed to have been characterized by social competition in the process of forma-

³⁰ Cf. BRANIGAN 1969; BLACKWELL 2018.

³¹ As is possibly revealed by cases of ‘legal looting’, recently commented on by Ch. Paschalidis (2018, p. 464); cf. PASCHALIDIS, MC GEORGE 2009, p. 84; for hoards in tombs see e.g. PASCHALIDIS 2018, p. 464 note 177; cf. BORGNA, DE ANGELI 2019; GALANAKIS 2020, p. 363.

³² VARIAS 2016, pp. 412-416, with references, and KLEITSAS in this volume.

³³ Cf. FONTIJN 2020, pp. 163-164 with references.

³⁴ BRANIGAN 1969; ALRAM-STERN 2004; see also KLEITSAS in this volume.

tion and emergence of hierarchical power. As is well-known, the period ranging from late Early Helladic II (EH II) to Early Helladic III/Middle Helladic (EH III/MH) includes gaps and profound discontinuities, mainly emphasized by destruction events, abandonments and cultural change, phenomena which can be associated with the evidence of large metal hoards, mainly deposited in main settlements, such as at Thebes and Eutresis, and intensively occupied areas, such as Naxos in the Cyclades.³⁵ These hoards may be interpreted as the output of highly competitive social behaviours associated with the emergent elites that strove for dominant positions through the mobilization of a relatively new source of power such as metal. At Thebes a hoard was found under the floor of one of the monumental buildings providing evidence of a still multifocal nature of social power.³⁶

In terms of the nature of hoarding, EH deposits from central and northern Greece, which have been included in a wider phenomenon involving south-eastern Europe, could be explained as evidence of cult practices.³⁷ Meanwhile, they share a number of dominant features – such as standardization and selective composition –, which may reveal additional functions and roles assigned to the hoarded materials, possibly stored as means of proto-currency usable in exchange activities. The standardization of shape – deriving from the exclusive association of classes and types of bronzes widespread at an interregional level and encompassing different cultural and metallurgical provinces – may suggest specialized use of the objects as tokens of value in new, expanding long-distance exchange networks. Selective composition, with an emphasis on tools for building activities – such as shaft-hole axes, chisels, and flat axes –, refers wealth to a specific social environment by enhancing the symbolic meaning attached to groups of specialized craftsmen and their instruments, suitable for the construction and refinement of new complex monumental buildings,

namely the seats of the new social power emerging in central settlements such as Thebes.

4.2 Evidence for the destruction of wealth in Crete?

Turning to the southern Aegean, solid evidence for metal deposits being associated with marked discontinuities and change in depositional contexts comes from final Neopalatial Crete with its social system troubled by destruction and collapse. Many metal assemblages including vessels, ingots and other bronzes, at times called hoards, have been found in the ruins of buildings, mostly sealed under thick destruction deposits, as attested from villas and palatial buildings such as Ayia Triada, Tylissos, Zakro, and several urban mansions.³⁸ The archaeological visibility of stored wealth is extreme in these cases, though most of the known deposits cannot be considered real hoards.³⁹ The composition is largely random as materials do not seem to have been selected for deliberate burial. From a hoarding perspective Late Minoan I (LM I) deposits from Mochlos and Chryssi, which could provide evidence of various social activities and even ritual practices in the context of metallurgical exploitation and production, are much more relevant.⁴⁰

The evidence from LM Mochlos includes ca. 90kg of metal, distributed in approximately 10 deposits, or hoards according to the terminology used by the excavators. These deposits, mostly coming from the so-called House of the Metal Merchant (or House C3),⁴¹ are extremely relevant to the study of hoarding and some of them deserve special attention.

Firstly, the metal hoard from House A in the Artisan's quarter is noteworthy, as it was clearly connected with metal re-cycling in a workshop context,⁴² thus offering explicit evidence for the inter-

³⁵ RENFREW 1967; BRANIGAN 1969; LESLEY FITTON 1989; MARAN 1989; MARAN 2001.

³⁶ MARAN 1989; ALRAM-STERN 2004, p. 690.

³⁷ MARAN 2001; HANSEN 2016b, pp. 188-190.

³⁸ BRANIGAN 1969; GEORGIU 1979; BLACKWELL 2018; see also KLEITSAS in this volume.

³⁹ See however KLONTZA-JAKLOVÁ 2015.

⁴⁰ SOLES 2008; SOLES, GIUMLIA MAIR 2018.

⁴¹ SOLES, GIUMLIA MAIR 2018; see now SOLES, DAVARAS 2021.

⁴² SOLES 2008; cf. SOLES 2003, pp. 20-23.

pretation of scrap hoards as supplies of metal industries, all the more so when they are physically linked with the remains of workshops. The hoard, found in a special stone-lined pit, included 3.5kg of metal, with a couple of broken bronze vessels, one handle, numerous fragments of ingots, all items that seem to have been selectively assembled according to the properties of alloy and metal components.

Secondly, the large ‘foundry’ hoard from a basement storeroom of the House of the Metal Merchant seems to be useful for demonstrating the ambiguity inherent in the distinctions between the ritual vs economic nature and temporary vs permanent deposition of hoards. A large number of items including scrap metal damaged by fire had been deposited on the floor very near to the wall, at the very same location where a smaller group of whole objects, including two double axes and a shovel, had been previously hidden within a structured niche at the bottom of the wall, providing evidence for a foundation deposit, possibly still retrievable on occasion.⁴³ Did the larger deposit represent an additional amount of wealth deposited with the aim of reinforcing the ritual power of the metal included in the foundations? Did it play the role of a general allotment, namely a stock of metal stored for supplying production as well as exchange, practiced at the community level, as the excavator suggests? And, without contradicting such an assumption, might we add that this deposit had a role in memorializing events that implied the participation of the inhabitants of the house? Was it a stock of metal usable for the supply of workshop activities but which accounted primarily for the involvement of the household in events that represented the special role of the entire community in craft practices and metal production organized according to a decentralized pattern? It is worth observing here that the storage and preservation of a large number of objects regardless of their concrete efficiency is well attested in the Aegean world, as is documented by the Mycenaean written records for a later period.

⁴³ SOLES, DAVARAS 1996; SOLES 2008; J. Soles and A. Giunlia-Mair (2018) explain the presence of damaged and fired objects as an outcome of the collection of materials from a workshop destroyed (LM IA) before the formation of the hoard (LM IB).

The tablets stored in the archive room 7 of the Pylos palace list a number of vessels and facilities suitable for the celebration of sacrificial feasts and including broken, apparently not usable objects, while in the same archive room faunal remains served as a reminder of the execution of such events.⁴⁴ It seems therefore possible that recording and memorializing could also have had a role in metal hoarding in the Mochlos storerooms aside from the immediate concrete function of the stored materials; furthermore, the modes of their deposition seem to have been submitted to ritual requirements, which were embedded in the economic behaviour.

It remains difficult for us to determine whether the majority of the hoards from Mochlos would have remained in the archaeological record if the town had not been affected by violent destruction and sudden abandonment.

5. Late Mycenaean landscapes of deposition, Italy and Europe

The Greek mainland hoards dating to the transition between the palatial and post-palatial phases, LH IIIB-C or ca. 1200 BC, were also deposited during a phase of social and political instability, coinciding at times with structural and depositional discontinuities.⁴⁵

From a comparative perspective it is worth observing that most late Mycenaean hoards are comparable in a few aspects, including their mixed composition and in part also fragmentation – as attested by the deposits from the palatial environments, at Mycenae, Athens, possibly Thebes and Orchomenos –, to those from the early Late Bronze Age (Recent Bronze Age 2/Final Bronze Age 1) in Italy and the neighbouring areas (Ha A1).

The Italo-Aegean metal connection during the Late Bronze Age is a well-known phenomenon, mainly represented by the so-called international or

⁴⁴ STOCKER, DAVIS 2004, and PALAIMA 2004, with references.

⁴⁵ SPYROPOULOS 1972; BORGNA 1995; BLACKWELL 2018; for complete literature and full discussion see KLEITSAS in this volume.

foreign bronzes spreading throughout the Aegean,⁴⁶ and is emphasized at times by the appearance of the same items in hoards over extremely widespread areas, which might provide evidence for the mobility of people including different individual roles such as traders and artisans. An Aegean, Aegeanized or Italian itinerant metalworker, who left evidence of his work in the well-known mould discarded over the ruins of the Ivory houses at Mycenae,⁴⁷ could have produced the winged axe from the Surbo hoard, in Apulia, which included a fragmented Mycenaean sword.⁴⁸ Some foreign bronzes even entered the composition of the Aegean hoards, as is the case of a number of Naue II swords, pointing to a phenomenon of commodification of goods that had previously circulated as individual prestige objects in discrete spheres of exchange.

Commodification and the subversion of exclusive circuits of exchange are reflected both in the mixed composition including raw metal and the high degree of fragmentation of hoards deposited in the central Mediterranean and European periphery, starting approximately in the advanced Middle Bronze Age, when long-distance relationships began to be affected by the trade patterns serving the centralized institutions of the Eastern Mediterranean. As mentioned above, this increasing phenomenon is fully represented in northern Italy and the circum-alpine regions during the latter part of the Late Bronze Age or 13th-12th c., a period when Aegean visitors were directed more clearly to the Adriatic including its northern shores. The hypothesis that the increasing volume of scrap and economic metal usable for both exchange and recycling and eventually ritually depos-

ited⁴⁹ may have been dependent on new concepts of value deriving from the Aegean relationships deserves special attention.

The appearance of large hoards of mixed composition including scrap metal in the Aegean at the exact moment when foreign relationships in the domain of metallurgy reached their apex might therefore support the hypothesis of the reception of foreign patterns in the Aegean world also concerning metal deposition. Although from different perspectives, scholars have therefore sometimes made reference to a foreign component in the interpretation of Aegean hoards, either suggesting the intention of controlling the distribution of metal and deliberately removing from circulation wealth that acted as a resource for new artisans, independent from the palatial organization,⁵⁰ or claiming a direct foreign social agency that introduced new cult practices.⁵¹

The archaeological contexts of the LBA Aegean hoards offer an insightful perspective on the possible nature of their deposition. From the analysis of contexts, emphasis can be placed on both a recurrent location within inhabited areas and built environments,⁵² and a selective association with walls and public structures, at least as far as 'palatial' hoards are concerned. Some time ago, I suggested that these hoards might represent some kind of foundation deposits, a circumstance that would explain their long-term permanence in the archaeological record.⁵³ Considering the clear dominance of tools, standard kits for artisans and workgroups with their officers – possibly represented by weapons such as swords –,⁵⁴ removed from circulation and ritually buried, this hypothesis cannot be ruled

⁴⁶ SHERRATT 2000; JUNG 2009; BORGNA 2012, BORGNA 2023.

⁴⁷ STUBBINGS 1954; BIETTI SESTIERI 1973; BORGNA 2012; DE MARINIS 2020.

⁴⁸ MACNAMARA 1970; BORGNA 2012; BORGNA 2023; in some south-eastern European deposits there is also evidence of Aegean-related materials, such as swords of Aegean type (KRAUSS 2005; PRIMAS 2005, with references; see KLEITSAS in this volume); in Central Europe the well-known hoard of Oberwilfingen with winged-axes and oxhide ingots was possibly related to the traffic route along the Danube (PRIMAS, PERNICKA 1998; PRIMAS 2005).

⁴⁹ Cf. BRANDHERM 2018, p. 56; on the variety of hoards as for composition and nature in south-eastern Alps see TURK in this volume, with references.

⁵⁰ BORGNA 1995.

⁵¹ JUNG 2007, pp. 232-239.

⁵² KLEITSAS and MARAN in this volume.

⁵³ As for the hoard of the Poros wall, we cannot exclude that the bronzes had been inserted into the stones of the structure, considering in particular that they were found roughly at the same quote, at the north end of the wall, most probably along the alignment of its surviving part (WACE 1953, pp. 6-7; STUBBINGS 1954).

⁵⁴ Cf. BLACKWELL 2018 for the reconstruction of standard kits.

out, also in consideration of possible parallels in historical times.⁵⁵ As for hoards deposited at a distance from the palaces, in peripheral regions, they could represent irregular supplies of metal for new figures of independent bronze workers.

A solid case for a new, substantial pattern of organization in the framework of the metal industry seems to be represented by the context of the Capo Gelidonya wreck.⁵⁶ Evidence of metallurgical activities is provided by a stock of raw materials, acquired as scrap metal for recycling, showing clearly that the artisans on board did not depend on central distribution and mainly provided their raw metal themselves.⁵⁷

Overall, Aegean Late Bronze Age hoards, either stockpiles of new competitive social components or allotments mobilized by the central organization, either simply hidden and stored wealth or dedicated items in a ritual scenario, attest to weakness and imbalance in the control of metallurgy by central institutions under the pressure of new patterns in the organization of work and labour.⁵⁸ In either case these hoards can be better explained in a wider perspective including the multifaceted practices connected to the circulation and manipulation of metals in the LBA global world.

6. Urnfield ideology and the deposition of ‘treasures’

An integrated view on hoarding in the different geographical and cultural areas considered in this volume may help to illuminate interesting similarities in the practices of consumption and deposition of metal, which continued in the latest phase of the Late Bronze Age, the advanced Italian Final Bronze Age,

the European Recent Urnfield period and the latest post-palatial phases in the Aegean, ca. 11th c. BC.

In this period, new patterns are observable in bronze deposition in Italy, following the wide-scale diffusion of scrap metal in many large mixed hoards during an early part of the Late Bronze Age, with a special concentration in the Alpine regions and the mountain peripheries (above). Aside from ‘utilitarian’ or ‘economic’ hoards – mainly represented by shaped, raw metal such as pick-ingots and/or multiple exemplars of a single class of materials –⁵⁹ a group of mixed hoards including a large range of fragmentary objects may be clearly distinguished from the earlier ones for a minor relevance of raw copper and a higher quantity of prestige objects including ornaments, as well as sheet metal objects and vessels.

Most of the hoards, coming from central Italy, present several aspects – typology, decorative techniques, state of conservation, and practices of manipulation – that find parallels in the Urnfield world, as A.M. Bietti Sestieri noted many years ago.⁶⁰

It may be possible to consider them as ‘community hoards’, according to a terminology used in the European literature⁶¹ for describing large, mixed hoards composed of weapons, ornaments, parts of attire and equipment, objects which directly point to individual roles and identities.⁶² The multiple identities evidenced by such hoards, at times suggesting special interpersonal relationships revealed by linkages and associations of groups of objects,⁶³ suggest that a relatively large community participated in the formation of the deposit. Even cult practices, possibly represented by several Final Bronze Age hoards deposited outside of inhabited areas, were a matter of communal participation. The identification of special locations, such as mountain peaks or slopes, finds important parallels in the Urnfield contexts.⁶⁴ In the Apennine area, locations seem to have coin-

⁵⁵ See *e.g.* at the archaic temple of Kalapodi, the tools of the builders or carvers inserted under the stylobate foundation (HELLNER 2018).

⁵⁶ BASS 1967; BASS 2010.

⁵⁷ BORGNA 2018; more recent explorations have retrieved further materials from the sea, including a broken Naue II sword (BASS 2013), which finds direct parallel in both Late Mycenaean hoards from the palatial acropolis and the large hoards of mixed composition in Italy and the Alpine regions (BORGNA 2023).

⁵⁸ See already KILIAN 1985a, pp. 79-80; KILIAN 1985b, p. 157.

⁵⁹ BORGNA 1992; BORGNA 2023; BORGNA in press; BELLINTANI, CARDARELLI, LAGO in this volume.

⁶⁰ BIETTI SESTIERI 1973; BORGNA in press.

⁶¹ Cf. VACHTA 2016.

⁶² See also the term used by Ch. Kleitsas and J. Maran in this volume,

⁶³ DIETRICH 2014; for a different perspective see HUTH in this volume.

⁶⁴ Cf. HUTH 2016; see TURK in this volume.

cided at times with regional cult places and even true sanctuaries, presumed to have emerged in this period, which show strong connections with the Alpine *Brandopferplätze*, well-known in the Iron Age, after its establishment during the Late Bronze Age.⁶⁵

The destruction of bronzes by means of fire, violent breakage and special practices of manipulation pointing to ritual practices can be verified in several of the hoards, some directly related to peak sanctuaries. Evidence for this practice is found in the Monte Primo hoard in the Marche region, which was deposited in a cave at the foot of the ascent to the summit of the mountain where a large fortified site surrounding a cult place has been identified.⁶⁶

To complete the view of an integrated social context, with multiple identities influencing the composition of many Final Bronze Age hoards, mention can be made of the numerous small tools, such as saws, chisels, awls, and shovels, suitable for a variety of light crafts usually well-developed in settlements. This kind of composition contrasts with the typical contents of early LBA hoards, characterized by raw metals with sickles and axes deposited away from the main settlements and mainly pointing to land-use activities.⁶⁷ The depositional contexts from the latest stages of the Italian Bronze Age seem to indicate a human landscape which had been re-organised according to new patterns of communal social life, widely based in settled communities. The most relevant cases are represented by hoards deposited in inhabited areas and even under the floor of special buildings, such as those at Rocavecchia, Torre Castelluccia, Lipari-Capanna alpha II in southern Italy and the Aeolian islands, possibly Coste del Marano in central Italy and even Frattesina with the so-called Tesoretto in the North.⁶⁸

⁶⁵ GLEIRSCHER 2002; STEINER 2010; for case studies cf. WINDOLZ-KONRAD 2012; for the Apennine area see CARDARELLI 2012; CARDARELLI, PELLACANI 2018; BETTELLI, BORGNA, LEVI 2023.

⁶⁶ BETTELLI, BORGNA, LEVI 2023; for the hoard see PERONI 1963; PIGNOCCHI, TOUNE 2015.

⁶⁷ BORGNA 2021; see the case of the founders' hoards at Frattesina, included in the inhabited area, interpreted as possible allotments to artisans: BIETTI SESTIERI, GIARDINO 2019; see BELLINTANI, CARDARELLI, LAGO in this volume.

⁶⁸ Rocavecchia: MAGGIULLI 2009a, b; Torre Castelluccia: GORGOGNONE ET AL. 1993; Lipari: BERNABÒ BREA, CAVALIER 1980, pp. 733-789; BORGNA 2021, with references; Coste del Marano: BIETTI SESTIERI 1973; PERONI

Though possibly formed through communal participation and contribution, valuables stockpiled in these contexts provide relevant evidence for the development of social inequality and the emergence of economic wealth at the Late Bronze Age-Early Iron Age (LBA-EIA) transition, a phase of important transformations and change towards the establishment of early urban societies. Hoarding of wealth in the central building of the village or in emergent private houses – possibly comparable with the Homeric *thalamoi* – could imply the retrieval and use of the materials for display, ritual and exchange, according to a new pattern, with significant parallels in the other areas considered here, even for the increased evidence of multi-material compositions including at times gold, amber, glass and ivory along with bronze. Lipari, Torre Castelluccia, and Rocavecchia experienced particularly lengthy, close relationships with the Aegean world, such that a reference to the roughly contemporary Tiryns treasure seems all the more acceptable. Joseph Maran reminds us that the Tiryns hoard included materials pointing to exclusive spheres of circulation and consumption, with prestige objects such as weapons, ornaments and metal vessels, some of which find strong parallels in both Italy and Europe. Moreover the social and cultural environment of the treasure, namely the Tiryns community, shows evidence of close connections with the central Mediterranean including the northern Adriatic and the Urnfield regions until very late in the Final Bronze Age.⁶⁹

From the variety of evidence for long-distance relationships and comparable practices involving bronze selection, consumption and deposition is possible therefore to conclude that the study of hoards from a wide-ranging comparative perspective embracing Europe and the eastern Mediterranean offers unique insights for a thorough comprehension of single contexts also in the very late Bronze Age and transition to the Iron Age, when the experience of a global world faded away and related phenomena such as the metallurgical *koine* came to an end.

1996, p. 333; Frattesina: BELLINTANI, CARDARELLI, LAGO in this volume.

⁶⁹ MARAN 2006; MARAN in this volume; cf. MARAN, STOCKHAMMER 2020; KONSTANTINIDI-SYVRIDI 2020.

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