South East Research Framework resource assessment seminar

Metal in the Late Neolithic and Early Bronze Age

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Introduction

Once upon a time, the appearance of the first metal objects, and the know-how needed to manufacture them, were considered to be significant events in prehistory, marking a real break with what had gone before – heralds of wholesale change that was to affect almost every aspect of life and death. Things are rather different today, of course. No longer does everything to revolve around the presence or absence of metal. Instead, attention tends to focus on the much broader social and economic transformations that took place across the 3rd and 2nd millennia BC, particularly with regard to the use and occupation of the land, and the manner in which the dead were dealt with. Consequently, the key transition is now usually placed somewhere in the mid-2nd millennium BC, as landscapes apparently dominated by ceremonial and funerary monuments were replaced by landscapes with a more 'domesticated' feel, occupied by more substantial settlement sites and associated field systems.

As for the impact of metal, the Three Age System of stone, bronze and iron, and the culture-historical approaches that dominated the middle centuries of the 20th century AD were heavily dependent on identifying physical links between different artefact types (usually those occurring in graves or hoards) and in working out ways in which technology, and key tool or weapon types, developed over time. Artefact associations and typologies continue to play an important part in helping us to make sense of prehistory, but their links with other aspects of the past are far less certain that was once believed. Furthermore, we are no longer so reliant on bronzes to provide either a chronological or cultural backbone to the past. Today we have significantly greater quantity and variety of material from the Bronze Age than previous generations. Scientific dating techniques, if applied and used properly, offer greater accuracy and precision for creating chronologies that are independent of the typologist. The significance of bronze to Bronze Age studies has been considerably reduced.

Put another way, an opportunity has arisen for trying to establish a place (or places) for metal among the ideas and narratives that have been emerging over the last couple of decades. This should involve in the first instance a re-examination of the available evidence, from within the region and beyond, if we are to understand how significant was the appearance, use and creation of metal objects to people during the Late Neolithic and Early Bronze Age.

In highlighting questions and priorities for the south east, it is of course impossible to avoid overlap with broader natural and international priorities. At the same time, however, it is necessary to recognize that as far as the Late Neolithic and Early Bronze Age are concerned, the region has seldom loomed large as a focus for research. As is well known, certain parts of the UK have, for various reasons, tended to dominate proceedings. One unfortunate result of this is that the prehistory of some regions, such as the south east, tends to be written with reference to expectations and preconceptions derived from outside, particularly from 'Wessex', rather than reflecting on what has actually been found within the region.

Sources

As already noted, a vital first step towards getting a grip on the earliest metal from the region is to review the existing evidence. This is by no means a straightforward task. For many, the

obvious sources to turn to first will be the published ones, especially catalogues or corpuses of objects. For the south east, there is little that can be regarded as either recent or comprehensive. Sabine Gerloff (1975) covered the daggers over 30 years ago, while some of the items catalogued by Colin Burgess & Sabine Gerloff (1981) also belong within the Early Bronze Age. Otherwise, one is faced with a trawl of all the potentially relevant literature – the various county journals plus other local, regional, national and international publications.

This process can be greatly aided by database searches, the most significant of which are the National Monuments Record's AMIE database (www.pastscape.org) and local government HERs. However, these are by no means easy to use. Although much relevant data lurks within them, these databases are generally structured around the recording of sites and monuments, not objects. Consequently, artefact data is recorded patchily and is often difficult to retrieve. Other online databases, although again difficult to use for anyone interested in artefacts, are the NMR Excavations Index (http://ads.ahds.ac.uk/catalogue/collections/blurbs/304.cfm) and the various resources held by the ADS http://ads.ahds.ac.uk/). The CBA's British and Irish Archaeological Bibliography (http://www.biab.ac.uk/) is also of value for aiding the trawl of literature, particularly for journals and monograph series. The best source for recent finds is, of course, the Portable Antiquities Scheme's website (http://www.finds.org.uk/). Their online database of recorded finds contains reasonable detail plus excellent photographs and/or drawings of discoveries reported to the scheme's Finds Liaison Officers.

Unpublished material includes the increasingly voluminous 'grey literature' that has emerged in the wake of PPG 16, the search for which is greatly aided by the various databases listed above. Unpublished research, including university theses, can also be invaluable. For the south east, the most significant is Stuart Needham's unpublished 1983 PhD thesis on Early Bronze Age axe heads which, although now a quarter of a century old, remains an essential source for the sheer amount of data collected and presented, as well as the author's discussion and classification of the axe heads. Also worth mentioning is the National Bronze Implements (NBI) index – a card index of Bronze Age metal objects, the compilation of which began in the 1920s. Held by the British Museum, it can no longer be regarded as comprehensive, but contains useful information and, usually, drawings for thousand of objects. It is particularly useful for items which have never found their way into any form of publication.

Finally, of course, there is no substitute for a personal confrontation with the objects themselves. Items of Early Bronze Age date are scattered across the region's museums, although a significant number reside in museums somewhat further afield. Some, of course, remain in private collections, while still others appear to have been lost, or at least their current whereabouts are unknown.

Even when all possible avenues have been exhausted and all relevant data collected, there will remain problems. It is not unusual for different sources to contain apparently contradictory information about particular objects. Sometimes it can be difficult to decide which particular object a specific source is referring to. The process of collection and concordance of data can be highly frustrating.

The metal

So…what have we got? Obviously the best known metal item from the region is the gold cup from Ringlemere in Kent (Needham et al 2006), which it is not proposed to discuss here. Otherwise, the total assemblage of metalwork from the region for the period we are interested in is approximately 110 items, give or take a few less certain examples. Given that we are dealing with the best part of a millennium, this may seem a rather low total, although compared with other parts of the country it cannot be regarded as unusual or exceptional. This

total is, however, low when compared to later stages of the Bronze Age, especially in the south east. Some *individual* hoards from the Late Bronze Age contain more objects than this.

An important point worth bearing in mind is just how few of these finds possess anything approaching an archaeological context. Somewhere around 90% were found accidentally by non-archaeologists engaged in all manner of soil-disturbing activities. I include metal-detecting here on the basis that it is impossible to go out searching specifically with the intention of finding Early Bronze Age metal objects unless one is targeting known (and often scheduled) monuments.

Judging by the Portable Antiquities Scheme's database, metal-detectorists in recent years have been no more successful at finding early metalwork in the region than anyone else – less so in fact. Middle and especially Late Bronze Age metalwork dominates the lists of Bronze Age finds reported through the scheme. In fact, a search of their database for objects of Early Bronze Age date is just as likely to turn up items of flint as it is metal.

In this respect, patterns of detecting are of interest. Detectorists tend to focus on areas where they feel success is more likely, which results in a tendency to avoid the Wealden clays in particular, partly because of the clay soils but also because of a perception that little if anything of interest is likely to be found, although metal from the period has indeed turned up in the Weald in the past. These perceptions also seem to apply to archaeological fieldwork – or at least fieldwork undertaken outside the development control framework. These patterns relate more generally to the problems of understanding the present distribution of known finds across the regions. Distribution maps have their uses of course, but also present considerable problems. They represent the distribution of found objects and need bear no relation to genuine patterns of activity in the past.

A little more than three-quarters of the Early Bronze Age objects from the region are axe heads. Almost all are single finds, and few have an archaeological context. The nearest we get to a context are those that come from associated finds – examples include a late 19th century discovery of an axe head and a pair of daggers with human remains at Aylesford in Kent (Ashbee 1997); while a round barrow adjacent to the Combe Hill Neolithic causewayed enclosure near Eastbourne, East Sussex, yielded 3 broken flanged axe heads and a fragment of a fourth when it was dug into in 1908 by a Major F Maitland. The axe heads had been placed beneath a massive stone just 0.25 m beneath the surface of the mound. There was no sign of an accompanying burial (Grinsell 1934, 273; RCHME 1995, 4). Other hoards, however, such as the one found at Lydd, Kent in May 1985 during gravel extraction (Needham 1988a), lack even this level of contextual detail.

Stuart Needham's study of depositional practices for metalwork in the Early Bronze Age (1988b), points out that axe heads rarely occur in graves, nor - in the South East – hoards; in most cases they are single finds. As axe heads make up the bulk of early metal arefacts from the region, this means that we have no idea of the original depositional contexts of the overwhelming majority of early bronze finds. Although the case has been made, on the basis of finds elsewhere and from later periods, that we cannot dismiss all this material as 'stray finds' or accidental losses, and that where evidence exists deposition was usually a deliberate act, present evidence from south east England offers little flesh to this most fragmentary of skeletons.

Clearly, this rather limits what we can say about metal and its significance in this period. It is also a little disconcerting to note the tendency to pay greater attention to hoards when following up new discoveries. Hoarding is far from being a normal and continuous practice.

Uncommon and late in the Early Bronze Age, the bulk of the remainder of the region's hoards tend to belong to one of two fairly restricted chronological horizons – in traditional metalwork terminology, principally the Taunton phase of the Middle Bronze Age, around the 15th-14th centuries BC, and the Ewart Park/Carp's Tongue phase of the Late Bronze Age, around the 10th/9th centuries BC (for chronology see: Needham 1996; Needham *et al* 1998). Focusing on hoards ignores the overwhelming majority of acts of metalwork deposition during the Bronze Age.

The 20 to 25% of metalwork from the region that does not comprise axe heads offers only limited variety, and the usual lack of context. Away from the known graves we have a few late Early Bronze Age spearheads, such as those from Lightwater in Surrey, and Buckland, near Dover in Kent (Needham 1979). There is also a halberd from Faversham (O'Riordain 1937, 312) and the odd early dirk (Burgess & Gerloff 1981). After axe heads, though, it is daggers that are the most numerous Early Bronze Age metal items from the region. Around 15 certain, possible or doubtful examples are known, representing around 12% of the total assemblage. However, a higher proportion of this artefact type (eight finds) has been recovered during archaeological excavation.

Before looking at some of these daggers, it is worth remembering that while the overwhelming majority of early metalwork does not come from graves, it is also the case that the overwhelming majority of Early Bronze Age graves do not contain any metal. Metal, whether bronze or gold, was not a normal component of contemporary funerary rites. This is not only a south-eastern phenomenon either.

The unusual axe and dagger association from a probable grave at Aylesford has already been mentioned, while even better known is the grave group from Hove in East Sussex, which also included an amber cup (Phillips 1857; Needham et al 2006, 97-9). A dagger from Sittingbourne, Kent was found in 1883 during chalk quarrying and subsequently recorded, possibly *in situ*, by George Payne (Kinnes 1985). It comprised a crouched adult inhumation with a tanged copper dagger, a stone bracer and a bone belt-ring or toggle. There was no evidence for either a pottery vessel or a covering barrow mound, although the latter of course may have been levelled long before.

In West Sussex, a dagger was recovered from the grave of a crouched female inhumation found beneath a bowl barrow near Chanctonbury in 1958-9 (Ratcliffe-Densham 1968). Meanwhile, excavations at Money Mound, located on a sandstone ridge near Lower Beeding, East Sussex in the early 1960s found that considerable disturbance had occurred in the 18th century. No trace of a burial or even a grave was found. A few items were recovered though – some Beaker sherds, flint arrowheads, and a plano-convex flint knife along with a few bronze rivets presumed once to have belonged to a dagger (Beckensall 1967).

A more recent excavation, this time at Pyecombe in West Sussex, by Chris Butler and the Mid-Sussex Field Archaeological Team in 1988, also recovered evidence for a dagger from a grave beneath a barrow. The mound had been levelled by ploughing, but a central grave pit survived. It contained a crouched inhumation, this time an adult male, accompanied by a Beaker, a slate wristguard, and a bone pommel presumed to come from a dagger. A few fragments of metal, from what survived of the blade, proved to be copper (Butler 1991).

Finally, in 1989 a bronze dagger and part of a human jawbone were reported by a metal detectorist. The findspot, at Racton Park Farm, Westbourne near Chichester, was subsequently excavated. An adult crouched inhumation had been placed directly onto the contemporary ground surface and covered by a chalk mound, of which little remained. 20

small rivets or studs, presumed to have come from the dagger's pommel, were also found (Kenney 1989).

The wider picture

Making sense of these and other finds requires more than just studying the metalwork or graves in isolation. They need to be fully integrated with other forms of evidence – sites, artefacts, landscapes – the broader social and economic context as well as the narrower circumstances of provenance and deposition, where these are known. Broadly contemporary sites are not difficult to see. There are plenty of round barrows, for example, with a fair number still surviving as earthworks and more still as cropmarks or soilmarks. The minimum number for the region must be comfortably in excess of 2000. Unfotunately, lithic scatters aside, surface traces of other site types are extremely unusual, especially away from arable land, which further complicates the process of trying to understand what was going on in areas such as the Weald, let alone the better-explored chalk downs.

There is no shortage of evidence for prehistoric activity right across the region. The South East contains an abundance of archaeological features, whether earthwork, cropmark, soilmark or whatever, but strip away everything that post-dates the Early Bronze Age and we are left with a pattern of dispersed funerary and ceremonial monuments, to which we could add a smattering of find spots of varying degrees of plausibility.

The South East is lacking, of course, in sources of metal: copper, tin, gold and so on would all need to be brought into the region either as raw material or finished objects. During the Neolithic, however, the region was home to an extractive industry engaged in obtaining raw materials required for the manufacture of tools and weapons. The flint mines – including the well-known sites at Cissbury, Blackpatch, and Harrow Hill – are concentrated on the West Sussex chalk downland, with no sites yet confirmed for East Sussex, Surrey and Kent (Barber et al 1999). Understanding the impact of metal on a stone-using society requires far more data than we have at present. Clearly the first objects of gold and bronze appeared within a late Neolithic society, with current estimates suggesting a likely date somewhere in the mid-3rd millennium BC. Items from graves such as the well-known 'Amesbury Archer' (http://www.wessexarch.co.uk/projects/amesbury/archer.html) suggest that the earliest items may well have arrived as the possessions of individuals, perhaps as symbols of power and status rather than as practical tools. But pinpointing the arrival of metal and of metalworking technology, the two probably not arriving together, is far from straightforward.

The earliest metal objects known in the British Isles probably belong to somewhere around 2500 BC, give or take a century, but the possibility of being able to push that date back can not be ruled out. Our knowledge is to a considerable extent dependent on suitable examples having been put in the ground in the first place. So much of our knowledge of early metal is dependent on depositional practices, and prior to the mid-3rd millennium BC, funerary rites were of a rather different character to those seen during the Beaker phase.

Some circumstantial evidence for an earlier start has been highlighted. Mike Parker Pearson (*pers comm.*) has made the suggestion that metal may have been circulating in the British Isles by the beginning of the 3rd millennium BC, based partly on a shortage of flint or stone axe heads at Durrington Walls during the first half of that millennium. This may not, however, square fully with evidence elsewhere, while the question of the precise function of the earliest copper axe heads, as compared with Neolithic stone axe heads, also needs to be considered. Intriguingly, there is an absence of any firm dating evidence from any of the South Downs flint mines to show that mining continued much beyond 3000 BC, although it

must be remembered that the available radiocarbon dates are few in number and generally low in quality.

This underlines the need for further examination of the mines and their products, of later Neolithic sites and lithics generally, and for findspots of early metal objects of all kinds to be examined and, if possible, to be dated using AMS. This last point is particularly worth stressing, as the idea that metalwork itself is 'dating evidence' continues to linger (despite the evidence for widespread curation, long-term circulation of objects and deliberate deposition of old objects or 'heirlooms'). There is also a more basic problem to be dealt with, that of the use of radiocarbon dating in archaeology in general. Sometimes it is not at all clear why dates have been obtained, if at all.

The actual mechanics of early metalworking remain a matter for experiment and speculation. We lack early moulds from the region, likewise sites with any in situ evidence for early metallurgy. This is far from being a local problem, and the need to identify and examine early metalworking sites is a crucial one. At present, the best chances come either from careful examination of the environs of known Late Neolithic/Early Bronze Age sites, or chance discovery during PPG 16-related excavation. However, we need to be sure that evaluation and excavation strategies and techniques would be capable of recognising the remaining traces.

Related to the matter of technology is the question of the origins of the metal being used in the south east, particularly given the region's geographical position. Examination of the metal content of artefacts has a lengthy if intermittent history, and remains a far from standard practice both within the region and beyond. When combined with lead isotope analysis, as in the recent study by Brenda Rohl and Stuart Needham (1998), there is clear potential for characterising the possible origins of the objects found within the south east, particularly for these early stages of metal use.

As for the social context of metal and its wider impact, this again is a matter that spreads beyond the borders of the region. Questions that need to be addressed include that of how knowledge of manufacturing technologies was transmitted. Additionally, we need to consider who the metalworkers were, their political and social status, and whether these changed over time. It may also be the case that links and influences can be drawn with other practices that used fire as a medium of transformation (e.g. cooking, potting, cremation, the burning of wooden structures, and so on). The questions are endless, and at present the lack of evidence from the South East and beyond means that greater emphasis is often placed on ethnographic comparisons rather than on archaeological data.

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