

*Hidden valuables, hidden variables:
hoards and related deposits from the
Mesolithic to the present day (The Gordon
Childe Lecture for 2024)*

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Hidden valuables, hidden variables: hoards and related deposits from the Mesolithic to the present day (The Gordon Childe Lecture for 2024)

Richard Bradley

Abstract

This article traces the deliberate deposition of artefacts, human remains and animal bones from the Mesolithic period to the twentieth century AD. Rather than presenting a straightforward narrative, their treatment is thematic and extends backwards in time from the most recent examples, about which a little is known, to the earliest, which remain enigmatic. The article also extends to single finds, grave goods and river metalwork. While the histories of these phenomena were continuous and unbroken, their significance often changed. The lecture considers nine specific examples and the very different ways in which they have been interpreted.

Keywords: Childe, hoards, grave goods, single finds, river finds, sacrifice

Introduction

The language of archaeology sets traps for those who study the past. Terms that were coined almost casually assume an authority that was never intended. The word ‘hoard’ provides a good example as it is both a description of a collection of artefacts and an explanation of why they were assembled. They relate to two different kinds of research, and the tensions between them go back to the formation of the discipline.

Gordon Childe’s work illustrates both approaches. Although he wrote little about individual hoards, they influenced his thinking profoundly. One early paper commented on the dating of a group of metalwork in Hungary (Zoltai and Childe 1926). A later one discussed a deposit in the west of Scotland, but this time Childe (1942) was concerned with the movement of artefacts by sea. Both studies were related to his wider interests.

Hoard: associations, chronology and typology

There are two main approaches to the archaeology of hoards. The first concerns the association between different artefacts in the same context. As Childe recognised, it seems that the objects in hoards were in use together – like those buried in a grave, they provide a snapshot of the kinds of material circulating at the same time. By comparing these collections with one another, it should be possible to establish a chronology (Evans 1881; Gräslund 1987). There are difficulties with this approach, yet the method retains its attraction even now. Studies of individual deposits show that they can cover a longer time than originally expected (Knight et al. 2019). The same qualification applies to items buried with the dead. There is evidence that some graves were reopened and their contents inspected, supplemented or even removed (Aspöck et al. 2020).

Hoarding: accumulation, concealment and abandonment

The main problem raised by hoards is why they formed in the first place. Why were so many artefacts brought together, and why were they taken out of circulation and never recovered? Childe considered that the principal factors were the storage or concealment of valuables. Neither was accomplished successfully, and the fact that the material survived means that those assemblages were lost. He emphasised these processes in his account of the Bronze Age. Most hoards were deposited by metalworkers, and their activities shed light on the production and distribution of artefacts. The existence of independent smiths distinguished the organisation of European societies from that of ‘totalitarian Oriental states’ (Childe 1957).

Hoard and related deposits

The title of this lecture refers to both hoards and related deposits – what are they? Certain items were commonly buried in dry land, but during the same periods other kinds of artefacts were deposited in water (Testart 2012; Torbrügge 1971). Most tools are in terrestrial hoards, yet ornaments were also placed in wetlands. However, weapons are usually discovered in rivers. It seems obvious that these deposits formed part of a wider system (Bradley 2017).

Hoard across time

There is also a chronological issue. The studies on which most scholarship is based are concerned with the material culture of just two phases: the Late Bronze Age and the Viking Age. Yet the practice of forming these deposits can be traced without a significant break from the Mesolithic period to the early Middle Ages (Bradley 2017). There is nothing to suggest that it took the same forms throughout the entire sequence. Nor was it undertaken for the same reasons. Possible interpretations change from one period to another.

For that reason, I cannot offer you a simple history of hoarding. Instead, I will summarise a series of themes in the interpretation of these deposits. They are treated separately here. A few of the most recent can be understood, and for that reason they

provide my starting point, but the meanings of their predecessors become increasingly obscure. The simplest procedure is to begin in the present and to work backwards in time, from the partially known to the entirely undocumented, isolating several strands in the archaeology of hoards and other contexts. Successive sections will proceed from the twentieth century into deep prehistory.

The twentieth century: Alan Turing and Archbishop Ramsay

Documented deposits involve a wide range of possibilities. Here a good starting point is the Second World War, when Alan Turing famously worked as a codebreaker. He was interested in medieval currency and, with a colleague, he had already devised a statistical method for estimating how many coins came from a particular die. But his interest in portable wealth went much further and in 1940 he purchased silver ingots as a way of storing his own wealth. He decided to bury them for safekeeping and took them in a pram to two secret locations near Bletchley Park – one of them was a stream (Myrberg Burström 2015). He encrypted directions for finding them again and concealed this document. But after the war ended the local topography had changed so much that Turing was unable to retrieve his treasure. He even built his own metal detector, but the silver was never recovered.

It is unusual to associate collections of valuables with a named individual, but a second case is rather similar. Michael Ramsay moved to Durham after he retired as Head of the Church of England. After his death, divers working in the River Wear discovered items of his property. They found them in separate groups, as if these pieces had entered the water on different occasions. The objects shared a common origin, for there were 300 religious items presented to him when he was Archbishop of Canterbury. They included medals celebrating the Vatican Council, a silver trowel used to lay the foundation of an Indian church and a gold coin recording the renovation of a shrine in Japan. The question was how and why they had entered the river. Was Ramsay the victim of a robbery that he failed to report? Were they stolen property, dumped by the thief in a place where no one could find them? That was the line taken by the staff of Durham Cathedral, but there were other possibilities. Had the Archbishop discarded these artefacts to protect their special associations? Did he consign them to the river to prevent their sale after his death?

Interpretations reached an impasse, the cathedral authorities favouring a purely mundane explanation, and the divers insisting that these objects had entered the river on more than one occasion (Kennedy 2009). Now there is a solution. My colleague John Creighton, who knew Ramsay when he lived in Durham, tells me that he saw him drop objects in the river. Their special character would not have been apparent at the time. Maybe Ramsay was following the Christian belief that a person enters the world with nothing and leaves it with nothing, but that would not explain the peculiar nature of this collection. It has an exclusively religious character, and the Archbishop might have wanted to protect its sacred associations.

I quote these examples because they evoke a few of the principal elements in the archaeology of hoards and river finds. They are unusual cases that extend to two well-

known people: Alan Turing, who buried his ingots as a source of wealth but was unable to find them again; and Archbishop Ramsay, who deposited ecclesiastical gifts to protect their sanctity. It is revealing that both men chose a stream or river as an appropriate location because their motives were entirely different.

The early Middle Ages: the *Nibelungenlied* and *Egil's Saga*

The same kinds of confusion are illustrated by two literary sources written down in the Christian era when hoards and river deposits were becoming a distant memory. The reasons for their formation were no longer understood. Both the *Nibelungenlied* and *Egil's Saga* contain echoes of earlier practices. They were recorded in the Middle Ages – the *Nibelungenlied* in Germany, and *Egil's Saga* in Iceland – but were set in a period several hundred years before.

The *Nibelungenlied* preserved elements of older beliefs that were no longer understood (Hatto 1965). The main protagonists are Siegfried, his wife Kriemhild and Hagen, the villain of the story. The tale begins when Hagen kills Siegfried during a hunt. It focuses attention on Kriemhild's enormous dowry. What should happen to it now that her marriage has ended?

We are told that the treasure was 'entirely of gems and gold'. In the past the queen had used it to reward her followers, but now Hagen expresses his hostility. Two different responses follow. Kriemhild's brother proposes the most radical solution: 'Rather than be plagued with this gold let us sink it in the Rhine so that no one can have it.' Hagen disagrees and takes the treasure for himself. He deposits it in the river with the hope of recovering it later. But, as the poet tells us, 'This was not destined to happen' (Hatto 1965, 148–9).

The author was obviously unsure why Kriemhild's dowry should have ended up in the water. It might have resolved the tensions aroused by so much wealth. She had used it to recruit warriors and, by destroying it, her brother might have restored order. But she rejected his plan. However, Hagen saw the river as a suitable hiding place for stolen property and intended to retrieve it. The two conceptions are entirely different, yet by the early Middle Ages prehistoric and Roman antiquities may well have been found in the Rhine, where they are known in considerable numbers (Kapesser 2012). The *Nibelungenlied* offered one interpretation, but it was not particularly plausible. Surprisingly, the same ideas feature in accounts of hoards and river finds even today.

The story recorded in *Egil's Saga* is equally ambiguous. It begins as the protagonist is approaching the end of his life. Accompanied by two servants, he sets out, taking several chests of silver coins with him, but when he returns without the treasure it becomes obvious that his companions have been killed. In fact, he says as much – to quote a modern translation, 'Egil said that he had slain [them and] that he had hidden the chests, but where he had hidden them he told no man' (Green 1893, Chapter 90). The question remains unanswered because he dies soon afterwards.

One suggestion is that his wealth was buried so that it would accompany him to the afterlife (Gullbekk 2008). When *Egil's Saga* was written down, the narrative must have presented problems, but people remained aware of the right places in which to deposit valuables:

East of the farm ... is a [stream] ... and it is noteworthy that in rapid thaws there was a great rush of water there, but after the water had fallen there have been found English pennies ... Below the farm enclosure are bogs ... Many feel sure that it is there Egil hid his money. And south of the river are hot springs ... Some men guess that Egil must have hidden his money there. (Green 1893, Chapter 90)

It seems as if the practice of placing metalwork in water was remembered, although no one was sure why people did so.

The first millennium AD: Vimose, Skedemosse, Alken Enge and King Arthur

So far, all these accounts have considered deposits of artefacts, but there was an equally significant emphasis on human bodies and faunal remains. They were associated with valuables but could also occur on their own.

That is particularly apparent at two famous deposits of ‘war booty’ in Scandinavia (Nørgård Jørgensen 2009). At Vimose, Pauli Jensen (2009) identified 12 successive deposits in a lake, extending from the end of the first millennium BC to the Viking Age. Eight groups were dominated by damaged weapons, but in her term the earliest and latest of the collections were of ‘non-military’ character. They included animal bones and were compared with finds of vessels containing food interpreted as ‘fertility deposits’. Skedemosse had an equally important sequence. Here these elements occurred in separate phases, but they could also be combined. ‘The finds ... were deposited on at least six occasions ... Animals and humans were deposited not only at the time when weapon sacrifices were prevalent, but for an extended period ... before and after’ (Monikander 2010, 96). Again, military equipment was discarded in places that had already been used for other purposes. At Skedemosse, they included the sacrifice of horses. But in their final phase both sites reverted to their original roles.

A feature of certain deposits is the rarity of human remains. To some extent this has been remedied by fieldwork at Alken Enge where the bones of 400 young men with weapon injuries were deposited in shallow water. Their body parts had been rearranged up to a year after they had died in battle – like the weapons on other sites, the corpses were treated according to specific rituals (Løvschal et al. 2020). The local topography was important and two centuries later collections of war gear were discarded in a similar setting at Illerup only 5 km away. There were few artefacts at Alken Enge, but it is clear that human remains and damaged weapons were deposited in the same kinds of places. Elsewhere there are even earlier deposits, and similar ceremonies after a battle may be evidenced in the Late Bronze Age (Mörtz 2018).

Until comparatively recently it seemed important to distinguish between ‘sacrifices’ of living beings and ‘offerings’ of inorganic items, but this may be misleading, as some societies consider special objects to be alive. Like the people who used them, individual weapons had histories and names. They could exercise their own agency. Viewed in these terms it is perfectly acceptable to extend the idea of sacrifice to objects as well as people and animals (Bradley 2023). Sites like Vimose or Skedemosse did not change their character completely when the equipment of defeated warriors was deposited there.

The most famous sword of all appears in English literature and was not among the spoils of war. It was Arthur's famous weapon Excalibur that made him into a king, for this was an artefact with special associations. Their biographies were intertwined, and their lives had to end together. The sword was drawn out of a rock when Arthur's powers were recognised, and when he died it was thrown into a lake where it was received by an enchantress. Thus, the sword emerged out of a stone and was eventually deposited in water: the same elements will feature in other parts of this lecture. At the same time the story is consistent with Androschuk's (2010) interpretation that during the first millennium AD the gods were the true owners of all the valuables on earth. Fine artefacts were provided for the living, and eventually they had to be returned.

Coin hoards in Roman Britain: hiding in plain sight

Again, we can go back in time. Among the largest hoards are those of Roman coins. They have been studied intensively for many years. This has advantages and disadvantages. Much of the work has been done by numismatists, not all of whom are interested in other aspects of the past. Other studies have been by economic historians. The research of both groups is important but has little bearing on this lecture.

There are further problems. It is difficult to understand the relationship between coins and other valuable metalwork in the Roman period (and especially the Iron Age). Recent discussions touch on wider issues. Were certain kinds of coins restricted to special kinds of transaction (religious offerings or diplomatic gifts)? How far was Roman Britain characterised by a cash economy? Were coin hoards employed as temporary stores of wealth, and were they really concealed during times of crisis?

The last question touches on practical issues. Where were coin hoards buried, and where was a significant number of them located in the same kinds of places? Apart from those associated with settlements, hoards were deposited at temples and shrines. But other collections raise the problem encountered by Alan Turing: if valuable items were buried for safe-keeping, how easy would it be to find them again? They had to be concealed in places where other people would not discover them. The question was considered by recent research on *Iron Age and Roman Coin Hoards in Britain* (Bland et al. 2020).

One part of this project was based on topographical survey, Geographic Information Systems and the results of new finds and excavations. It made effective use of the records of the Portable Antiquities Scheme and, to a smaller extent, its work was influenced by research on the siting of Bronze Age hoards (Hansen et al. 2012; Rundqvist 2015). Roman deposits were often found in specific locations, and the same was true of the smaller number of Iron Age examples. They favoured sloping ground on the flanks of hills, and low rises in otherwise low-lying land. Floodplains and valley floors were important, and so was proximity to streams, rivers and their sources. Other common elements included rock outcrops, the seashore and the remains of older monuments (they were usually barrows or hillforts). Late Iron Age coin hoards provide the clearest demonstration of a close relationship with topography. They are recorded on the sides of hills and 58 per cent of the accurately recorded examples commanded views within a comparatively narrow window between north-east and south-east (De Jersey 2014,

Chapter 5). The same orientations were favoured for the entrances of roundhouses, enclosures and hillforts.

If large numbers of coin hoards were buried in similar places, it would not have been difficult to find them, and those locations cannot have offered much protection. They could be located by thieves in the same way as metal detectorists work out the most likely findspots of Bronze Age hoards. It seems as if many valuables were hidden in plain sight. Either people were extraordinarily careless, or many deposits were never meant to be recovered.

The Late Iron Age: deposition and sanctuaries

The complex relationship between hoards and the deposits at sanctuaries is shown by two examples. Some of the most distinctive collections of valuables were associated with temples and shrines and from about 1000 bc those in the Mediterranean share many features with Late Bronze Age hoards in other parts of Europe: the deposition of fragments that formed parts of larger objects, the presence of distinctive artefacts and the residues of metalworking.

Among the deposits from cult sites there were Late Iron Age gold hoards. In the Low Countries one distinctive group was composed almost entirely of local coins, but some of the collections also included arm rings or torcs. They have been found at various locations. Some were apparently isolated; others were associated with a fortified settlement; and two of them probably came from shrines. They dated from a comparatively short period, and the authors of an important study favour a *terminus ante quem* of 52 bc. It means that these hoards could have been deposited during Caesar's conquest of northern Gaul (Fernandez-Götz and Roymans 2024, 29–30).

At first sight all these collections can be explained as wealth hidden by its owners at a time of crisis, but Roymans and Scheers (2012) put forward a more subtle interpretation. It is wrong to make a clear distinction between valuables buried during an emergency, and sacred deposits directed towards a god or gods; even their temporary concealment might have involved some kind of ritual. As these authors say, 'hoards may have been placed under the temporary protection of a deity for safety reasons. The place of burial may also have had supernatural associations' (Roymans and Scheers 2012, 20). That is why the hoards found at cult sites raise so many problems.

What happened when such places did not provide sufficient protection? Some of these elements are illustrated by the deposition of a great treasure at Toulouse in south-west France during the second century bc. No archaeological evidence survives, but it was described in a series of written accounts (Boulestin et al. 2012). The treasure was composed of gold and silver and included ingots. It was looted when a party of Gauls raided the Greek sanctuary at Delphi. They took it back to their homeland where, for some reason, they deposited it in a lake. During a subsequent period, the water was drained, and the metalwork was recovered. Eventually the valuables fell into private hands. It was meant to be taken to Rome but instead it disappeared. Its character seems to have changed from a collection of sacred objects to a source of personal wealth.

Several points are relevant here. The treasure had been stored inside a building at Delphi, but its deposition in a lake would have conformed to practice in the barbarian

world. Some authorities think it happened because the treasure was cursed. It had been stolen from a sanctuary and, like Kriemhild's dowry in the *Nibelungenlied*, it had to be submerged to curtail its power. A different source says that the treasure was deposited in the ground when it finally reached Gaul. As the collection contained ingots, it could have become a metal hoard. But in the end, it lost its special character and left no trace behind.

The difference is that the deposits in Belgium and the Netherlands remained intact but were never recovered, while those associated with the sanctuary at Delphi were stolen and did not benefit from divine protection. Instead, they were dispersed and, following a complicated history, all trace of them was lost.

The Early Iron Age: burials and river metalwork

It is interesting to compare Iron Age studies before and after researchers recognised the significance of river finds (Testart 2012; Torbrügge 1971). These studies focused especially on relations between the Continent and Britain around 800 BC. To what extent were the inhabitants of southern England members of a wider community? Was a new technology introduced by migrants from overseas? For the most part the argument was based on ceramics and hillforts, but the presence of high-quality swords played a more obvious role. Their distribution extended from graves in Central Europe as far as the British Isles where the main concentration of finds was in the River Thames. It led to a major controversy. The main protagonists in an important debate were Christopher Hawkes (1959) in Oxford and Roy Hodson (1960; 1964) in London.

For Hawkes these swords provided evidence of a new population with close connections on the mainland. Hodson objected that there were important differences between the British and Continental material and, unlike the situation in Central Europe, only one insular find could have come from a burial. This observation touches on a wider theme. How were grave goods related to the artefacts deposited in rivers and similar contexts?

There are several possibilities, and they are by no means restricted to the Late Bronze Age or Early Iron Age. Objects of kinds that were originally buried with the dead might be selected as river finds during a subsequent phase. There is good evidence of this during the Urnfield period in the Upper Rhine (Sperber 2006). The alternative is for specific types to make the transition from river metalwork to grave goods, which is evidenced in the same study and is equally well documented in the southern Netherlands (Fontijn and Fokkens 2007). Yet another pattern is for artefacts of the same types to be employed in both these contexts but in separate areas, and that must apply to the swords found in Britain. There are similar deposits in rivers on the near-Continent, and they contrast with the evidence from Central Europe where they are associated with burials (Gerdsen 1986). Hawkes's interpretation depended on typology and subsequent accounts on the settings in which these artefacts are found. They represent very different kinds of research.

Sometimes there were more local contrasts. Not all swords might have had the same significance, and by 800 BC metal production was changing. There must have been a time – however brief – when people in Central Europe had the option of using either bronze swords or weapons of the same forms made of iron. Producing these artefacts imposed

different demands and so did the task of obtaining the necessary raw materials (Garrow and Gosden 2012). The iron swords did not have the same associations as their prototypes made of bronze and, unlike the weapons imported to the Thames valley, they were deposited in burials. These contrasts are pervasive, but they do suggest a broad equivalence between the finds from both these contexts. Perhaps the bronze swords deposited in rivers can be considered as grave goods without the graves themselves. To return to those from the Thames, it would mean that Hodson's reading of the evidence was correct and that Hawkes's interpretation was wrong.

The Late Bronze Age: hoards and metalworking

Metals and metalworking dominate studies of prehistoric hoards. The problem is most severe in the Late Bronze Age. Many artefacts are represented by fragments and are usually described as scrap. Childe was right to link them with the recycling of broken objects by a smith. The same features are illustrated by hoards of the early medieval period. There are indications of a prehistoric weight system or systems, but nothing as precisely calculated as the later use of hacksilver (Hunter and Painter 2013; Kilger 2007).

Recycling reached its peak towards the end of the Bronze Age and seems to suggest a reduced supply of metal. But these collections have certain features that resist a common-sense interpretation. Objects in these hoards could be broken by various methods, and it seems as if some were exposed to a fire and violently destroyed (Knight 2022). An apt comparison is with the funeral rites practised during this period, and there are sites where scrap metal is directly associated with cremated bones (Goldhahn 2007). At the same time, certain parts of the objects were selected for deposition, while the remainder must have been recycled. The contrast between sword blades and their hilts provides the best example. The proportions of different fragments varied between different phases and regions across Europe (Bradley 2017). Although craft production was important, as Childe believed, the transformation of these artefacts must have been governed by rules that had little to do with ensuring an efficient outcome.

A new perspective is proposed by the anthropologist Mary Helms (2012), who suggests that the metal objects were thought to be alive. Her analysis is inspired by accounts of how metals were perceived in the Classical world and South America. Material that had been taken from the earth was subjected to an extraordinary transformation, and special objects had to be returned to the beings who provided them. This was achieved by burying artefacts in the ground or submerging them in water. The simplest interpretation of scrap hoards is that the smith offered part of the material to ensure that the work went well, or to celebrate a successful outcome.

But that does not explain another puzzling feature. Some objects played a dual role. They could be deposited intact in rivers and bogs. At the same time artefacts of exactly the same types – weapons and personal ornaments – were broken up and recycled. Swords and spears provide the best illustration. It is true that they are commonly found in rivers, but that applies to only part of the available evidence, because objects of identical forms could be melted down as a source of metal – their histories did not follow a single path (Bradley 1985; Fontijn 2020). What was it that created the distinction between an object

whose material could be recycled by a smith, and one that had to be sacrificed in a special location? Comparison with deposits of war booty in northern Europe suggests a possible answer. Perhaps the treatment of artefacts of the same kinds did not depend on their types, as defined by archaeologists, but on their histories. Had they been inherited? Had these weapons played a part in a famous battle? Or were they originally the property of a defeated enemy?

The Early Bronze Age: collections, displays and images

In the Early Bronze Age metalwork and raw materials were transported over long distances. In some cases, it involved travel by sea, and the importance of landing places on the coast was acknowledged by the deposition of hoards. One was the Pile Hoard, which was found beside the sea in southern Sweden (Vandkilde 2017). The other was at Dail na Caraidh in the west of Scotland (Bradley 2021). In both cases the importance of these collections is shown by comparing the finds of metalwork with panels of rock art depicting objects of the same types.

Helle Vandkilde considers Pile as a haven where artefacts obtained from separate parts of Europe were deposited together in a pool beside the sea. All the raw material was foreign since copper was not extracted at this time in Scandinavia, but intact and broken axes were made in a local style. Another had been imported from Britain. There were ingots from the eastern Alps, and ornaments and weapons made in Central Europe. These items employed materials drawn from different sources and were deposited together in a pool of water. It might have been here that exotic items entered the local system and Baltic amber was exported (Vandkilde 2017).

Between 1800 and 1500 BC there is evidence from another part of the local shoreline. At Simris people pecked drawings of bronze axes into rock outcrops beside the Baltic Sea. Most were shown with their hafts, and some of the images included boats. The most striking feature is that the artefacts themselves are of British type (Skoglund 2016, 72–7). The comparison goes even further, as axes of the same form were illustrated on several monoliths at Stonehenge. There they are shown as units of metal of various sizes and look like the contents of a hoard (Parker Pearson et al. 2022, 151–4). The resemblance between them is revealing. Perhaps groups of special objects – artefacts made of exotic materials or weapons captured in a battle – were exhibited like an array of trophies before they were taken out of circulation. The decorated surfaces might portray such temporary displays.

The images at Stonehenge are later than the Pile Hoard, but a similar relationship between rock art and collections of metalwork is found near the west coast of Scotland where the raw material might have been introduced from Ireland. Again, the evidence takes two forms. In Kilmartin Glen drawings of metal artefacts – axes without their hafts and halberds – were depicted inside burial cists beneath a group of monumental cairns. The axes are shown in groups like those in hoards, and again they are represented as pieces of metal (Bradley and Watson 2021).

Further to the north an assemblage of this kind was found at Dail na Caraidh. Its siting was equally significant. The artefacts were in three groups on a fossil cliff that overlooked the end of a loch leading from the Irish Sea. The site was at the opening of the

Great Glen, which provided the main route through which metalwork was taken across the Scottish Highlands. At the same time the distinctive siting of the Dail na Caraidh hoard emphasises the special significance of this place. The metalwork was deposited by a natural mound, and this location commanded a view of the midwinter sunrise behind the Nevis range which includes the highest mountain in Britain. This was not the only place where a collection of early metalwork was related to the position of the rising or setting sun (Bradley et al. 2018).

The earliest hoards

In recent years it has become apparent that explanations of hoarding based on the circulation and processing of metalwork are insufficient and misleading. The practice already existed in the Neolithic and can be traced back to the Mesolithic period. People practised similar activities at an earlier date than originally supposed. Similar artefacts were employed, and hoards were deposited in the same kinds of locations. Like subsequent hoards and related deposits, there was a concern with axes and an emphasis on water.

There is too much diversity to do justice to all this material. The point is simply to show how some of the features considered so far had precedents during early prehistory. Here I will focus on two studies concerned with different parts of Europe. The first is *Projet Jade*, an investigation of the production and distribution of Neolithic axes made from a special material in the Alps (Pétrequin et al. 2012). The other is a paper called 'Ritualised hoarding in Mesolithic Scandinavia' (Bjørnevad-Ahlqvist 2020). Its subtitle is particularly revealing as it describes this as 'an under-recognised phenomenon'.

Although axes made of Alpine jadeitite have been recorded in burials, many more appear as single finds or have been found in pairs or as larger hoards. They have a wide distribution, and the treatment of these objects anticipates later practices. Some examples were broken or burnt. It is their wider contexts that have most in common with later developments. Seventy-nine per cent were associated with water and 18 per cent with prominent rock formations. The findspots included lakes, pools, rivers, bogs and waterfalls, and these artefacts were deposited beside conspicuous outcrops, beneath overhanging rocks and in gorges and fissures. Across their distribution individual objects were set upright in the ground as if they had been planted in the soil. They were important because they came from remote locations, but did people in the Neolithic world think of them as living beings? That may be why standing stones along the Atlantic coastline portray arrays of axe blades like the contents of a hoard. Other menhirs were shaped to resemble enormous axe heads, and occasionally they were embellished with human features (Cassen 2009).

Northern Europe illustrates a different development. Neolithic deposits of axes are already well known. Examination under the microscope shows that individual artefacts were painted with red ochre and kept in fabric containers (Wentink 2006). Other groups contained human and animal remains, amber beads and pots containing food. New work has established that there were even earlier hoards. Mesolithic examples extended over almost 5,000 years, although their number increased between 6000 bc and the beginning of the Neolithic period two millennia later (Bjørnevad-Ahlqvist 2020). Again, these deposits included formal arrangements of stone axes, although flint blades feature prominently

and there were also artefacts of worked bone and antler, collections of raw material and numerous beads. Pottery was made towards the end of the Mesolithic period when a few vessels were deposited in water. The contents of the first hoards extend from objects of a single type to more varied collections, but simpler artefacts of the kinds associated with settlements are not represented in these collections. The objects included in hoards show signs of use, and individual items were deliberately damaged when they were deposited. Nearly 60 per cent of the hoards were associated with water. By the end of the Mesolithic phase their positions were increasingly remote from those of occupation sites. Although such hoards are a recent discovery, they share many features with their successors.

Back to the future

In this contribution I have explored some broad themes in the archaeology of hoarding; and there could be many more. Each had its variations, and none would offer a complete account. There is considerable diversity, and a simple narrative is inappropriate. Some of those elements were transformed over time, while others overlapped to such an extent that any overall pattern was obscured. Towards the end of this sequence people may have held on to traditional conventions without understanding how those practices originated. Coincidence and chance played an important part. Archbishop Ramsay would have understood the theological implications of casting religious gifts into water, but for Alan Turing a stream was simply a bad hiding place.

Despite so much variation, certain elements were tenacious. In every phase special deposits were placed in water. That practice did not change from the Mesolithic to the Viking Age, although their exact character differed radically. Sometimes they included complex artefacts, which might be damaged or unbroken. They might also include human or animal remains and vessels containing food. Weapons and other artefacts could be discarded singly, but there were also collections interpreted as the equipment of defeated war bands. Not all the finds were associated with the same kind of water. Personal ornaments could be connected with still water (Fredengren 2011) and weapons with fast-flowing rivers. That was true from the Bronze Age to the early medieval period.

Terrestrial deposits are equally complex but easier to analyse. What is striking is how often the same features of the landscape were associated with special artefacts; they extend from the jadeitite axes of the Neolithic period to the coin hoards of Roman Britain. They may not be in identical locations, but the similarities are obvious. The sites include hilltops, gorges, fissures and rock outcrops. Hilltops and viewpoints were important and so were small areas of raised ground on valley floors. Sometimes the patterning is so obvious that these would not have been sensible places in which to conceal valuables. It is one reason why certain localities are targeted by detectorists today.

There was often a relationship between deposition and acts of violence. Sacrifice involves the taking of life and sometimes it extended to the treatment of powerful objects. It can also explain the drastic treatment of defeated war bands, their livestock and their weapons (Bradley 2023). But when damaged swords were deposited, it was in accordance with ideas about the correct places in which to do so: notions that had already been established for other reasons and in less troubled times. Certain items were deposited

because of their histories and associations. They were not chosen according to the artefact types identified by modern scholars. The problem is not always recognised, and it has certainly set back Bronze Age studies.

The deposits from shrines and sanctuaries are both puzzling and ambiguous. At first sight they can be considered as offerings to supernatural powers, but the fate of the Toulouse treasure was to lose its special character. By the end of its history, it was treated as private wealth. In principle, Late Iron Age hoards in the Low Countries followed the opposite trajectory. They could have started as personal property and at the time of Caesar's invasion they might have been placed under the protection of the gods. This makes it even more difficult to distinguish between the provision of votive offerings and the concealment of treasures. The contents of hoards cannot speak for themselves and can only be interpreted in their wider settings. Where were they buried? How were they arranged in the ground? And were other items associated with them, such as faunal remains or plant food?

Rather than treating the components of a hoard together, we can study each of them separately. Had the tools in these assemblages been used or repaired, and had the ornaments been worn as a set or acquired over a long period? Were the swords and spears employed in combat, and were they deliberately disabled when they were taken out of circulation? Did those processes apply to all of them, or to only a few examples? Artefacts buried on the same occasion might have had different biographies, which only came together when this material was deposited. That was the only feature that united them and should not set any limits on the ways in which they are studied today.

Such finds will always be difficult to interpret. The history of hoards was extraordinarily prolonged, yet most of the current interpretations share a common problem. Since the work of Sir John Evans and Oscar Montelius they were intended to explain the presence of metalwork in these deposits. That overlooked the first 5,000 years of hoarding – half the recorded currency of this distinctive practice. There are several reasons why the availability of metal transformed traditional norms. It was abundant, malleable and often of demonstrably foreign origin. It could be weighed, broken into fragments and employed as a measure of value. It could also be used to make personal ornaments and currency according to a single system of weights, and it was often recycled. The smith played a special role in all these processes and might have been less a technician than an alchemist. These issues have dominated the archaeology of particular periods, from bronze production in the first millennium BC (Rahmstorf 2019) to the treatment of silver in the first millennium AD (Graham-Campbell and Williams 2007). Such research has been valuable and influential, but it cannot extend to deposits of Mesolithic and Neolithic date, or to assemblages containing other kinds of material, especially food and animal remains. Because of the emphasis on the Bronze and Iron Ages, studies of hoarding have embarked from the wrong starting point.

Where are we now? A hoard is simply a short-hand term invented by archaeologists to describe a series of phenomena that they do not understand. Those phenomena were extremely diverse and not necessarily related to one another. The only characteristic that they did share was the deliberate burial or concealment of a selection of artefacts. The material deposited in water was, if anything, even more diverse. Rather than combining these features in a single dogmatic framework, it is more informative to identify the guiding principles in the archaeology of different phases – here I have described them as themes. There is no one explanation for a prehistoric, Roman or medieval hoard. Instead, there

are many different interpretations. They may complement or contradict one another, and none applies to the entire phenomenon. We find ourselves increasingly baffled by the very existence of the objects on which Gordon Childe based his account of the past.

We do not know why those artefacts have come to us in the first place, and we still need to find that out.

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