Gifts from the earth: symbolic dimensions of the use and production of Neolithic flint and stone axes

Alasdair Whittle

If the Neolithic is seen as the gradual intensification of a mixed farming economy by sedentary populations whose social structure became steadily more differentiated, the basic roles of flint and stone axes are unproblematic: functional tools and markers of status and prestige. But if there was a much longer and slower process of settling down, with a value system which mediated rivalry and encouraged participation, different roles emerge for axes. They may have symbolised both control over and unity with nature, and were made and acquired essentially for display and giving away rather than for permanent accumulation. Extraction too may have had important symbolic roles, encouraging participation, commemoration, and consciousness of nature.

KEY-WORDS: axe, mobility, symbol (metaphor, metonym)

LITHIC STEREOTYPES

Any characterisation of the extraction and use of flint and stone tools in Neolithic Europe must depend to a large extent on how the Neolithic phenomenon as a whole is modelled. The conventional view of the Neolithic phenomenon has long been of a population sedentary from the outset, practising a mixed farming economy, which intensified through time, fuelling both demographic and territorial expansion. Though Neolithic social structure has been debated for a shorter time, there is likewise general agreement that the period witnessed gradual changes in differentiation within and between Neolithic communities. Social models are extremely varied in detail, and their sources diverse, but the general pattern observed often

* School of History and Archaeology, University of Wales, Cardiff, Great Britain
stays the same. To take only one brief example, the British Later Neolithic has been modelled as a group-oriented chiefdom, drawing on cross-cultural generalisation (Renfrew 1973), as a ritual authority structure, drawing on both Neo-Marxist theory and cross-cultural generalisation (Thorpe and Richards 1984), and as a prescriptive structure based on an Eliadean sacred model, drawing on a range of ethnographic and religious analogies (Garwood 1991). In all these sorts of model, social difference tends to be assumed rather than demonstrated. Where collective action is evident, the concept of ideology (discussed explicitly in Britain since the early 1980s: Shanks and Tilley 1982; Miller and Tilley 1984) has been at hand to retain the basic idea of sectional interest and differentiation.

Fig. 1. Tonowo, Bydgoszcz Province. A hoard of stone axes connected with Danubian communities from Polish Lowlands. The largest axe blade is 18 cm long. Photo by courtesy of D. Piotrowska (State Archaeological Museum, Warsaw).

In this kind of world, the roles of flint and stone axes have been unproblematic. Flint and stone axes were used above all to cut down trees to make clearings and
houses for sedentary mixed farmers. Axes circulated in interesting patterns of
movement, because of the geographically restricted locations of lithic sources, and
they served also to mark status and prestige, eventually being replaced first by copper
and then bronze analogues and successors.

Axe sources, both of flint and other stone, have also in this view been seen as
unproblematic. They have often been characterised as “axe factories” or even
industrial sites, serving essentially practical, material needs. Like the Neolithic
phenomenon as a whole, the perceived tendency is towards intensification and
expansion, for example that claimed in the exploitation of striped flint sources at
Krzemionki, from the TRB into the Globular Amphora phase (Borkowski et al.
1991). Fluctuations through time in the choice of flint source, for example between
chocolate, striped and spotted flint in southern Poland, can be referred to cultural or
ethnic variation.

OTHER WORLDS: NEOLITHIC COMMUNITY AND VALUES

Although the Neolithic involved a shift to domesticated animals and cultivated
plants, it is not clear that the long-term trend is uniformly to more and more
embedded sedentism. One view of the sequence in central Europe, on which this
paper will concentrate, can be that there was an initial valley-based system in the LBK,
with permanently occupied hamlets of longhouses supported by intensive garden
cultivation and some more extensive woodland grazing, followed by a more widely
spread system by the TRB and subsequently, assisted in part by the adoption of the
plough (Kruk 1980; Sherratt 1981). This is not the place to argue the issues in detail
(see Whittle forthcoming), but this reading raises many problems. In later phases of
the sequence, the evidence for settlement in fact becomes both more difficult to
interpret and progressively harder to find. It is unclear to me that we must see large
agglomerations of pits, sometimes in combination with ditched enclosures, as foci of
permanent occupation. It has been notoriously difficult to pin down Globular
Amphora occupations. Even the LBK system may have involved what we can call
radiating or tethered mobility (Lieberman 1993; Kelly 1992). The Neolithic
settlement system as a whole was not in fact relentlessly expansive, as more recent
work in southern Poland demonstrates (e.g., Kulczycka-Leciejewiczowa 1993, on
Silesia); in the Silesian study the overall area of settlement changes little right through
the sequence. In one pollen study in the upper Vistula valley, associated with the
investigation of Pleszów near Kraków, there are no signs of an increase in clearance
after the LBK: if anything, of stability or reduction, compatible with dispersal and
changing patterns of mobility and periodic aggregation rather than expansion
(Godłowska et al., 1987). Further afield in the Alpine foreland, there were long
histories from the fourth into the second millennia BC of shifting and regenerating
clearances, associated with small scale cultivations (Rösch 1993), and in Jutland pollen studies suggest that limited swiddening and clearance of coppiced secondary woodland for grazing were still major strategies as late as the Corded Ware/Single Grave horizon (Andersen 1993).

There are two immediately relevant observations to be made from this record. First, the best (though still disputable) contender for sedentary existence, the LBK, was not coeval in most areas of its distribution with large-scale underground extraction of flint and stone for axes. One exception may be Rijckholt-St Geertruid in Dutch Limburg (de Grooth 1987). Stone was generally preferred to flint for axes and adzes, and was derived from a series of sources at various ranges; there were also well established patterns of other lithic procurement (e.g., Lech 1990). Secondly, the best contender for some kind of mobile existence, or at least one which involved the formation of only small and short-lived occupations, the Globular Amphora Culture, has been associated in southern Poland, at the Krzemionki sources, with the most intensive scale of underground extraction (Borkowski et al. 1991). And in GAC contexts, axes are more obvious in the realm of the dead than in the occupations of the living (Wiślanski 1979).

In the materialist view of the Neolithic, society is a product of the conditions of production and settlement. Even the scheme which gives prime attention to a conceptual order based on opposing ideas of domus and agríos (Hodder 1990) is based on such a materialist view; sedentary existence emerges out of competition among intensifying foragers, and the Neolithic initially spreads across Europe as a sedentary system rooted in the concept of the domus. The Neolithic can be seen differently (Whittle forthcoming). The Neolithic way of life in Europe was based above all on a set of beliefs, values, and ideals, about the place of people in the scheme of things, about descent, origins and time, and about relations between people. It involved the conceptualisation of a universe peopled by spirits and ancestors as well as by the living. From spirits, ancestors and other beings came a sense of the sacred, and this rather than anything more secular, guided people’s values and ideals. Belief in relation to and descent from spirits and ancestor figures created both a sense of time and of origins.

The values and ideals of cooperation, sharing, solidarity, mutuality, and esteem were central to the way of life, and were maintained even though or perhaps rather because the composition of co-residential groups fluctuated. I am not trying to take competition out of the scheme, and to create some happy Utopian Arcadia. One has only to look at the many wounded and shot people in British tombs and Ertebølle contexts (Whittle 1990; Madsen 1991; Venc 1991), or at the shocking massacre in the Talheim LBK pit from Baden-Württemberg (Wahl and König 1987), to see that that kind of picture is inadmissible. But we have persistently avoided any systematic incorporation of values in Neolithic explanations or interpretations. I would prefer
to visualise rivalry and emulation rather than competition, mediated through a shared value system, which generally acted as sanction, against excessive differentiation or accumulation. It is ironic, in view of the claims to be made below for other values attached to axes, that the most savage wounds documented so far are the blows to the heads of the Talheim victims, delivered by both flat axes and adzes. But even if some axes, adzes and battleaxes did serve in part as weapons, there is no obvious evidence to document an increase in societal tension through time. There are documented shootings from the Mesolithic; and Corded Ware/Single Grave burial assemblages, which are often summoned in support of the emergence of a more warlike, male-dominated, or *agrios*-oriented world, in fact strongly echo (through their provision of stone artefacts and pots) much earlier sepulchral representations of social *persona*, going as far back as the LBK, and celebrate older values of prowess, participation and generosity. What is beginning to change by the end of the Neolithic is the reckoning of individual time and group descent, which is a more subtle and slower process of change than the blanket term “social differentiation” allows.

**THE USES AND MEANINGS OF AXES**

That axes and adzes were used in practical ways is not in doubt. Apart from their possible role as weapons, their use for cutting and shaping wood can be seen from marks on preserved wood, from the Alpine foreland and from the Somerset Levels in south-west England (*e.g.*, Höneisen 1990; Coles and Coles 1986). It is not known for how wide a range of tasks axes could be or were used. Splitting wood may have been done better by wooden wedges (Coles and Coles 1986), and felling could as well have been effected by ring-barking or slow-burning as by more laborious direct attack. It is striking that in some contexts relatively small-sized axes were the norm, as around the Alpine foreland from the late fifth/early fourth millennium BC onwards, where small blades only partially protrude from sleeves set in large, shock-absorbing ash hafts (*e.g.*, Pétrequin 1993). The corollary of this observation is that some of the larger axe blades elsewhere may have had purely symbolic roles. The conditions of preservation beside the early fourth millennium BC Sweet Track, Somerset, suggest that neither the jadeite axe blade nor the flaked flint axe blade in mint condition were hafted at the time of their deposition beside the trackway (Coles and Coles 1986). Similarly, in the ditch of the causewayed enclosure at Etton, Cambridgeshire, a wooden haft was deposited minus its blade (Pryor 1988). Blades presumably circulated as items in their own right.

We should not be content to assume fixed or inherent values for things (Appadurai 1986). Some attention has been given to the circulation of axes as items of exchange, but often as part of an effort to derive sociological information from the distance travelled by items from their sources. Much less attention has been given
to the meanings of exchange and interchange, or to the basic triple obligation to give, to receive and to reciprocate (Mauss 1990). There is much more to say about such interchange in general. I suggest here that axes of flint and stone had at least three dimensions which made them appropriate gifts, taking the context in which exchanges took place as read for these purposes.

First, axes may have symbolised control over nature. Since they were used as practical tools, their functional dimension cannot be ignored at a symbolic level. These were tools with which people could manage and control woodland (though not necessarily on a fully sedentary basis). Following Leach’s (1976) distinction between metonym (part for whole) and metaphor (arbitrary association), the axe then could have served, metonymically, as symbol of the much wider business of subsistence, occupation cycles, aggregation and cooperation between communities scattered through woodland. In the most extreme example of all, the menhirs of early Neolithic Brittany, the symbol may have been further turned in on itself. The menhirs like Le Grand Menhir Brisé at Locmariaquer and that re-used in La Table des Marchands

Fig. 2. Striped and grey white-spotted flints from southern Poland: a — striped flint from the Krzemionki Opatowskie flint mine (PL 6), Kielee Province; b — grey white spotted flint from Świeciechów-Lasek flint mine (PL 12), Tarnobrzeg Province; c — polished axe blade of striped flint (Globular Amphora Culture) found on the mine field at Polany II (PL 5), Radom Province. Photo: S. Biniewski.
and Gavrinis are shaped like axes in both plan and section (Tilley and Thomas 1993). Their great size evokes mastery over nature. The metonymic dimension of the axe has become a metaphorical kind of symbol as well.

Secondly, axes were made from particular rock and flint sources. This may have brought a range of metaphorical and metonymic associations. Presumably many sources were well known, their locations being no secret, and sometimes relatively close to zones of occupation. In other instances, the precise derivation of axes may have been a matter for speculation, at any distance from source, even in the Neolithic. The distant and the exotic may have been a source of respect and awe (Helms 1988). On the basis of cross-cultural generalisation, particular materials may have been invested with significance, admired for specific qualities of, say, hardness and durability, desired for their colour or patterning, or associated metaphorically with other properties and virtues. Two examples from the ethnographic record indicate the kind of possibilities to which I refer, though they do not of course give direct insights into Neolithic Europe. For Aborigines in western Arnhem Land in northern Australia, stone tools have had aesthetic and symbolic value (Taçon 1991). Hardness, durability, and colour have been valued. Stone tools have been associated with

---

Fig. 3. PL 6 Krzemionki Opatowskie, Kielce Province. Subterranean extraction of striped flint connected with the Globular Amphora Culture. Negatives of extracted flint nodules can be seen in the floor. S. Krukowski’s investigations before 1939. Photo: T. Rekwirowicz.
particular social roles, for example those of initiated males, and with the beginnings and final resting places of Ancestral Beings, who in other guises framed the whole landscape. For the Zafimaniry, shifting cultivators in Madagascar, especial importance was attached to the properties of wood, which was used for fires and houses, and associated metaphorically with the development of people, the bones of ancestors and other symbolic transformations (Bloch 1993). Though culture or ethnic histories cannot be discounted as a factor, the changes in preference in southern Poland among the major flint sources through the Neolithic sequence must speak strongly for dimensions other than the purely practical (cf. Taçon 1991:206).

Fig. 4. Large axe blade made of striped flint from the Krzemionki Opatowskie mine, found in northern Poland (Pomerania). After O. Kunkel and S. Krukowski.

Flint and stone were derived in most cases from within the earth itself: gifts from the earth. It would be myopic to deny the potentially profound symbolism of this derivation. With all its other possible properties and associations, the axe was from the earth, a link with the bountifulness and generosity of nature, a symbol of unity with and dependence on nature (partially opposed perhaps or dissonant with other ideas of control over nature). May there be cases at sources like Krzemionki where galleries are elaborated beyond the strictly practical, to celebrate such a union?

Thirdly, it is surely evident across Neolithic Europe as a whole that axes were not things to accumulate. Had that been the case, we could expect far larger
concentrations in settlement or occupation contexts, in hoards, and in graves. Their deposition, and presumably therefore their use, must have been governed by rules or norms of appropriateness. Even in the graves of the Globular Amphora Culture, when there is a greater abundance of flint axes, the number rarely seems to exceed a handful between several individuals (Wiślański 1979), and the succeeding Corded Ware/Single Grave assemblages return to an older tradition of more modest inventories. I believe that axe-blades and hafted axes in life would have been carried and displayed on a daily basis. The burial evidence of stone tools from the Bandkeramik tradition may suggest that the primary association was with adult males, though this was probably not exclusive (Whittle 1988), and the flint axes more numerous later in the sequence may have had more ambiguous or more general associations. These were, I believe, items to acquire, to display as badge of varying affiliations, and then to give away. The recipients of gifts can have included other people, but also nature or the land itself, and ancestral beings and spirits. It has been suggested that the long tradition of axe depositions in the landscape in southern Scandinavia speaks for a fertility or regeneration cult (Ebbesen 1993). Once again, there may have been cross-cutting associations. The axe in part may have stood for durability, unity with nature and ancestral spirits and other such ideas, but on another level for impermanence and transience, or for a cycle of beginnings, brief custody
(rather than ownership or possession) and then return. We may speculate finally that some of the power of the axe was derived precisely from such an overlap of ideas, making it an ambiguous, dangerous and therefore awesome symbol.

QUARRYING AND MINING

Although it is important to pay serious attention to the practical and chronological aspects of lithic extraction, I should like here to pursue the themes of social interaction and symbolism. Axe production, like axe use, may have brought a range of ideas with it. In part it may have served to separate producers from the world of the everyday and thereby enhance the special nature of their task (Bradley and Edmonds 1993; Edmonds 1993:121–5). At the same time, as already noted, major sources of flint extraction in the middle and later parts of the Neolithic sequence must have been well known. Indeed, compared with earlier sources of stone tools, such sites represent a concentration and localisation of activity, interestingly at a time when there is also an emphasis on shared action in other arenas, notably the ditched enclosures of central and western Europe. The continued use of major flint sources underlined the importance of routine, in what may still have been mobile lives, and established social tradition and memory.

Crucially, we have very little insight into the question of control of production. At the remote and high-altitude stone sources in Cumbria, north-west England (Bradley and Edmonds 1993), variations through time in extractive technique suggest that little permanent control can have been established by any one group. From Australian ethnography, we know of cases both where people travel long distances to work stone sources themselves, and of others where there are resident specialists or controllers (McBryde and Watchman 1976; Clark 1965). In specific Neolithic situations like Krzemionki, it may be profitable to use the evident uniformity of production to envisage participation in tasks of commonly perceived value, rather than the imposition of social control. Working sites like Čmielów (Balcer 1988) may also be thought of as the setting for further participation and joint venture, built into annual or other rounds of mobility, rather than as purely specialised preparation centres.

CONCLUSION

There is no need to separate the practical from the symbolic dimensions of flint and stone axes, since they are interwoven. We have tended, however, to emphasise practical, technical and chronological aspects of Neolithic axe use and production, and to assume that they belonged to an already settled world. Put into a more fluid social context, as part of worlds being gradually brought into being over long spans of time, these gifts from the earth can be re-invested with a powerful set of overlapping associations, linked to central aspects of the Neolithic experience in Europe.

ACKNOWLEDGEMENT

I should like to thank the British Academy and the Polish Academy of Sciences for arranging my exchange visit to Poland in 1994, Jacek Lech for masterminding my programme, and Hanna Kowalewska-Marszałek and Halina Królik for showing me Krzemionki.

REFERENCES

Leach, E. 1976. *Culture and communication*. The logic by which symbols are connected. Cambridge.


