Offshore finds from the Bronze Age in north-west Europe: The shipwreck scenario revisited

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OFFSHORE FINDS FROM THE BRONZE AGE IN NORTH-WESTERN EUROPE: THE SHIPWRECK SCENARIO REVISITED

Summary. *This article challenges received thinking relating to the interpretation of Bronze Age finds from the seabed in the waters of north-western Europe, especially the North Sea and Channel area. Metal objects recovered from the sea are traditionally presumed to be the result of shipwrecks. As such, their interpretation as casual, if unfortunate loss is unquestioned. However, abandoning the shipwreck scenario as a remnant of the 'sacred* vs *profane' heuristic, it is suggested that offshore finds could provide insight into deliberate Bronze Age maritime practice, rather than misadventure. Certain patterning in the data of offshore finds, including affinities with hoards on* terra firma*, urges another interpretive framework – that of considering the sea as a place for deposition. This appeared to be the case particularly in regions which experienced an intensity of maritime interaction, such as the Channel area during the later Bronze Age. From this it is hypothesized that rather than being considered* outside *the Bronze Age social realm, the sea, especially in the MBA to earlier LBA in the Channel area, was incorporated into Bronze Age cosmology in similar ways to other zones in the landscape.*

INTRODUCTION

It is assumed one cannot excavate the ripples of prehistoric sea journeys, and yet seafaring is implicit in any form of colonization, contact and exchange, and these concepts are the bread and butter of archaeological inquiry. Traditionally, evidence for prehistoric seafaring has been largely indirect – through maps of artefact displacement (Butler 1963; O'Connor 1980). However, recent excavations and publications on prehistoric boat fragments in England and Wales have supplemented sporadic finds made over the last 200 years, and now at least ten Bronze Age vessels are known from coastal and estuarine settings (see Clark 2004a; 2004b; McGrail 2001; van de Noort *et al.* 1999; van de Noort forthcoming; Yates and May 2005).

These provide direct evidence for seafaring off coastal Britain and have prompted reconstructive and performance experiments (Gifford and Gifford 2004; Coates 2005). As well as these more technical exercises, social, ideological and experiential considerations of prehistoric sea travel aim to place seafaring in a wider social and cultural context (see van de

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Noort 2003; 2004; Clark 2004a; Chapman and Gearey 2004). This offers exciting avenues of research into the character of seagoing communities in the Bronze Age. Despite this, however, attempts to understand what it may have been like to be a Bronze Age seafarer, and to inform the social and ideological context of seafaring, more often than not invite comparisons with rock art iconography from Scandinavia or Homeric mythology (Kristiansen 2004, 116; van de Noort forthcoming). However, it is not just boats which give insight into seafaring and seafaring communities; there is another body of evidence to which one could more profitably turn, and which belongs to the Bronze Age realm of north-western Europe – offshore finds of prehistoric bronze objects.

OFFSHORE FINDS FROM THE NORTH SEA AND CHANNEL AREA

As can be seen from the map in Figure 1 and Table 1, finds of bronzes from the North Sea and Channel area are not uncommon. The author has identified 18 single finds or discrete

Figure 1
Recovery map of offshore finds from the Bronze Age in north-west Europe. Image Medy Obernedorff and Alice Samson.
1) Terschelling, 2) Westkapelle, Zeeland, 3) Langdon Bay, Kent, 4) Folkestone, Kent, 5) Whitstable, Kent, 6) Whitstable, Kent, 7) Salcombe Bay, Devon, 8) Moor Sand, Devon, 9) Thurlestone, Devon, 10) Seaford, Sussex, 11) Seaford II, Sussex, 12) Chesil Beach, Dorset, 13) Poole Harbour, Dorset, 14) Hengistbury Head, Dorset, 15) Bembridge, IOW, 16) Alexandra Dock, Humberside, 17) Sotteville-sur-Mer, Normandy, 18) Sandettié-bank, Straits of Dover.

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TABLE 1
Offshore finds from the Bronze Age from the Channel and North Sea areas

No.	Location	Find description	Location details	Date	References	Condition	Provenance
1	Terschelling	axe (stop-ridge)	in the straits Terschelling/ Vlieland	MBA	Archis II	–	local or N France/UK
2	Westkapelle, Zeeland	axe (stop-ridge)	500 m off coast	MBA	Archis II	–	local or N France/UK
3	Langdon Bay, Kent	×182 swords/rapiers/dirks/knives/hilts, ×48 palstaves, ×79 axe/axe frags. (many median-winged), ×7 chisels, ×5 misc. tools, ×6 spearheads/ferrules, ×4 bracelets, ×3 pins, ×2 fitting/fastener, ×2 pieces jet, ×18 misc.	east of Dover harbour, 500 m from cliffs	Late MBA, *c.*1300–1150 BC	Needham and Dean 1987; Muckelroy 1981	many pieces damaged – esp. blades and hilts (54% assemblage fragmentary)	maj. Continental (between Brittany and Lower Rhine, i.e. eastern and western FR types, some GB). Continental metal composition, recycled and from div. origins
4	Folkestone, Kent	sword (Weymouth type)	37 m offshore, East Wear Bay	LBA, *c.*1000–700 BC	Cowen 1952; Dean 1984	complete, 'sound condition'	native (densest distrib. Dorset)
5	Whitstable, Kent	×3 axes (looped and socketed)	1.5 km off Whitstable	LBA	info. from Maidstone Museum, Giles Guthrie, Accession numbers 38.1916, 85.1953 and KAS 182.1916	–	–
6	Whitstable, Kent	×1 sword (Late Ewart Park)	found in sea off Whitstable?	LBA	info. from Maidstone Museum, Giles Guthrie, Accession Number 111.1963	top of hilt and part of shoulder missing. Possible damage to tip	–
7	Salcombe Bay Cannon site 2002 and nearby 2004 discoveries, Devon	×3 palstave axes (Breton and Rosnoën), ×11 swords/rapiers/blades (Rosnoën), ×1 chisel/adze, ×1 socketed fitting, ×1 gold arm ring, ×1 gold torc frag., ×1 poss. cauldron handle, bronze block, organic material, tin ball. TBC	1.5 km offshore	Late MBA, *c.*1300–1150 BC	Yates and May 2005	differentially eroded, some blades broken	poss. mixture of Continental (FR) and British types

TABLE 1
continued

No.	Location	Find description	Location details	Date	References	Condition	Provenance
8	Moor Sand, Devon	×6 swords, ×2 axes (palstave)	offshore, 600 m east of Salcombe Bay finds	MBA, 1350–1150, carp's tongue sword 950–800 BC	Muckelroy 1981; Ransley, pers. comm.	differentially eroded from action of the sea. One sword very well preserved	swords from Seine Basin, N France. Breton palstaves
9	Thurlestone, Devon	spearhead (pegged and socketed)	Leas Foot Beach, Thurlestone	LBA, 1200–900 BC	info. from Receiver of Wreck, Sophia Exelby and Fiona Pitt of Plymouth Museums	tip bent backwards	prob. British origin
10	Seaford, Sussex	axe (palstave), bronze lump, poss. needle/pin	offshore	LBA	Dean 1984	–	–
11	Seaford II, Sussex	axe	500 m from Eastern breakwater SEE Seaford	–	info. from Receiver of Wreck, Sophia Exelby	good condition	–
12	Chesil Beach, Dorset	axe (Armorican socketed)	150 m offshore	LBA	Taylor 1980; Dean 1984	unsharpened edge. Holed through corrosion or damage	Armorican
13	Poole Harbour, Dorset	axe (winged palstave with loop), poss. bronze pins/needles	entrance to harbour	LBA	info. from Receiver of Wreck, Sophia Exelby	–	–
14	Hengistbury Head, Dorset	axe (shaft-hole)	offshore	LBA, 800–750 BC	Hawkes 1938; Dean 1984	knocked sideways somewhat out of shape'	Sicily/S Italy
15	Bembridge, IOW	sword	offshore	MBA, 1400–1250 BC	info. from Receiver of Wreck, Sophia Exelby	–	British (Taunton phase)
16	Alexandra Dock, Hull, Humberside	axe (median-winged)	Alexandra Dock	LBA	Burgess 1968, 34 and fig. 7.3; Dean 1984	broken. Base missing	typical central European, early Urnfield
17	Sotteville-sur-Mer, Normandy	×2 twisted gold torcs	5.6 km offshore from Sotteville-sur-Mer	LBA	Billard and Jézégou 1995; Briard 2001	incomplete and eroded by the action of the sea	Tara-Yeovil (IRE, S Eng)
18	Sandettié-bank, Straits of Dover	sword	north of Calais, Sandettié-bank (*c.*51°16' N, 1°55' E)	LBA	Verlaeckt 1996	top of handle broken off	Atlantic type. Loire estuary area? (Briard 1966, cit. Verlaeckt 1996)

seabed assemblages mainly from the coastal waters of Britain.[1] Most of them have been recovered by amateur divers and fishermen. Taking coastal change into account, many of the finds are still a considerable distance out to sea. This indicates that their find positions were probably not the result of palaeogeographical change, such as sea-level rise, or local environmental change, such as cliff falls. The few cases in which the context (beach/sea) is unclear are indicated in the table. Moreover, it is not yet known how the Salcombe Bay assemblages interact.[2] These bronzes could all be part of the same depositional event, spread across the seabed as part of the post-depositional processes. This may become clearer in light of their reassessment by English Heritage.[3]

THE SHIPWRECK SCENARIO

The accepted interpretation of offshore finds is that they are the result of nautical misadventure, this being the only occasion in the archaeological record when sea journeys are visible (Muckelroy 1980; 1981; Dean 1984; Needham and Dean 1987; Parfitt 2004a; 2004b; Billard and Jézégou 1995; 2005; Yates and May 2005). The implications for the preferred 'wreck' explanation are enormous for Bronze Age studies because, unlike finds on land, these bronzes were not chosen for deposition but instead were interrupted at an earlier stage in their life cycle. They provide opportunities for examining exchange in mid-transit. Hence they are seen to have 'corrective' potential for the totality of Bronze Age metal circulation (Needham and Dean 1987). The Langdon Bay assemblage, for example, was recovered 500 m offshore from Dover cliffs and *c*.3 km from the site of the Dover boat. It consists of *c*.360 tools and weapons and a few ornaments, all dating to the late MBA, *c*.1300–1150 BC (see Fig. 2). The finds were in varying stages of completeness/corrosion/fragmentation. The stylistic origins of the finds are widespread between Brittany and the Lower Rhine area. The types and numbers upset existing distribution maps, and the object composition finds no parallels in land assemblages on either side of the Continent (Muckelroy 1980; 1981; Needham and Dean 1987). For example, median-winged axes, of which there are 59 in the Langdon Bay assemblage, are extremely rare in Britain with only a couple of other known examples.[4] They are common however in central Europe and eastern France but mostly as single finds.

Muckelroy's (1980; 1981) preferred explanation for offshore finds is that they are evidence for a European-wide exchange network in scrap, operating separately from local production and circulation arrangements. He assumes these are types which have lost their value outside their circulation areas, and had they made it to safe harbour would have been remelted into other, local forms (ibid. 1981, 288). He compares 'wreck' assemblages such as Langdon Bay with the Mediterranean examples of Huelva and Rochelongues, assemblages which similarly contain objects outside their traditional distribution area from a wide range of geographical

1 A forthcoming monograph funded by English Heritage (Needham and Parham in prep.) on seabed finds will considerably expand on this dataset and describe the finds in detail.

2 Moor Sand investigated 1977–83, Salcombe Bay Cannon Site – seventeenth century wreck site discovered in 1995, investigated 2000–1, four Bronze Age objects recovered 50 m away in 2002, but subsequently reexamined because of more Bronze Age finds recovered from Salcombe Bay in 2004.

3 Needham and Parham in prep.

4 In this respect it is interesting that one of the other British examples, i.e. that from Alexandra Dock, Hull, was also an offshore find, see Table 1.

Figure 2
Langdon Bay assemblage. Dover Museum, Kent. Photo: A.V.M. Samson.

locations. Late Bronze Age shipwreck assemblages from the eastern Mediterranean, such as Ulu Burun and Cape Gelidonya, have been similarly characterized as cargoes of 'international' provenance, Ulu Burun having items aboard of at least seven different cultures (Cline 1994, 100). Muckelroy supposes for all these cases that local surplus entered a larger network and circulated on a wide scale until it was melted down into local forms. Hence we do not see these types on land, but only when they end up in the sea as wrecked cargo (ibid. 1981, 292). We shall return to these cases later. Bradley (1990) supports this interpretation by seeing offshore finds as corroboration of a certain type of hoard valued for its raw material value alone. He observes that mixed hoards (i.e. those with objects from more than one category), with fragmentary material, found outside areas in which the same types played more specialized roles (i.e. single type watery depositions), often in coastal areas 'seem to stress the nature of these objects as metal and nothing more' (ibid. 145). In other words he sees such assemblages as commodity hoards. Following this logic, sea finds, which share many of the same characteristics, back this up and prompt an interpretation as 'trade interrupted', i.e. commodity hoards gone astray. This ties sea finds into a place within a wider Bronze Age interpretive framework which categorizes them as the result of 'profane' activity.

With this in mind it is very tempting to see the Langdon Bay assemblage as the result of a shipwreck, even if one does not agree with the overtly economic interpretation as long-distance exchange of scrap. There are problems with this view, however. Firstly, as one of the only archaeologically investigated marine sites of its kind, the Langdon Bay assemblage overshadows the fact that the recovery of prehistoric artefacts from the sea is not an isolated incident. A more representative view of this phenomenon comes from the other offshore finds of the period, occurring singly or as small collections of artefacts (see Table 1). Secondly, the proportions of tools/weapons/ornaments in the Langdon Bay assemblage mirror the proportions seen in other offshore finds (see Figures 3 and 4). This indicates that Langdon Bay might not be

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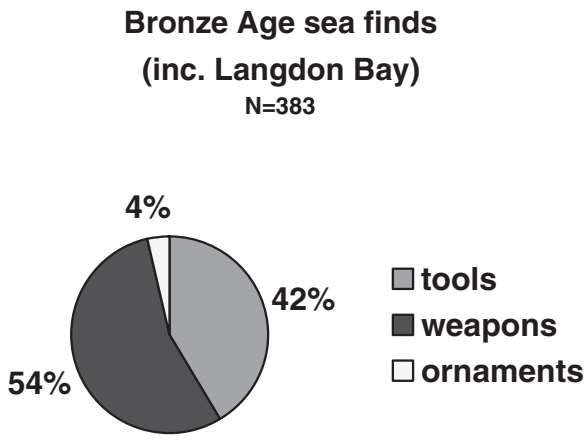

Figure 3
Percentage of weapons, tools and ornaments in offshore contexts (including Langdon Bay assemblage).

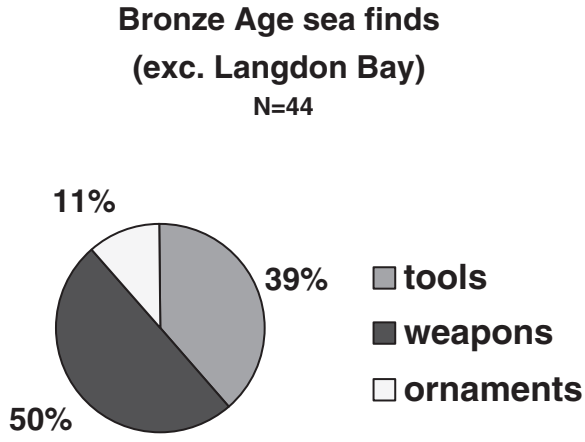

Figure 4
Percentage of weapons, tools and ornaments in offshore contexts (excluding Langdon Bay assemblage).

so unique and could merit recontextualization as part of the larger offshore dataset. Thirdly, the find context fits into the depositional framework of the period – tools and weapons in wet places. This is potentially very exciting as it implies that, contrary to assumptions about the invisibility of past sea journeys, certain prehistoric maritime activities do indeed have material expression. Before making such a leap, however, let us examine the data in more detail and consider the case for structured deposition in the sea.

DISCUSSION OF THE DATASET

The finds in Table 1 largely represent single finds that attracted the attention of amateur divers and fishermen, not those recovered by professional archaeologists. In addition to this,

limited contextual and positional information was available for some of the finds. Moreover, there is a huge recovery or reporting bias for southern English waters and hardly any finds from other areas.[5] Whether this mirrors the similar pattern on land remains to be seen. However, the offshore context justifies examination simply because we have to conclude that all objects were dropped/lost/wrecked from boats and it is not often we can specify how an object ended up in its recovery spot. Also, if accepted as the result of wrecks, these finds could reveal the ways in which metal objects entered communities in the Bronze Age. For the sake of this discussion, similar criteria apply to offshore finds as they do to the identification of patterns in terrestrial data, namely: 1) Is there recurrent patterning in the data across time and space? 2) What is the likely provenance of the bronzes (i.e. are they foreign imports?). 3) Does the patterning of the offshore finds mirror that of certain terrestrial contexts, and if so which? 4) What possible meanings can be attached to them?

First of all, the finds from the sea cover a specific time period from the later MBA, *c*.1400 BC to the LBA, *c*.800 BC. The majority of the finds fall under the Taunton to Penard phases, 1400–1150 BC and the rest fall between the Taunton and Ewart Park phases, 1100–800 BC.[6] There are no EBA or early MBA finds at all in the dataset. Secondly, finds consist mainly of the categories of weapons and tools,[7] and of these primarily axes, swords and rapiers. Thirdly, in terms of spatial distribution, finds are concentrated along the Channel coast of England and in river mouths, bays and estuaries. Fourthly, they are assigned to types of diverse geographical origins from northern France, Ireland and southern England, as might be expected, and also to central European types, and in one case southern Italy (see the shaft-hole axe from Hengistbury Head, Dorset). Hence both Atlantic and central European networks are implicated. Fifth, many of the pieces show deliberate damage and breakage in antiquity; by this I mean hilts alone or blades cut in half, spear tips bent or missing and axes twisted out of shape or cut in half. This is the case for over 73 per cent of the blades in the Langdon Bay assemblage, some of the blades from Salcombe Bay, the Thurlestone spearhead, the Alexandra Dock and Hengistbury Head axes, the swords from Whitstable and Sandettié-bank and the Sotteville-sur-Mer torcs. It may also be the case for the Chesil Beach axe. In other cases the pieces are too eroded to tell or there was no available information. Conversely, certain pieces from the Langdon Bay assemblage were in very good condition, as were the Folkestone sword, the hooked and tanged sword from Moor Sand and the axe from Seaford II. Sixth, two of the collections contain copper and tin lumps (see Seaford and Salcombe). The last salient factor is that ornaments including pins, bracelets, torcs, arm-rings and fasteners make up 4–11 per cent of the composition of the finds. It is perhaps worth noting that unlike pins and miscellaneous fittings, axes and swords are more recognizable to the diving/fishing non-archaeologist. However, even sites professionally investigated such as Langdon Bay, Moor Sand and Sotteville-sur-Mer reveal low numbers of ornaments. Muckelroy (1981, 285) notes this is curious because ornaments are considered to be one of the major imports to southern Britain at this time and dominate the categories in hoards on land (Champion 1982; Bradley 1990).

Hence, we have a concentration of later Bronze Age tools and weapons, usually occurring as single or small groups, often showing deliberate damage and from a wide

5 Although see Needham and Parham in prep. in which the Bristol Channel area is also well represented by offshore finds.

6 Following Needham and see Fig 1.4 in Fontijn 2002 for comparative periodization.

7 Following Rowlands' (1976) categorization of bronzes into weapons, tools and ornaments.

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geographical area clustered around the south coast of Britain. Is it likely that they all ended up offshore owing to misfortune? Abandoning the wreck scenario means giving up the idea that offshore finds are snapshots of 'circulation in action', but it also allows us to explore the possibility of another realm of Bronze Age practice and to consider its meaning. Firstly, some objections to 'wreck' finds will be outlined and, secondly, a comparison is made between the data and the terrestrial treatment of tools and weapons.

ALTERNATIVES TO THE WRECK SCENARIO

If accepted as wrecks, offshore finds could reveal the ways in which objects came into communities. In this respect the majority of finds are small groups of weapons and/or tools, or single weapons and tools, and only occasionally larger groups of objects such as the Langdon Bay and Salcombe Bay finds. This suggests that a boat's cargo may have been largely made up of other, perishable, cargo such as cloth, skins, salt, animals, grain or specialist food products. Perhaps bronze was not imported in bulk consignments, but in smaller amounts. The finds could also represent the personal possessions of the crew, which may indicate that it was considered appropriate for at least one member of a crew to carry an edged weapon of sorts and the ubiquitous multipurpose axe. This may have been one of the key ways in which knowledge of styles and form was transferred. When the size of the various cargoes is compared, it is obvious that there were at least two different types of journey involving the exchange of bronzes – small scale (such as at Seaford, Sussex) and larger undertakings (Langdon Bay). This indicates that journeys were multipurpose and different. It also illustrates that central European networks operated simultaneously with Atlantic networks in terms of cross-Channel bronze circulation. Thus, heterogeneous networks operated simultaneously.

However, although boats undoubtedly sank in the Bronze Age, as they have always done, there are several reasons to doubt the shipwreck scenario as a catch-all explanation for offshore finds. Firstly, in the few excavated cases (Langdon Bay, Salcombe Bay, Moor Sand, Sotteville-sur-Mer) there were no ship remains or, more significantly, no remains of any other cargo with the bronzes. This is in contrast to the other well-known Bronze Age wrecks, Ulu Burun or Cape Gelidonya, both of which had substantial portions of ship preserved with them (Cline 1994). These wrecks also show the range of other non-perishables, besides metal, carried as cargo – shell, stone, pottery, faience, anchors, weights, seals, beads, resin, etc. (ibid.). Even given that the rough conditions of the North Sea contrast with those of the Mediterranean, there are factors such as the cooler temperature of the North Sea which make preservation of certain materials such as heavy oak planking more likely. Primarily, it is hard to understand the absence of pottery or ballast in these assemblages if indeed they are wrecks. Yet in over six excavation seasons in the Langdon Bay site, in which even pins and fragments were recovered from the concentrated 150×60 m dispersal area, no pottery or any other non-metal material was recovered apart from some jet (Needham and Dean 1987).[8] The fact that the shipwreck scenario is accepted is a consequence of the fact that there are no similar artefact compositions to Langdon Bay known on land. In the case of the Sotteville-sur-Mer torcs, a 7200 m^2 sector around the find spot was metal detected and explored for ship remains. None were found, yet a wreck scenario is still deemed the most likely (Billard and Jézégou 1995; 2005; Briard 2001). However,

8 Jet is not out of place in terrestrial hoards/graves.

interpretation in both these cases smacks of 'normalization' of the archaeological data (Murray 2001), and perhaps we should consider other possibilities. For example, gold torcs are found in terrestrial hoards from Britain, southern Spain and central and western France (ibid.) and there are similarly large and heterogeneous hoards to Langdon Bay from southern parts of Europe, such as the Mediterranean coast of France at Rochelongues and the Atlantic coast of southern Spain at Huelva (Bouscaras 1971; Ruiz-Gálvez Priego 1995; Cunliffe 2001, 279–81). Both these assemblages have been interpreted as wrecks, but unlike Langdon Bay, other scenarios are also entertained. For example, the Huelva assemblage consisted of 400 artefacts, again mainly weapons and tools, dredged from the joined mouths of the rivers Odiel and Tinto just off Huelva. The assemblage included artefacts beyond their normal circulation spheres such as British spearheads and eastern Mediterranean objects. Associated wood was dated to the mid-tenth century BC (Cunliffe 2001; Ruiz-Gálvez Priego 1995). Yet despite characteristic similarities to the Langdon Bay hoard, and the presence of planking, a votive interpretation has been considered for this assemblage owing to its strategic and politically neutral position in the fork of two rivers and between maritime and riverine zones (Ruiz-Gálvez Priego 1995).

Secondly, and more compelling, are the results from metal analysis of the Huelva hoard, which, although stylistically based on different Atlantic and imported prototypes, indicate that all the items of the hoard have a similar composition (Rovira Llorens 1995). This suggests that they were made in the same region at the same time, and the author suggests a possible local origin (ibid.). Of note in this respect is the indication that many of the pieces of the Langdon Bay assemblage may also be compositionally uniform, which gives the impression they were produced on the Continent at the same time (Needham and Dean 1987). This evidence runs counter to Muckelroy's theory about a long-distance scrap trade siphoning off local surpluses over a very wide area and time. This might be taken as evidence for the fact that they were intended as merchants' hoards for redistribution if it were not for the fact that the types were so diverse. Instead it indicates that the items were made in the same workshop in the same area for the same purpose. Perhaps this is reason to believe that they were assembled for deposition, like Armorican socketed axes.

DELIBERATE DEPOSITION IN THE SEA

The temporal and compositional patterning described above suggests another scenario: that of deliberate deposition in the sea. More data and work are needed to understand why this was the case, but the heterogeneity of the finds points to a variety of practices, some of which indicate the sea might have represented the ultimate wet place for meaningful deposition in the Bronze Age.

In the later Bronze Age in western Europe tools, weapons and ornaments were deposited in wet places such as bogs and streams (for a general overview see Bradley 1990). Major rivers saw the most lavish consumption of weaponry in the later Bronze Age, whereas tools and ornaments were deposited in a wider variety of contexts (Bradley 1990; Fontijn 2002). This is a tradition in marked contrast to the situation in the EBA in which daggers, ornaments and small tools were found in graves (Needham's Set 1, Needham 1988). Deposition in wet places crystallizes over the EBA/MBA transition and becomes entrenched in the later Bronze Age. Dry land deposits increase at the end of the LBA and decline again in the Early Iron Age (Huth 2003). Differential use-histories of these objects can also be generalized. Axes tended to show intensive use before deposition, whereas swords and

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weapons were deposited unused, or sharpened before deposition (Butler and Steegstra 1997/1998; Fontijn 2002, 247–58; Bradley 1990).

Another feature of deposition in the later Bronze Age is the repeated use of some areas over long periods of time such as Duddingston Loch near Edinburgh (Bradley 1990, 107), the Trent, Ancholme and Witham valleys, Lincs. (May 1976, 114) and the Scheldt and lower Meuse/Rhine valleys in the Low Countries (Roymans and Kortlang 1999, 53–7). The following paragraphs compare the above observations with the sea finds.

OBJECT CATEGORIES

Firstly, with regard to the dataset presented here, and even excluding the Langdon Bay assemblage, one can see a predominance of axes and weapons (spearheads and blades) from the sea. Contrary to Bradley's criteria for utilitarian hoards (valued for their raw material potential) as generally being mixed category assemblages, this is true for 33 per cent (n = 6) of the sea finds. Single category assemblages account for 67 per cent (n = 12). It is true that this latter figure includes single finds dredged from the sea floor, possibly representing only part of a larger assemblage, but let us explore the data further. To strengthen support for the idea that some sea finds may result from deliberate deposition, one might question the absence of any EBA finds from the sea. Although this may be due to the lack of intense metal circulation in the EBA compared to later periods,[9] it also mirrors the fact that deposition in watery contexts on land did not occur as regularly in the EBA as it did in later periods.

SWORDS AND SPEARHEADS

In a couple of cases (Folkestone and Moor Sand), the good condition of the swords has been remarked upon in publications (Cowen 1952; Muckelroy 1981). In the cases in which single swords and rapiers have been found, it may be safe to assume that their condition cannot have been too damaged or broken because their non-archaeologist finders remarked on them and reported them. This is the case for Whitstable, Bembridge and Sandettié-bank. Spearheads occur as both single finds and as part of multiple assemblages (Thurlestone, Devon and Langdon Bay). Thus, contrary to the picture of wrecked scrap metals outside their circulation area, we may have evidence for deliberate deposition of weaponry in the sea, akin to that in rivers in some cases. In addition to this, certain offshore 'hotspots', such as Salcombe Bay or Whitstable, may have been used for several depositional events.[10] The fact that the sea is not a confined, periodically dredged body of water, such as rivers like the Thames, means that this practice will not be so easily observed.

Moreover, the composition of the latest Salcombe Bay assemblage bears similarity to what Fontijn terms 'personal warrior sets'.[11] For example, the Overloon (Limburg) hoard of two rapiers, two spearheads, a pin/needle and a flanged axe is interpreted as the non-grave context deposition of two personal warrior sets, paralleling the 'warrior-style' grave goods of the more

9 Although this is a matter of interpretation and some authors have seen the sea in the EBA as a busy thoroughfare, for example Butler's (1963, 208) characterization of the North Sea as a 'Beaker lake'. Moreover, over half the seagoing vessels recovered in Britain from the Bronze Age date to the earlier Bronze Age (Samson 2005).

10 Pending the results of the English Heritage reassessment.

11 David Fontijn, pers. comm. and see Fontijn 2002, 103 on the deposition of personal warrior sets.

northerly Sögel-Wohlde graves (Fontijn 2002, 103). These graves usually contain spearheads and arrowheads, not axes, which is where they differ from the Overloon hoard. The 2004 Salcombe Bay finds included three palstave axes (Breton and Rosnoën), 11 swords/rapiers/blades (Rosnoën), a chisel/adze, a gold torc and bracelet, and a possible cauldron handle (media reports). However, another source also includes mention of bronze arrowheads and spearheads (Sophia Exelby, pers. comm.). If we look for comparable terrestrial depositions, a find from Croxton, Norfolk perhaps provides a closer parallel to the Salcombe Bay assemblage. It comprised a gold torc, a bronze axe, a spearhead and an undecorated bronze bracelet (Needham 1990; Briard 2001). Similarly, another rare combination of weapons and ornaments has been found in an assemblage from Thirsk, north Yorkshire, where a gold bracelet and a gold ring were found in conjunction with three socketed spearheads, a ferrule and a bronze knife (Needham 1990). Both these small assemblages are interpreted by Needham as ritually deposited individual sets of equipment (ibid.). Perhaps we are looking at a similar deposition in Salcombe Bay.

As already mentioned, the relationship between the various Salcombe Bay finds is not clear and the items are still being examined (by Stuart Needham), but perhaps the idea of personal sets should be borne in mind. Weapons are very seldom found in graves in the MBA or LBA in southern England. The inclusion of a cauldron fragment is also interesting as it references hospitality practices often linked to pan-European (warrior) ideologies. The same goes for the Moor Sand assemblage of six swords (one a very well preserved hook tanged example) and two palstave axes.

AXES

Although one cannot ascertain whether a single axe dredged from the seabed represents either the entire deposit or a deliberate act, one might however suggest, on the basis of the combined evidence, that this was a patterned phenomenon. Axes in Britain, France and Belgium are often found singly or in multiple hoards. The majority of axe finds in the Netherlands are usually single finds (Butler and Steegstra 1997/1998). It is of note that regional variation indicates that ornament hoards dominate on the west coast of Belgium and south coast of Britain during the later Bronze Age (Bradley 1990; Huth 2003). This is not the case for offshore finds, in which axes and edged weapons dominate.

The axes in the dataset occur as both single and multiple finds and in mixed assemblages. Palstave axes predominate, followed by socketed axes and a few other types. Palstave axes occur in all three types of assemblage (single, multiple and mixed). The majority of the socketed axes occur in a group found a mile offshore at Whitstable, Kent. The same spot was repeatedly visited by divers who retrieved *c*.12 similar looped and socketed axes (Parham, pers. comm.).

It has not been possible to ascertain the state of the axes to see whether they show the intensive use-life often associated with deposits on land. A few (Chesil Beach, Hengistbury Head and Alexandra Dock) reportedly have signs of deliberate damage such as breakage and distortion through pressure which is more frequently seen in hoards containing a lot of scrap. None of the examples is reported as decorated (a feature of some imported Scandinavian palstaves). Apart from the median-winged axe from Alexandra Dock and the shaft-hole axe from Hengistbury Head, most of the axes have a probable local origin (i.e. local to the place where they were found, see Table 1). However, the wide distribution of palstaves across Europe makes it difficult to know whether they are local or imported. Hence, by their very form they represent adherence to an

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'international' style (Fontijn 2002). Following Butler and Steegstra's (1997/1998, 165) analysis of palstave axes as multifunctional and woodworking tools and their widespread occurrence in the sea, from Friesland to Devon, such axes may fruitfully be incorporated into a framework of meaning.

It has been suggested from the treatment of axes on land that they represent events in the life of a local community (Fontijn 2002, 247–58). It is argued here that the predominance of the workaday palstave in sea finds represents just this – the small-scale, community deposition of an integral tool; a tool widely exchanged through large areas of Europe and the most enduring element of a Bronze Age toolkit, a tool used in the construction of houses, clearing woodland, making fences, and building boats[12] and thus an essential tool for any boat community (Samson 2005). Perhaps this is what we are seeing in the Whitstable find, which rather like the Voorhout hoard of Welsh palstaves (see Fontijn 2006), recovered from a coastal dune in the western Netherlands, may be interpreted as a community deposition.

ORNAMENTS

With the exception of the Sotteville-sur-Mer torcs, ornaments do not occur as single finds or as multiple object finds, only as part of mixed composition finds. If one excludes Langdon Bay then we have a very small number indeed, consisting of a few pins/needles which accompany single axe finds, the gold bracelet and torc fragment from Salcombe Bay and the gold torcs off the Normandy coast. Langdon Bay also contained bracelets, pins, and fittings/fasteners, but not in great numbers. It is difficult to know how to interpret these and whether indeed one should at this stage owing to the recovery bias which probably operates for this category – they are retrieved in conjunction with recognizable objects such as axes, and not on their own. In southern England, ornament hoards concentrate on the south coast in the later Bronze Age (Bradley 1990, 122; Champion 1982). Regional MBA types such as Sussex loops and quoit-headed pins are found only in Southern England where ornaments even occur in burials.[13] There is not enough data to say whether this regional preference was carried through into sea depositions.

The gold twisted torcs dredged up by a trawler deep off the Normandy coastline are rather intriguing. They belong to the Tara-Yeovil type and are deemed to be of Irish origin (Billard and Jézégou 1995; 2005; Briard 2001, 134). The Sotteville-sur-Mer examples are taken as confirmation of a transport route for these 'prestige' objects across the Channel (ibid.). A similar item, from St Helier in Jersey, is taken as proof of the Channel Islands as a staging post between Ireland and the British Isles for gold ornaments (Briard 1986; 2001). Yet as we have seen above in the Croxton hoard and Salcombe Bay assemblages, the torc can also be associated with weapon sets, and of 54 similar torcs in Europe, most are associated either with other gold objects or with stop-ridge axes (ibid.). The likelihood of seabed torcs being the result of wrecked ships is diminished by investigation of the Sotteville-sur-Mer site and the fact that prehistoric gold ornaments in the sea are not unique, as Salcombe Bay illustrates.

Ornaments are often associated with female identities in the Bronze Age (although the basis for this is often dubious and not based on sexed remains, but on assumptions); however at

12 Toolmarks show that the palstave was one of the main tools, hafted as both an adze and an axe, used in the construction of the Dover Bronze Age Boat (Goodburn 2004, 129–30).

13 Three bronze bracelets accompanied an MBA burial from Ramsgate, Kent. In British Museum and referred to in Champion 1982.

this stage drawing any inferences from the limited finds is problematic other than to note that ornaments (and axes) contradict the contemporary notion of the sea as an exclusive zone for male adventurers.

DISCUSSION

The analysis of offshore finds appears to suggest that we cannot attribute all sea finds to nautical misadventure and therefore 'trade frozen in time'. The patterns in the data suggest that people in the Bronze Age were placing culturally and socially meaningful objects in the sea in the same way as they used large rivers and wet zones in the unsettled landscape for the deposition of weapons, ornaments and tools not found in burial contexts. Voyages in boats resulted in the deliberate and structured deposition of objects. There appears to be multiple identities in the characteristics of the bronze sea finds. This is entirely in keeping with what one might expect. Just as hoards on land imply different circumstances of assembly, deposition and ownership (Needham 1990) so deposition in the sea reflects diversity. After all, voyages were made for many different purposes and by different people – maintenance of social contact and exchange, fishing, pacification of spirits/ancestors, hostilities, etc. and one would expect this to be reflected in the deposits, just as they are on land. Based on the data we can hypothesize small community deposits of axes, deposition of weaponry akin to that which occurred in major rivers, deposition of personal equipment sets and larger assemblages such as Langdon Bay which are open to a variety of interpretations. The 'wreck scenario' is just one.

IDEOLOGICAL IMPLICATIONS OF STRUCTURED DEPOSITION IN THE SEA

As mentioned above, in the Bronze Age in Europe, deposition of special items not found in graves or settlements, such as weapons and axes, was performed according to sets of rules which dictated where this was appropriate (Torbrügge 1971 cited by Bradley 1990; Needham 1988; Fontijn 2002). In a study of deposition in the southern Netherlands, Fontijn (2002) showed just how structured and rule-bound this practice was. In order to obtain an integrated picture of the Bronze Age socio-cultural environment – and hence worldview – one should look at these 'natural' places as well as the more obvious cultivated, cultured or settled areas such as houses, field systems and barrow cemeteries (Arnoldussen and Fontijn in press). Watery zones on the peripheries of settled areas were used to deposit metalwork. Large rivers were preferred for weapons and warrior paraphernalia of non-local origin, and swamps and smaller streams for ornaments and axes perhaps of more local origin. This is referred to as 'selective deposition' (Needham 1988; Fontijn 2002). This is a pattern which emerges all over Atlantic Europe in 'unaltered, watery zones beyond the humanly-modified environment' (Arnoldussen and Fontijn in press). Here it is suggested that such depositional practices might also have occurred in a marine context, although more data are needed to refute or prove this. Lastly, however, and in light of the implications of the sea as a zone of deposition, one should contest the notion of the sea as an 'unaltered' environment.

The implication of structured deposition in the sea is that the sea was the arena for all kinds of activities not directly associated with subsistence or directional travel. The different nature of the assemblages themselves invites questions about meaning and participation. Certain places in the sea may have been seen as appropriate zones to deposit objects, specifically metalwork. As mentioned, there appears to be a spatial bias in the distribution of these finds

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around the coasts of Britain. This may be due to reporting bias, but it is remarkable that finds are concentrated along the south coast and are almost entirely absent from offshore areas elsewhere. What is the meaning of this?

The sea connects communities, coastally and intra-continentally, both in terms of the social groupings formed through the effort of building and running a boat, and those which were formed through contacts, relations and exchange across the waters. Fontijn (2002) argues that the deposition of weaponry referenced non-local identities and values (i.e. adherence to an 'international' ideal of warfare), and the deposition of axes referenced community and local identities (i.e. the co-operation of households within local communities). In the study area, the sea is a zone in which both types of assemblage occur. The sea, especially in regions of intense contact, is drawn into the local cosmology of Bronze Age people rather than being set apart as an unsocialized zone outside society. For example, similarities in mortuary, domestic and material practices between northern France and southern England and the concentrations of offshore finds from the Channel area indicate that the Channel was traversed by people making journeys and marked by deposition and intimately modified and 'cultured'. This is apparently not the case for other coastal areas of Britain where the sea might indeed have been defined as 'outside'. Hence for certain regions we cannot see the sea as an area set apart from the settled landscape as 'unaltered' and 'outside'. Rather the depositional evidence suggests it referenced identities and relationships which were integrated into local cosmologies. It is in this context that the fashionable term 'seascape' can profitably be used – to describe situations and specific contexts in which the sea is a cultured realm and seafaring structured the activities of Bronze Age communities, i.e. in the later Bronze Age Channel area.

CONCLUSION

In conclusion, it is hoped that this relatively small dataset has suggested there might be alternative explanations to the shipwreck scenario. Just as aboriginal mythologies extend into the sea, so prehistoric social and ideological activity probably did not end at the shoreline. People move on the sea in structured ways, often within clearly defined territories.[14] Similarly, the sea can be considered as the realm of certain deities or spirits in which ancestral myths continue (Malinowski 1922/1960 on flying witches; McNiven 2003 on aboriginal *spiritscapes*; Rouse 1948 on *Carib* offerings at sea). Thus the sea can be divided, populated and mythologized in the same way as the land, and is susceptible to the same cultural control.

Ultimately, only systematic survey in offshore areas with evidence for Bronze Age activity, as well as increased reporting of finds by the public, could produce a more complete picture of the rules which structured deposition in the sea and thus increase the integrity of the dataset.

Acknowledgements

Thanks are due to Professor Harry Fokkens (Leiden University), Dr Thijs Maarleveld (Syddansk University), and Dr David Fontijn (Leiden University) for their discussion and guidance. I am also indebted

14 Gary Robinson (UCL), in a recent TAG paper on seascapes of Scilly (Glasgow 2004), made the point that wind, wave and current patterns make it easier to predict how people moved on the sea than on land.

to Dave Parham (Bournemouth University), Jesse Ransley (formerly English Heritage) and Sophia Exelby (Receiver of Wreck). Thanks also go to my colleagues in the Department of Archaeology of Native America and the Caribbean (Leiden University) for their encouragement in submission of this article.

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ABBREVIATIONS

EBA – Early Bronze Age
LBA – Late Bronze Age
MBA – Middle Bronze Age

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