MARXIST PERSPECTIVES IN ARCHAEOLOGY

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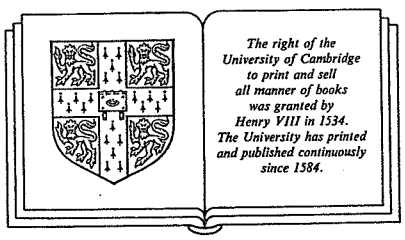

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Chapter 6

Ideology and material culture: an archaeological perspective

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Introduction

In this article it will be argued that a Marxist approach to archaeology offers a convincing theoretical alternative to current approaches, and that its perception of ideology opens up a deeper understanding of the relationship between material culture and society.

Before starting, however, it may be useful briefly to discuss some of the major theoretical approaches which have been struggling for dominance throughout the last two decades, as this represents the framework against which the application of a Marxist approach in archaeology should be considered.

Recent theoretical trends in archaeology

Two trends are easily discernible: one concerned with tracing and explaining the major evolutionary stages in prehistory, another with the explanation of the structure and internal dynamics of specific social systems.

The evolutionary trend has been closely associated with various forms of neo-evolutionism in social anthropology (Fried 1960; Sahlins and Service 1960; Service 1962), whose broad evolutionary stages have served as general interpretative frameworks for much archaeological research throughout the 1960s and early 1970s. Much of this research has been aimed at correlating certain types of settlement systems (such as Renfrew's 'Early State Module'), patterns of exchange (Renfrew 1975), or grave goods diversification (Brown 1971; Tainter 1978) with certain levels of social organization on an evolutionary scale of e.g. bands, tribes, chiefdoms and states. Although such a framework serves important heuristic functions it is not adequate for explaining either change or variability in the archaeological record. On the contrary it tends to lead to a kind of 'checklist' archaeology (such as Renfrew 1973b; Peebles and Kus 1977), where static, generalized evolutionary types are imposed upon specific prehistoric sequences with the danger of obscuring the characteristics of local evolutionary trajectories (cf. Kohl, this volume). Furthermore the interaction of social systems, which have characterized all prehistoric periods, are not accounted for by such frameworks.

Thus instead of serving as a corrective for the arbitrarily constructed evolutionary typology of social anthropology the interpretation of prehistoric social evolution has rather tended to be determined by this framework, leading into a dangerous circular argument. Recent developments, however, have to some extent improved on this situation (Service 1975. For critical discussions see also *American Antiquity* 1980: 601–13; Binford 1975; Dunnell 1980; Flannery 1972; Friedman 1982).

In order to overcome some of the explanatory limitations of neo-evolutionism the 'New Archaeology' of the late sixties adopted the systemic framework of cybernetics coupled with a range of new theoretical (and methodological)

approaches borrowed mainly from ecology, information theory and geography, amplified by quantitative and statistical techniques (early examples in Binford 1968; Clarke 1968: Chapters 3 and 11; Flannery 1968a; Hill 1977a; and stimulating articles and discussions in Hill 1977b). The systemic framework is often dominated by an ecological approach, especially when dealing with 'primitive' or marginal societies (Binford 1968; 1977; Jochim 1976; Zubrow 1975; several articles in Schiffer 1978–81), and by a more elaborate information theory of decision making when dealing with 'complex' societies (Flannery 1972; Johnson 1978). Ecosystemic approaches, however, are also now invading this field of research (Athens 1977; Isbell 1978; King 1978; Redman 1978; Sanders and Webster 1978).

One of the major limitations inherent in a systems framework is that it cannot account for either the genesis or the transformation of social systems in systemic terms (cf. Bender 1978; Salmon 1978; Tilley 1981a; 1981b), and the same is true of inter-systemic dynamics, e.g. trade and exchange (see the examples and discussions in Earle and Ericson 1977, especially Plog's article). Thus the sophisticated methods of spatial analysis borrowed from geography (Hodder and Orton 1976) have not yet been theoretically integrated within a systems framework. This is even more true of so-called 'normative' data, although much has been done since Binford (1965) and Clarke (1968: Chapter 9) discussed this problem, especially with respect to the analysis and explanation of stylistic variation (Blackmore *et al.* 1979; Engelbrecht 1978; Hodder 1978a; Plog 1978; Renfrew 1978; Shennan 1978; Whallon 1968; Wobst 1976).

Thus when trying to integrate the evolutionary perspective with a systems framework, explanations have tended to fall back upon single, causative factors, or so-called 'prime movers', usually population pressure (Carneiro 1970; Dumond 1965; Smith 1972; Spooner 1970). The role of trade and exchange has been linked more exclusively to the formation of highly developed and integrated social systems (Flannery 1968b; 1972; Frankenstein and Rowlands 1978; Hedeager 1978; Kohl 1978; Renfrew 1969; Webb 1975; Wright 1972). In addition so-called selective adaptive mechanisms referring to the functional compatibility between a social system and its environment have played a major role within the ecologically oriented school of Binford and his followers (see recent examples in Binford 1977; Kirch 1980; Schiffer 1978–81). Recently an attempt has been made to solve the problem of analysing transformations within a systemic framework (Renfrew and Cooke 1979), but we still await convincing applications.[1]

Underlying these theoretical developments we find a strong emphasis on a neo-positivist perception of science, originally introduced by Binford in several articles (collected in Binford 1972) and later generally accepted and applied by a whole generation of American archaeologists (see a rigorous presentation in Watson, LeBlanc and Redman 1971; discussions in Fritz and Plog 1970; Morgan 1973; 1974). Although it would be interesting to discuss why this approach won acceptance in archaeology at a time when it had already been modified or even abandoned as a dominant philosophy of science, my point here is that such an approach is now severely hampering the theoretical development of archaeology by prescribing a rigorous one-dimensional perception of how to give meaning to and how to explain archaeological data. What at one time could be regarded as a necessary step in the process of developing and applying some scientific standards to archaeology has now turned into a paradigmatic theoretical exercise, ignoring the still many unsolved problems of interpretation and explanation and of archaeological representativity. Despite a sophisticated perception of the complicated formation processes of the archaeological record such sophistication is abandoned when it comes to explaining the relationship between the invisible social structures of prehistoric societies and their visible material remains, although some aspects of this problem have been recently touched upon by Binford in a (somewhat extreme) criticism of Schiffer (Binford 1981).

The basic problem is that structures and transformations are neither reducible to their empirical content nor their context, as I shall illustrate later in this article (cf. Tilley 1981a and 1981b).

> Thus, in archaeology, the analytical and empirical gulf between separate levels of information – e.g. site catchment and analyses of region *x*, distributional analyses of different commodities and the analysis of 'princely graves' of the same region – has to be crossed by an explanatory bridge dependent on cultural and theoretical insights rather than on analytical and deductive techniques in order to lead us towards an understanding of the structural reality that explains what happened *between* these levels. (Kristiansen 1981a: 240)

From this it follows that the establishment of stable and predictable relationships between observable phenomena in the archaeological record and the employment of such variables in hypothesis testing represent necessary but not sufficient empirical steps on the ladder towards explanation.

Despite this criticism one should not forget that the theoretical and methodological renewal of the 1960s and 1970s represents a major breakthrough in the development of archaeology as a cultural science, comparable perhaps to the development of a chronological methodology in late-nineteenth-century archaeology in Europe. Probably the most important outcome of this process up to now has been the gradual application of a body of common methodological standards, which has been accompanied by increasing theoretical diversification. Thus one year will see the propagation of 'behavioural archaeology' as the key concept, another year 'structural archaeology' or 'spatial archaeology' competing with 'social archaeology' and 'economic archaeology'. In addition the morphogenesis of catastrophe and anastrophe in prehistory, with robust middle-range theory as a serious

alternative, offer striking new solutions for the progressive archaeologist.

Although diversification and new developments should be welcomed in a period of transition, the present situation seems to reflect the impact of passive theoretical and methodological borrowing (plus talented management and promotion) and the lack of a general theoretical framework to filter, balance and restructure such borrowing. After the first stage of New Archaeology, mainly dealing with general problems and summarized in six major publications (Binford and Binford 1968; Clarke 1972; Lee and de Vore 1968; Renfrew 1973c; Ucko and Dimbleby 1969; Ucko, Tringham and Dimbleby 1972), the late 1970s have seen more attempts to explore and link together interdisciplinary 'subsystem' research (see Burnham and Kingsbury 1979; Earle and Ericson 1977; Green, Haselgrove and Spriggs 1978; Redman *et al.* 1978; Sheridan and Bailey 1981; Spriggs 1977), reflecting both the potential and the problems of the present situation. As stated by Tilley in one such recent publication: 'The central difficulty is that archaeology lacks a common problematic determining the types of problems that are posed, the form in which these problems are tackled and what is seen as being sufficient and necessary for their solution' (Tilley 1981b: 363). What we should aim at, then, is the construction of a general theoretical framework which maintains an evolutionary perspective and a systemic framework, and which is able to account for the explanation of societies in their structural and cultural totality with regard to their genesis, reproduction and transformation. When looking for such a framework we need not turn to biology, catastrophe theory or any other mechanical theory. Instead it will be suggested that Marxist theory, whose point of departure is society itself, holds a potential for developing such a framework.

Marxist theory and archaeology

It is tempting to ask, in retrospect, why earlier attempts to explain archaeological evidence in evolutionary and Marxist terms failed to exert any significant impact on the general trend of archaeological reasoning and research. Going back to the later nineteenth century, the Darwinian decades of evolutionary breakthrough where one should have expected such an integration to occur for the first time, it is easy to see today that archaeology simply was not ready.[2] At that time the primary concern was the development of an explicit archaeological method of chronological classification in order to cope with the quickly accumulating evidence (Kristiansen 1976: Fig. 1). Culture-historical interpretations, however, were constrained not only by incomplete data and dating, but also by the close relationship between archaeology, bourgeois culture and nationalism (Kristiansen 1981b; Moberg 1981; Trigger 1981) which favoured historical and ethnic interpretations. In this period the potential of prehistory for contributing to social evolution was however exclusively recognized among anthropologists, such as Morgan (1877), and Marxist historians, such as Engels (1884).

After the turn of the century most anthropological and culture-historical disciplines adopted a diffusionist and ethnic framework, which naturally supported the already prevailing trends in archaeological research (the classical presentation is Jacob-Friesen 1928). This meant that when Childe, as one of the first Western archaeologists to adopt a materialist perspective, published *Social Evolution* in 1951, his interpretations and explanations were extremely constrained by the structure of the archaeological evidence. This consisted mainly of typologically and chronologically ordered culture groups with little or no bearing upon social and economic phenomena. Childe had tried to overcome some of these difficulties by applying his framework to the more tractable Scottish evidence (Childe 1946). This attempt was later used by Piggott to show that new evidence had proven most of Childe's interpretations wrong, which in Piggott's opinion thereby demonstrated the failure of evolutionary theory (Piggott 1960: 95). Although this conclusion rather demonstrated the failure of its author to distinguish between his own (theoretical) limitations and the limitations of science, it undoubtedly reflected a general and widespread perspective among archaeologists at that time, who feared any theoretical schemes after the political misuse of ethnic interpretations during the Second World War.[3]

This general anti-theoretical approach is perhaps best demonstrated in Piggott's own work *Ancient Europe* with its lack of any consistent theoretical framework, except human nature and the nature of the evidence (Piggott 1965: 1–23). Interpretations and explanations are consequently just as inconsistent as the changing properties of the evidence – from the technological framework of the late Glacial hunters and early farmers to the diffusionist and ethnic framework of later prehistory. Where *Social Evolution* appears too simplistic because of its rigorous application of general evolutionary stage theory, *Ancient Europe* appears too kaleidoscopic because of its lack of explanatory consistency. In this way *Ancient Europe* and *Social Evolution* may be said to reflect the contradictory situation of European archaeology during the 1950s and 1960s. Here was a rich and fairly representative archaeological record – the result of 150 years of research – but analytically unsuited to support a more consistent theoretical approach such as social evolution, which was therefore wrongly refuted.[4] This further prevented necessary methodological re-orientations and developments (with the exception of ecological research). Out of this stalemate arose the 'Sceptical Tradition', as it has been appropriately labelled by Klejn (1977: 3). When these theoretical and methodological constraints were finally transcended by the development of the New Archaeology the key to explanatory status and scientific prominence had become neo-positivism because of scientific traditions and political conditions in North America.

The potential application of a Marxist framework for the explanation of prehistoric societies came up against the problem that Marxist theory has not yet developed an adequate theoretical basis for explaining the long-term changes of pre-

capitalist societies.[5] This implies that the scientific potential of a wedding between Marxism and archaeology is largely unrecognized and remains to be explored. Yet recent work has strongly indicated that much previous discussion about pre-capitalist societies has been unnecessarily limited in scope, both empirically and (consequently) theoretically, by largely omitting the data of social anthropology and archaeology. This situation has to some extent been remedied by the development of French Structural Marxism with its efforts to re-define basic theoretical concepts. It has applied a framework to the explanation of pre-capitalist societies based on ethnographic evidence, thereby escaping the theoretical dead-ends of much Marxology (for references see Spriggs, this volume). Although this direction of structural Marxism has been rather successful in its application in social anthropology it has become increasingly clear that it suffers serious drawbacks when applied to the explanation of prehistoric long-term transformations operating in a wider social space than the local environment of traditional ethnographic case studies (for a general critique, see Ekholm and Friedman 1980).[6]

Recent archaeological applications of such a theoretical framework have made it apparent, first, that the long-term transformations found in prehistory and early history form a necessary basis for any serious future discussions about pre-capitalist societies, if this concept shall be given any general significance beyond that of accounting for the genesis of capitalism; secondly that such applications necessitate certain reformulations of the present theoretical concepts of structural Marxism and the subsequent development of new concepts, especially with respect to the spatial dimensions of structural interaction and with respect to transformations (cf. Spriggs, this volume). Such attempts have already been undertaken in several studies (Bender 1978; 1981; Bradley 1981; Frankenstein 1979; Frankenstein and Rowlands 1978; Friedman and Rowlands 1978; Kohl 1978; Kristiansen 1978a; 1981a; 1982; Rowlands 1980; Rowlands, Larsen and Kristiansen in press). In addition, works such as Rathje (1973), and the papers in Hodder (1982) are moving along somewhat similar lines, although in a more purely structural groove with less emphasis on material aspects of social reproduction.

By continuing theoretical elaboration and archaeological applications along these lines, Marxist theory may be able to offer a long-needed theoretical and explanatory 'superstructure' that can cope with the impressive methodological developments of the last two decades in nearly all fields of data analysis. It seems to me, therefore, that at the present moment two things are needed for a successful application of Marxist theory to archaeology:

1 More case studies along the lines referred to above. The success of any totalizing theoretical system which claims general applicability ultimately depends on its ability to account for and explain the evidence in more 'convincing' ways than previous research. This is done by subsuming earlier theories as variants of a more comprehensive general theory, as did neo-evolutionism with respect to functionalism, ecology and history (White 1945), or structural Marxism with respect to structuralism, historical materialism and cultural ecology (Friedman 1974). Naturally this process is modified by numerous subjective factors operating to maintain research traditions already established, e.g. through university teaching, control of research funding, personal and political relationships etc. There have been two decades of competing theoretical approaches and a general orientation towards endogenous development as an explanatory point of departure, combined with the local area or the region as dominant units of research. It now seems that an evolutionary structural Marxism is in a position to offer a system of theoretical concepts which links the spatial and normative dimensions of archaeological data with the prevailing, often ecological framework of local and regional studies to give a single model of social reproduction that accounts for both.

Thus if we want to transcend the explanatory limitations of much present research we need to study the interaction between social systems in their local, regional and even 'global' setting, in order to determine the structure of such interaction with respect to local and supralocal levels of organization. How are they dependent? Who controls production and its distribution/exchange and at what levels in the system? It is only by analysing the relationships between local systems and the larger structure by which they are reproduced that one can define and explain cultural boundaries in a meaningful way, and define what is 'between' and what is 'within' at various levels in the system. Thus if we want to determine the locus of evolutionary change we must be able to delineate the cultural boundaries and the structural framework within which these processes are operating, by considering the full scale and complexity of such processes. This implies that local and regional studies in archaeology can only be fully comprehended and explained by considering them against the structure of the larger system on which they depend. As Friedman and Rowlands have written (1978: 205): 'A complete evolutionary model would have to be a time/space model in which transformations over time are related to variations in space. Thus the specific evolution of social formations depends on the internal properties of local systems, upon the local constraints and upon their place in the larger systems.'

2 We further need a much more systematic exploration of the relationship between the nature of the archaeological evidence and its interpretation and explanation. The cultural and structural properties of extinct societies are obscured by two processes:
a) Through the ideological representation of past

social systems inherent in major parts of the material record. This is displayed in the symbolic *form and functioning of objects* (e.g. prestige goods, ritual gear and more generally in stylistic design), in the *intentional deposition of such objects* (votive offerings, hoards, grave goods) and in the *construction of symbolic structures* (often monumental constructions, barrows, temples, cult places etc.).

b) Through the subsequent transformation of the evidence after its deposition/abandonment/loss. This is dependent on *physical factors*, that is the interplay between external physical factors such as soils, climate etc. and the physical nature of the objects (e.g. stone, iron, wood etc.) which determines their rate of decay/conservation; *economic factors*, that is the later transformation of the landscape which has either preserved, destroyed or brought forth archaeological evidence; and *research factors*, that is the history of research (Kristiansen 1976; 1978b).

These factors respectively mystify and modify the information value and representativeness of the data and therefore constitute important analytical and interpretative links between theory and data. Whereas the ideological mystification of the evidence has been given little systematic attention, the transformation of archaeological data after deposition/abandonment/loss has been subject to more sustained analysis both at the general level of post-depositional formation processes (see especially Schiffer (1976), also Daniels (1972) and Clarke (1973)) and with respect to specific aspects of such processes (Foley 1981; Groube 1981; Wood and Johnson 1978). Not untypically, however, this work has neglected or been unaware of previous European research within a more traditional framework, less theoretically pretentious, but nonetheless of great value (especially the classical works of Eggers (1951: 1ff; 1959: Chapter 5); and also Torbrügge (1965; 1970–1) and Geisslinger (1967)).

While the impact of post-depositional formation processes has been dealt with rather systematically in recent years, those pre-depositional and depositional processes determining the formation and the nature of the archaeological record are much more complicated, especially those that are intentional. In the following I shall therefore deal specifically with the impact of ideology on such processes.

Ideology and material culture

It is a widely accepted assumption underlying the eco-systemic approach in archaeology that when the distortions of archaeological post-depositional formation processes have been subtracted, there exists a rather direct relationship between the archaeological record and past cultural systems when approached with relevant hypotheses and methods. Such an approach has been especially apparent in studies of mortuary practices, whose ideological manifestations are regarded as merely passive reflections of social reality. Also inherent in this tradition is the idea that society can be broken down into functional blocks or sub-systems such as religious, economic or social sub-systems and that the data can be classified accordingly (Binford 1962; 1965).

This functionalist approach arose as a necessary reaction against the traditional culture-historical perception of ideology as an independent variable that could be used to 'explain' otherwise inexplicable changes in the archaeological record (such as in stylistic design or burial practices). It was believed that criteria governing such changes first of all should be 'explained' with reference to religious ideas that might spread over large areas independently of social and economic differences. Ideological changes were thereby relegated from the organization of society to the isolated sphere of religion. Religious behaviour was consequently thought to act according to hidden, irrational (individual) preferences distributed more or less at random.

According to this approach, which reflected a twentieth-century Western perception of religion, ideological factors imposed heavy limitations on the information value of major parts of the archaeological record, perhaps most completely represented in the traditional archaeological textbook of Eggers (1959: Chapter 5). The New Archaeology tried to overcome this scepticism by re-establishing the functional relationship between society and ideology, a major step forward in understanding such phenomena. Having realized this we are in a position to take a more balanced view and reassess the relationship between ideology and material culture. This is necessary for at least two reasons, which will be further discussed in this article: first, a purely functional approach accounts only for a limited part of the ideological variation in the record. Secondly, and consequently, the functional approach has primarily been applied in areas where it seems to work best, mainly on ecological and settlement data, leaving a major part of the archaeological record unexplained.

Thus, the purely functionalist approach, which characterizes most New Archaeological research, represents a severe obstacle to the further development of archaeological interpretations and explanations. The main reason for this is its failure to distinguish between *cultural categories and material functions*. Thus: 'we should be prepared to accept the possibility that religious categories can have directly economic functions, just as "wealth objects" can be but mere ideological symbols. In terms of cultural content we can easily distinguish between religion and money, but in terms of their functioning in material reproduction we have to ask a new set of questions' (Friedman 1975b). This implies that the structures, or the dominant social relations, which organize production and reproduction may also organize other activities in a way that no cultural distinction can be drawn between the economic and the non-economic. In this way dominant social relations may cross-cut traditional institutional boundaries or the sub-systems of functional and eco-systemic models. Accordingly, 'there is no culturally defined economy, nor is there a culturally defined religion. As institutional categories these belong to our own and perhaps a few other kinds of society.

If we are to explain the functioning and evolution of social systems, it is necessary to discover the specificity of their internal structures' (Friedman 1975b). When this has been grasped, 'a vast new field of investigation opens up, namely the search for the reasons and the conditions which, in history, have brought about shifts in the locus – and hence changes in forms – of relations of production' (Godelier 1978: 765).

I believe that the principle of dominant social relations and the distinction between cultural form and material function also opens up a new field of investigation in archaeology, namely the search for the conditions that govern the cultural manifestations of material functions and hence determine the interpretation and explanation of a major part of the archaeological record, whose explanatory potential has hitherto been much neglected. Thus ideology is not considered to be a passive reflection of society, but, on the contrary, an active factor that can be used by competing individuals and social groups to establish and legitimize their dominance through an ideology bearing upon society as a whole and expressed in symbols, social norms, rules and rituals. This implies that ideology may entail both contrast and harmony on various levels. This dynamic principle may be manifested either as a reinforcement or a repression of various aspects of society, thereby further complicating the relationship between material functions and cultural form.

For example, with respect to mortuary practices, wealthy persons of high rank may be buried modestly with but a few symbols of their wealth and position, whereas members of rising and competing social groups may be buried with great symbolic manifestation of their social position. Frequently only a single social group or segment of society expresses its status in burials, whereas in some periods quite the opposite is the case: a considerably larger part of the population is buried and internal differences are equalized rather than emphasized.

At present we know very little regarding the socio-economic and ideological factors which cause these variations in mortuary practices, nor whether general rules governing these variations can be established (but see Pearson 1982). In studying mortuary practices it is therefore essential to clarify the relationship between social reality and its ideological interpretation. This can only be done by considering mortuary practices and wealth consumption within a larger framework of material production and reproduction, in order to determine how such ideological/cultural forms and norms correspond to their material functions of reproduction. Although such an approach has been employed in a few works (Bradley 1981; Ellison 1981; Kristiansen 1978a; 1981a; Randsborg 1974; 1981; Rathje 1973), it has been common to select a single period and a single region or even burial place which displays characteristic features of status (Brown 1981; Goldstein 1981; Hedeager 1978; King 1978; Shennan 1975). Those periods and regions which do not conform very well to such analysis are neglected.

In the first place this has laid not only particular explanations, but also their basic premisses, open to criticism (Braun 1981; Leach 1977; Ucko 1969). Secondly, studies of mortuary practices will never contribute significantly to the explanation of social evolution if we do not try to analyse and explain their full range of variation in time and space and consider them against the larger framework of social reproduction. We further have to accept that there exists no single methodological parameter that covers all such variation, not even within a single region. The only unifying framework is theory. Therefore we will have to proceed from the rather general theoretical principles presented above and by subjective confrontation with the data deduce interpretations and explanations from which more specific hypotheses may be formulated and tested.

I shall try to demonstrate this in the following by two examples. As a starting point, however, I have tried to summarize the main theoretical concepts and principles in two diagrams (Figs. 1 and 2). The first figure shows the basic concepts and in the second figure I have tried to integrate them into a more comprehensive model of social reproduction (cf. Friedman 1975a: Fig. 1; Ingold 1981: Fig. 10.1).

Cultural representation and material function

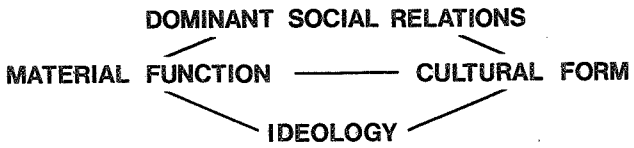
Monuments and society in Neolithic Denmark

Why do some societies produce monumental burials and others not? And what is the relationship between monuments and society? We have been presented with several elegant answers in recent years (Chapman 1981; Fleming 1973; Renfrew 1973a; 1973b). However, the prehistory of northern Europe reveals a succession of different grave monuments – from wooden constructions to megaliths and impressive tumuli – which may help to throw some more light on these questions. In the following I shall therefore contrast two types of monuments in Neolithic Denmark – megaliths and earthen round barrows – in an attempt to outline and explain the material functions of these cultural manifestations.

The premiss for doing so is the proposition that these monuments also represent two contrasting tribal structures: the territorial chiefdoms of the Megalithic Culture (approximately 4000–2800 BC, with a climax period approximately 3500–3200 BC), and the segmentary tribes of the Single Grave or Battle Axe Culture (approximately 2800–2400 BC).[7] They further present us with very different cultural manifestations of rather similar material functions of production, at least at the level of technology and subsistence.

Thus, I shall consider the cultural and structural totality of these societies, disregarding spatial and temporal variation at the expense of constructing a general model which is able

Fig. 1. Basic theoretical concepts – a static presentation (drawn by Catherina Olesen).



to account for such variation. By doing so, an attempt will be made to compare and confront the 'subjective' ideological evidence of ritual and religion with the 'objective' evidence of settlements, subsistence and technology.

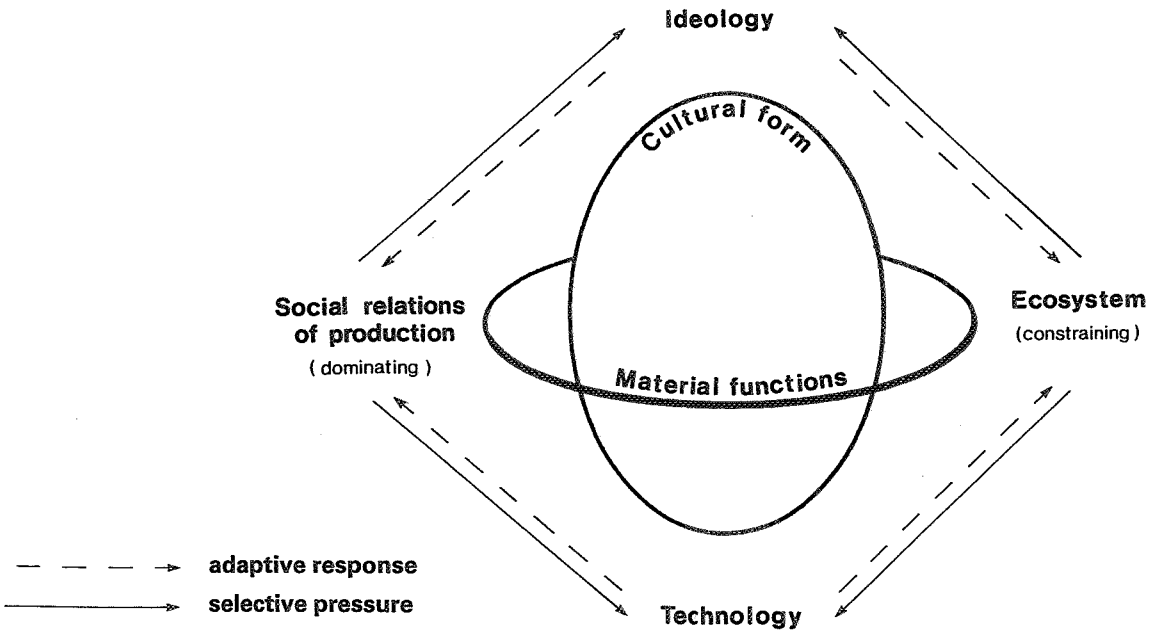
The Megalithic Culture

Settlement, subsistence and technology. Settlements were based on local cycles of slash and burn, evidenced in pollen diagrams, opening up rather large areas which were cultivated and grassed for several centuries. In addition, areas with secondary forest were 'cultivated' by cutting for leaf fodder, building materials, etc. Broken polished flint axes regularly found around settlement areas indicate the primary importance of these tools for clearing forest for new fields throughout the period. Only a few settlement sites have been excacated. They seem to indicate a pattern of (1) hamlets of small U-shaped huts, dispersed at good fishing grounds and close to fields, (2) local central settlements, sometimes with long houses, and (3) fortified regional central places (causewayed camps) of seasonal meetings for ritual, alliances and exchange. Settlements cluster along waterways (the coast, fiords, small inland rivers and lakes) that represented the main communication system in an otherwise forested landscape. Subsistence was based on a mixed economy dominated by wheat production in cleared fields tilled by simple ard ploughing, cattle herding for milk, meat and traction, free-roaming pigs in the forest and some fishing. Although this could be described as a broad spectrum economy, I believe that this farming system should rather be characterized as intensive shifting cultivation with high productivity in relatively small open areas due to a complex cycle of cultivation, grassing, secondary forest growth and recultivation, supplemented by fishing (Tauber 1981).

The basic tools for production known to us were the polished flint axe for clearing forest, heavy timber work etc., the ard for preparing the fields, canoes of hollowed tree trunks, traps and nets for fishing, hand querns for preparing flour, a wide variety of pottery containers for holding milk products, grain etc., plus a variety of small flint tools for scraping hides, cutting and so on. Well-worked wooden axe handles, spoons and dishes give a glimpse of a highly developed tradition in carpentry. Both pottery production and flint production reveal a highly organized and skilled tradition of manufacture. Flint was extracted by mining in a few areas and distributed semi-finished (without polishing) as seen in several 'trade' hoards. The time-consuming final preparation of the long polished axes, taken far beyond practical needs, was done locally. Extraordinarily long ritual axes were also produced, but basically working and ritual axes were similarly manufactured. Later a whole tool kit for specialized timber working was developed (chisels, small flat axes, hollow axes, and so on). Also in pottery production a distinction between fine ornamented (mainly ritual) pottery and settlement pottery quickly developed and a wide variety of specialized types were produced. The same artistic quality also characterized the manufacture of the very few battle axes (originally imitating East European copper axes), mace-heads and the rather numerous amber ornaments (which also included miniature battle axes and imitations of small East European copper ornaments). Amber was used in exchange for copper tools during the early phase, but this international exchange later ceased.

Ritual and religion. The earliest monuments were heavy timber-constructed earthen long barrows, surrounded by palisades. The burials inside them were meant to hold a single chief and his family, typically a woman and one or two chil-

Fig. 2. Basic theoretical concepts – a dynamic presentation (drawn by Catherina Olesen).



dren or very young people. Within the framework of the long barrow one chiefly family-burial could be placed along side the other, and the later megaliths – round or long dolmens with small stone chambers – continued this tradition. The megaliths typically cluster in groups, showing continued use of the same burial area for several centuries, often ending with the final stage: the big passage grave. These were constructed during the climax period and are virtually stone houses with an entrance (passage) into the chamber. After that the building of new megaliths ceased. The construction of the thousands of megaliths took place within a short time-span of 200–300 years, but they were in continued use during the following centuries. They were normally raised on agricultural land, evidenced by plough marks beneath them, and settlement material was often used in their construction.

The passage graves presented a change in burial rites, as they were meant to hold only the bones of the deceased, and one passage grave would often serve as 'temple' of the ancestors of several families, being divided into sections by stone slabs. This development towards larger communal burials (from dolmen to 'gross dolmen' to passage graves) was accompanied by the construction of the first territorial causewayed camps and later of cult-houses close to the passage graves. The causewayed camps did not serve settlement functions, but mainly ritual (and defensive?) functions, evidenced by heavy concentrations of offerings, including pottery, meals (bones and grain), a few prestige goods and also human offerings. These new ritual practices, which represent the climax period, seem to show a regional system of intercommunal ritual. Both in dolmen and passage graves a variety of goods accompanied the dead: pots, flint axes and more rarely battle axes and amber.

The megalithic monuments were quite clearly meant to hold only a very restricted number of persons, and burial took place in them rather rarely, once or twice in a generation. A complicated ritual seems to have taken place both before their construction and sometimes after. Offerings of pots etc. are sometimes documented in connection with the erection of early long barrows, and from the period of passage graves deposition of large amounts of ritual pottery took place at the entrance.

Parallel to the burial rites we find a separate religious tradition with two archaeological manifestations: the ritual hoarding or votive offering in wet places mainly of long polished axes (both singly and several together) and communal feasting. This is sometimes evidenced by large numbers of ox bones. Also single battle axes, mace heads and amber ornaments can be found as votive offerings. The tradition of ritual hoarding and feasting can be followed throughout the period. The cult places of votive offerings are normally located in the vicinity of megaliths and settlements, but during the later phase they seem to be more attached to the megaliths and the causewayed camps.

Synthesis: the social system. A close connection between ritual, subsistence and exchange is demonstrated by the central role played by the polished flint axe in all three areas. As the basic tool in subsistence, the basic medium of exchange and the primary medium of ritual hoarding, the axe links together production, exchange and ritual consumption/feasting. This clearly resembles the production–feast–alliance cycle described by Friedman for swiddening Kachin tribes in Burma (Friedman 1975a), while axes played a similar role in New Guinea (Liep 1983; Højlund 1979; in press) (Fig. 3). As in these societies, the combination and eventual control of production, exchange and ritual must also have represented the basic source of local prestige in Neolithic Denmark and, if maintained, ranking. This was especially so as flint had to be distributed from a few source areas. Thus participation in alliances was crucial for obtaining axes (normally semi-finished products), and when finished they served both as a medium of social exchange/ritual consumption and were a precondition for increasing production by clearing new forest. This again might produce enough surplus for giving feasts, participating in alliances and ritual hoarding thus increasing prestige and ritual (= social) control. The longest and most beautiful ritual axes were undoubtedly highly valued and widely renowned, and probably had names and myths attached to them, as in New Guinea.

Thus the ritualized extension of production and prestige through feasting and ritual hoarding of polished axes reveals the primary material function of these cultural institutions. It further gives a clue as to how surplus production entered the local cycle of prestige building, embedded in alliances and exchange. But if axes were the common medium in production, ritual and exchange, then rank had to be expressed in more specific forms, as in the rare battle axes or mace heads for the living,[8] and for the dead in megalithic monuments. In order to deepen our understanding of the social system it is necessary to consider the grave monuments and their material function in social reproduction.

It is evident that the construction of monuments reveals important aspects of subsistence in such a way that one might even speak of a direct functional relationship. Thus in the early phase of forest clearance the basic material for the construction of the large monuments was the timber of big split trunks. These early structures reveal all the basic features of later megaliths and in fact bring the plan of long barrows much closer to that of the longhouses. The latter may have preceded them for ritual communal purposes, later taken over by specialized cult-houses when stones replaced timber in monument building. This change in building material may be seen as reflecting the consolidation of the settlement pattern with less forest clearance and with repeated cultivation in the cleared land. Consequently clearing the fields of stones became a major activity and they could be employed in the building of monuments for some generations. Thus in the first place the monuments symbolize the creation of agricultural land – the most valued and labour-intensive factor in slash and burn cultivation.[9] Secondly, their construction reflects the same

type of social mobilization, co-operation and leadership as was needed for clearing the forest.

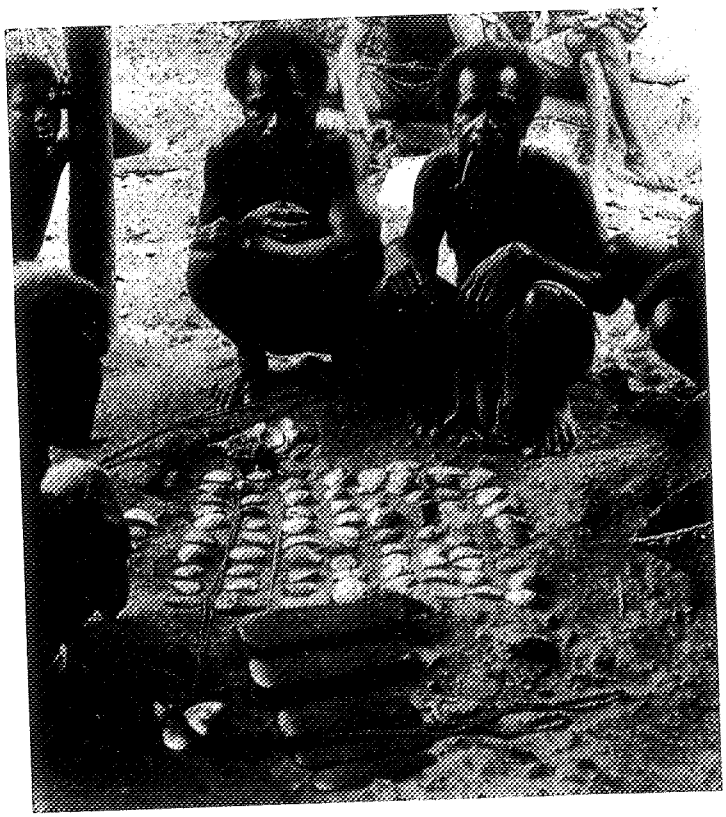
We may conclude, then, that the emergence of the first monumental burials, the creation and consolidation of permanent agricultural land and the development of leadership were closely related phenomena, spurred on by the mechanisms of feasting, ritual hoarding and exchange just described. We may also, with Renfrew (1973b), see the megaliths as social territorial markers of a stabilized settlement system, mobilizing an increasing population in big inter-communal building projects (rather than in settlement expansion onto poor soils),[10] thereby regulating the exploitation of land and forest resources, preventing destructive competition while sustaining the evolving hierarchical nature of society by ritual means. The culmination of these processes was reached with the construction of regional centres of inter-tribal ritual, the large causewayed camps.

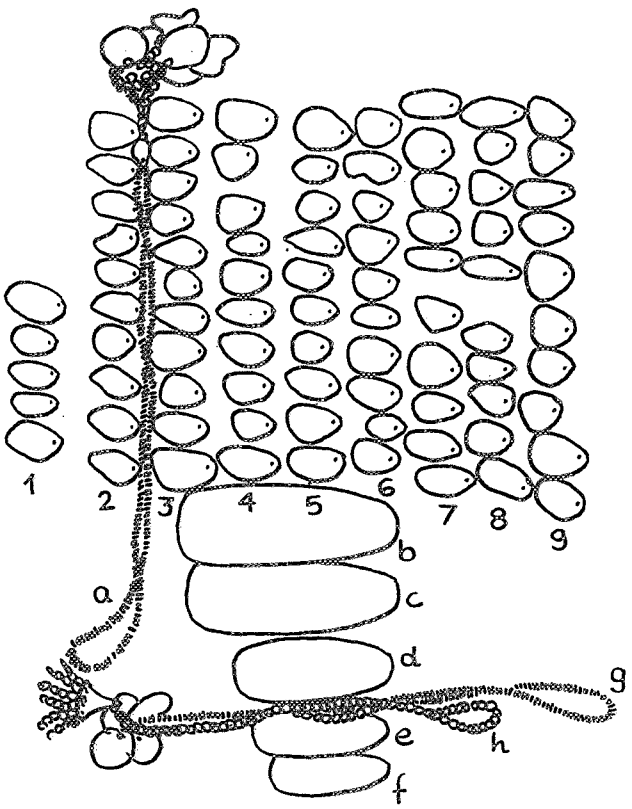
Thus we see that megalithic monuments represent a ritualized extension of the organization of production. Let us, however, take a closer look at the character of monuments and burial practices in order to throw some more light, if possible, on the nature of religion and social organization.

The idea of the long barrow – presumably planned to contain the successive burials of a single chiefly lineage – strongly indicates ascribed rank and leadership. This is clearly the case with the passage grave whose function presupposes long and repeated use by several chiefly lineages. Such chiefly co-operation might further suggest stronger integration and stability of leadership, as opposed to the frequent grouping of several dolmens in one place – rather suggesting stronger autonomy and competition between chiefly lineages. During the last centuries of the Megalithic Culture, long lines of stone-packed flat graves, sometimes extending 1–2 kilometres from the passage grave, appeared in some areas in Jutland. In other areas the bones in the chambers were constantly rearranged and even piled. Thus the passage grave seems to have served as a central religious focus for a wider settlement area of several chiefly lineages, probably descendants of the founding ancestors buried in the dolmen.

The ritualized chiefly organization of land and lineage through ancestor worship in megalithic tombs has been a recurrent phenomenon in many different parts of the world, in small-scale and more developed societies such as Madagascar (Bloch 1971; also good examples in Renfrew 1973a). Although not directly comparable with Neolithic Denmark such examples offer insights into the functional and organizational framework of these monuments. Quite clearly the megaliths do not represent burials in our sense of the word.

Fig. 3. Greenstone axe blades, shell necklaces and *Spondylus* shell money (*ndap*) in a mortuary payment on Rossel Island, Papua New Guinea. Row 1 is a solicitory gift from the gravediggers, who receive row 2 from the deceased's father's relatives. They themselves receive row 3 and necklace (a) from the deceased's own relatives. Rows 4–9 and the valuables (b)–(f) are from the deceased's spouse's relatives to the deceased's relatives. Descent on Rossel is matrilineal. The transaction illustrates the kind of ritual and social framework that produce an accumulation of primitive valuables. If buried it would resemble most neolithic hoards of western Europe. © John Liep.





The dead were not separated from the living, but lived as ancestors in their houses among the living and could be approached when opening the chamber or contacted through rites and offerings. Thus the ancestors of the chiefly lineage rested in a stone-built longhouse, evidence for the clearing of forest and fields in their territory (Fig. 4). In this way the megaliths symbolized both the collective efforts of the community and the heroic leadership of ancestor chiefs, legitimizing and sustaining the power of their successors. This ritual practice of ancestor worship came to its full development in the passage grave (Fig. 5), now only holding the bones of the deceased, which were arranged after having been through a complicated ritual extraction of the flesh in the cult houses and causewayed camps. Skulls seem to have played a special role, and they were sometimes arranged in groups. In some cases breaking into the grave and stealing of skulls of ancestors by an enemy is strongly suggested. Thus the ancestors were present in the life of the community (not separated from it in the land of the dead) and they could be mobilized when needed.

Megalithic ritual is thus seen to represent a ritualized extension of the communal lineage structure, the chiefly lineages being direct descendants of founding ancestors, interceding with them on the community's behalf. According to this interpretation cultural institutions of feasting, ritual hoarding and ancestor worship are intricately linked with the organization of production in such a way that no clear distinction can be drawn between religion and economy. Ritual and religion served clearly material functions in the social organization of production. By transforming surplus production into ritual feasting, alliances and prestige, a ritualized hierarchical system evolved that served for more than half a millennium to organize the successful reproduction of a dispersed settlement system of intensive slash and burn agriculture.

The Single Grave Culture

Settlement, subsistence and technology. The Single Grave Culture represents an adaptation to the light soils of central and western Jutland, areas that had formerly been very scarcely

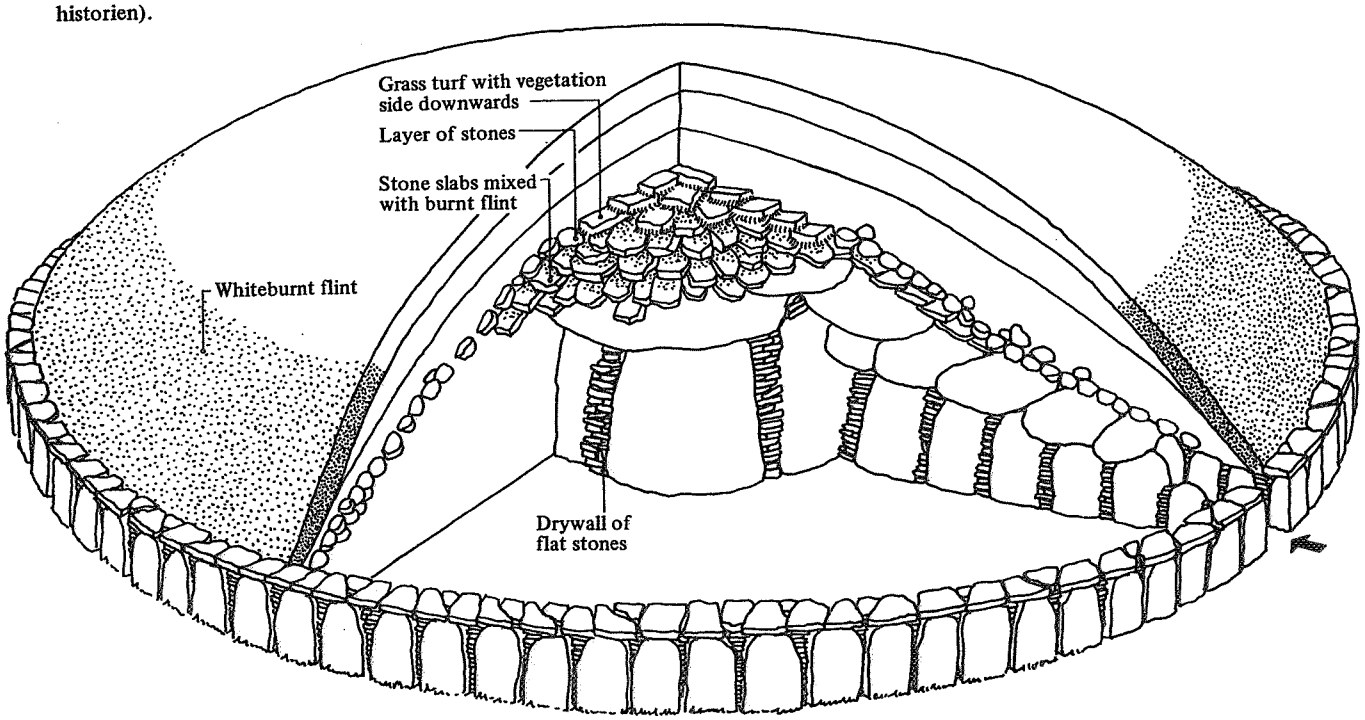
Fig. 4. Megalithic long barrow from Halskov Veenge, southeastern Denmark reconstructed after excavation (photograph: the Ancient Monument Directorate).

settled. These areas were characterized by a rather light open forest that could easily be transformed into grassland. Pollen diagrams indicate that permanent pastures and heathland, maintained right up to the present day, were created by a massive 'landnam' (forest clearance, literally 'land-take'). They further indicate that pastures and heathlands were dominant (as distinct from the Megalithic Culture), but with scattered secondary forest of oak and hazel and closed forests on the heavy moraines. Agriculture is demonstrated by grains of barley, the dominant crop, but stockbreeding was indisputably the basis of the economy leaving only scarce settlement traces. Settlements and barrows cluster along ecological boundaries – moraine and flat heath sand, or river-valleys and agricultural land – often in long lines kilometre after kilometre (Fig. 6). Such a settlement pattern secured access to pastures, forest and agricultural land. A few excavated (late) settlements indicate small hamlets of three to four very lightly constructed and rather small houses. They are normally close to barrows and no large central settlements have been found. Settlement material is scarce, but includes the usual small flint tools and polished axes for forest clearance (now thick butted). Small querns were also found in the later phases. Subsistence was based on stockbreeding of free-grazing cattle and sheep on extensive pastures and heathland, combined with some barley growing in small fields that were tilled with the ard. The heavy forest on the moraines and the scattered secondary forests were exploited for leaf fodder. Thus the economy should be characterized as pastoral with some agriculture.

Among the basic tools for production known to us, the polished flint axe is still the most important, plus stone wedges to help cleave tree-trunks. The ard was still used for preparing the fields, as shown by traces of ploughing beneath many barrows. For the first time wheels and wagons are introduced, evidenced both in actual finds and in trackways under or close to barrows, a response to the new open environment connecting large areas of temperate Europe at this time (Sherratt 1981). We also get glimpses of a tradition in wood and bark working – remains of dishes and boxes. In contrast to the Megalithic Culture the manufacture of the polished flint axe is rather careless and taken no further than needed for practical purposes. However, no efforts were spared to produce the beautiful and numerous battle axes, so characteristic of this culture. Pottery is also rather poor compared to the Megalithic Culture, consisting of a limited number of types dominated by the beaker. As in the Megalithic Culture we find both globular amphorae and open flat-based bowls, probably for holding and preparing milk. Amber was used for ornaments and is quite common (but becomes rare with the appearance of copper tools in the Late Neolithic).

Ritual and religion. The earliest burials were placed in the ground in a circular pit. At the bottom a single individual was buried in a timber coffin, covered with a small mound of grass or heath turf approximately 1 metre high. A wooden fence often surrounded the burial place. Later, coffins were constructed directly on the ground and again covered with a small turf mound. With repeated use new burials were added on top of the mound and covered with a new layer of turf or sand. Thus the burial practice often reveals a family succession from

Fig. 5. Three dimensional view of a passage grave from Jordhøj, Jutland (after Nielsen 1981: 83, drawn by Flemming Bau: Sesam Danmarkshistorien).



the earliest to the latest burials – one upon the other – but always respecting the former burials (Fig. 7). Around the periphery of the mound small child burials were dug into the barrow, completing the picture of the family mound. The rather low barrows typically cluster in long lines or groups of 10–20. Some ritual is evidenced in the early phase preceding the construction of the mound in the form of circular wooden constructions (cult-houses) standing for some time and burned down before the construction of the mound.

Both men and women are buried, sometimes in double graves or side by side. On the basis of grave goods only 25% are women, but in small well-excavated groups of barrows the female representation is seen to be higher. The evidence indicates monogamy. The position of the dead is always flexed. The males on their right side and the females on their left side, both looking to the south. Double male burials represent a distinctive feature.

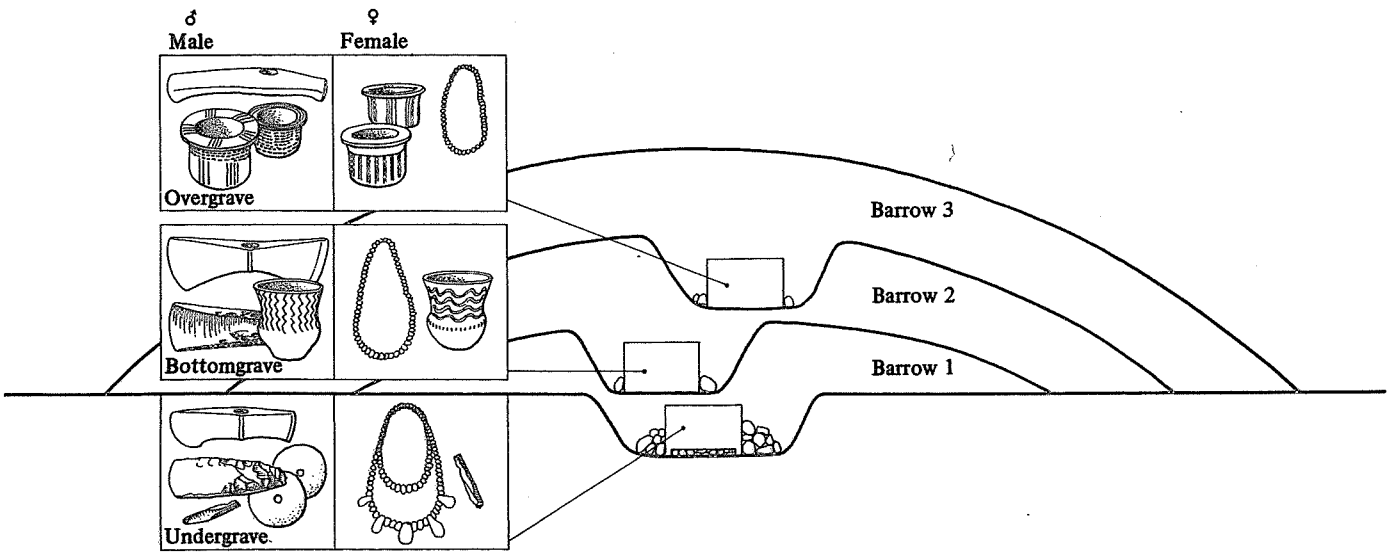
Burial equipment is rather standardized: for the man a battle axe in front of the face, sometimes a beaker holding some liquor (probably mead, as in the Early Bronze Age), and also a flint axe, a few stone flakes and two round disks of amber at the belt. The latter seem to be a special distinction not found too often (perhaps symbolizing the two wheels of the wagon?). The female would normally have amber ornaments (in their hundreds) and a beaker. Children are normally without equipment but are also buried flexed.

We have very little evidence of ritual hoarding and feasting, so little that we cannot speak of a ritual tradition.

Synthesis: the social system. The connection between ritual, exchange and subsistence noted for the Megalithic Culture is dissolved. Polished flint axes are still found as grave goods in the early phase of 'landnam' but then gradually disappear, becoming smaller and more carelessly manufactured over time.

Fig. 6. Group of single barrows near Viborg in Central Jutland, photographed around the turn of the century, when the landscape still retained some of its original, open treeless character (photograph: the National Museum).

Fig. 7. Cross-section of a typical single grave (after Nielsen 1981: 118, drawn by Flemming Bau: Sesam, Danmarkshistorien).



Instead we witness an enormous local production of battle axes, the standard equipment in male burials. In the early phase the axes are rather similar throughout western Europe, but are then gradually subject to local development, reflecting increasingly closed cycles of exchange and inter-marriage, with amber circulating for greater distances. The prime motive for maintaining alliances was the exchange of women and prestige goods (amber and battle axes). The open landscape, once created, was maintained by free-grazing cattle and the cutting of secondary forest for leaf fodder. Consequently land was not a scarce resource that needed to be created and maintained by ancestor spirits and their living descendants by ritual means. Productive wealth was mainly stored in cattle and sheep, needing large pastures, not in the products of the soil. Thus control of land was difficult but not important as long as it was plentiful. The decisive resource was water. Each hamlet could be self-sufficient and compete for prestige and cattle.

According to this interpretation the prime mover of leadership was exchange of prestige goods through alliances and inter-marriage, probably with cattle as a common medium of exchange and accumulation. The competitive and warlike nature of the system is shown by the hundreds of battle axes in burials. It seems, however, that certain areas were able to achieve a favoured position in the exchange system and developed slightly more hierarchical social structures, reflected in the distribution of amber. The status of females increased in areas of good soils, perhaps due to their role in agricultural production. Basically, however, the burial evidence reflects the autonomy of local lineages with the monogamous family as its smallest unit. Above this level the participation in marriage alliances created a wider territorial pattern of inter-communal tribal bonds. This is reflected in the localized distribution of certain ceramic types and battle axes, and also in a settlement pattern which shows regional clusters. Above that, wider and looser inter-regional groups are found. All in all this is a pattern very much resembling that of the segmentary lineages of African pastoralists (Sahlins 1961), although this proposition needs further testing.

These interpretations do not imply that we are dealing with a completely egalitarian system. The single graves must reflect only an upper segment of society. Since the Megalithic Culture, inherited rank and leadership had become fundamental properties of social consciousness, but larger segments of local lineages were receiving a burial in the Single Grave Culture. We are thus dealing with a ranked system of competing local lineages preventing higher levels of political hierarchization from being maintained. Hierarchization could probably be triggered if population or herds increased beyond the productive potential of land, or if prestige goods were introduced from outside the system which would also affect the processes of production, as happened later in the Bronze Age.

In order to deepen our understanding of the relationship between religion and social organization let us take a closer look at the grave monuments. The tens of thousands of barrows reflect an inversion of the megaliths in nearly all respects. Now the individual and his property are the focus of burial rites. Equipped with his personal items of rank, with liquor for feasting, he is once and for all separated from the world of the living. Leaving for another world he is socially and ritually equipped to re-occupy his place there and even brings land with him, symbolized by the half to one ha. of turf covering him. This further indicates that land was plentiful and could be taken away by and for the dead, in contrast to the megalithic monuments that reflected the opening up of new agricultural land. Later, in the hierarchical pastoral economy of the Bronze Age, monumental barrows could contain up to five ha. of land, reflecting a greater control of land by chiefly families in an increasingly dense settlement pattern. But in contrast to both megaliths and Bronze Age barrows, the barrows of the Single Grave Culture reflect no monumental ideology and were often situated on low land.

The barrow itself may be said to reflect important elements of subsistence and ecology. However, we can easily distinguish religion from economy as they are not otherwise linked up with each other by ritual means. Thus the ideology of burial rites almost exclusively reflects aspects of social organization: the transmission of personal status and property and the autonomy of the local lineage. Naturally feasting must have taken place, but as it was not linked to ritual consumption and wider inter-communal activities it is not archaeologically traceable. The subordination of religion to serve mainly social purposes and its concomitant separation from the processes of (agricultural) production seem to indicate that participation in alliances for exchange of women, cattle and prestige objects was the main prerequisite for increasing local prestige and production (accumulation of cattle).

This interpretation of Single Grave Culture social organization does not represent a unique historical case. On the contrary it entails many of the basic features of present day or historically known pastoral societies (Bonte 1978; Goldschmidt 1979; Ingold 1980). It should be stressed that pastoral societies exhibit a wide range of variation, and the Single Grave Culture is not purely pastoral. Yet certain elements seem to be more general, among them the autonomy of the household and the local lineage in production. Also an aggressive and warlike behaviour is often characteristic of a pastoral lifestyle. At marriage and death the transmission of private livestock, as distinct from land, is a decisive factor affecting both kinship systems and religion. Finally the feature of male partnership or assistant- and associateship is generally found to be linked to herding, as discussed by Ingold (1980), perhaps accounting for double male burial in the Single Grave Culture. As we have seen, all of these elements characterize the Single Grave Culture but they need to be more closely analysed in future research.

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Recent studies of male social organiz
in press) have demonstrated a rather complex system of rank. On top was the chief, also performing ritual and priestly functions[12] (plus other occupational specializations), and below him a dependant group of chiefly warriors without ritual functions. Chiefs were in control of long-distance exchange, thereby controlling both communal ritual and the distribution of prestige goods. The rather competitive and warlike nature of the system is demonstrated not only by the numerous swords, but especially by the fact that sword blades show heavy traces of actual use and sharpening, with the exception of many chiefly swords. Female members of the chiefly lineage can also be divided into those who performed priestly functions and those who did not, reflected both in clothing and in ornament types.

Large quantities of bronze and gold were stored in a wide variety of communal ritual gear, mainly found in hoards: *lurs*, shields, helmets, axes, golden drinking cups and so on (Fig. 10). Together with the ritual scenery expressed in rock carvings and bronze figures (Fig. 11), they indicate a highly organized system of communal and inter-communal ritual and feasting. The religious system was heavily influenced by Mycenaean and central European mythology and symbolism and throughout the Bronze Age new religious elements were constantly added. Thus, an elaborate religious system evolved, separated from the communal lineage structure, whose manipulation was an essential prerequisite of chiefly power.

The Nordic Bronze Age Culture is seen, then, to exhibit the basic features of a theocratic prestige-goods system, as known in Polynesia (Friedman 1982; Goldman 1955), including religious/political dualism, status rivalry and inter-chiefly

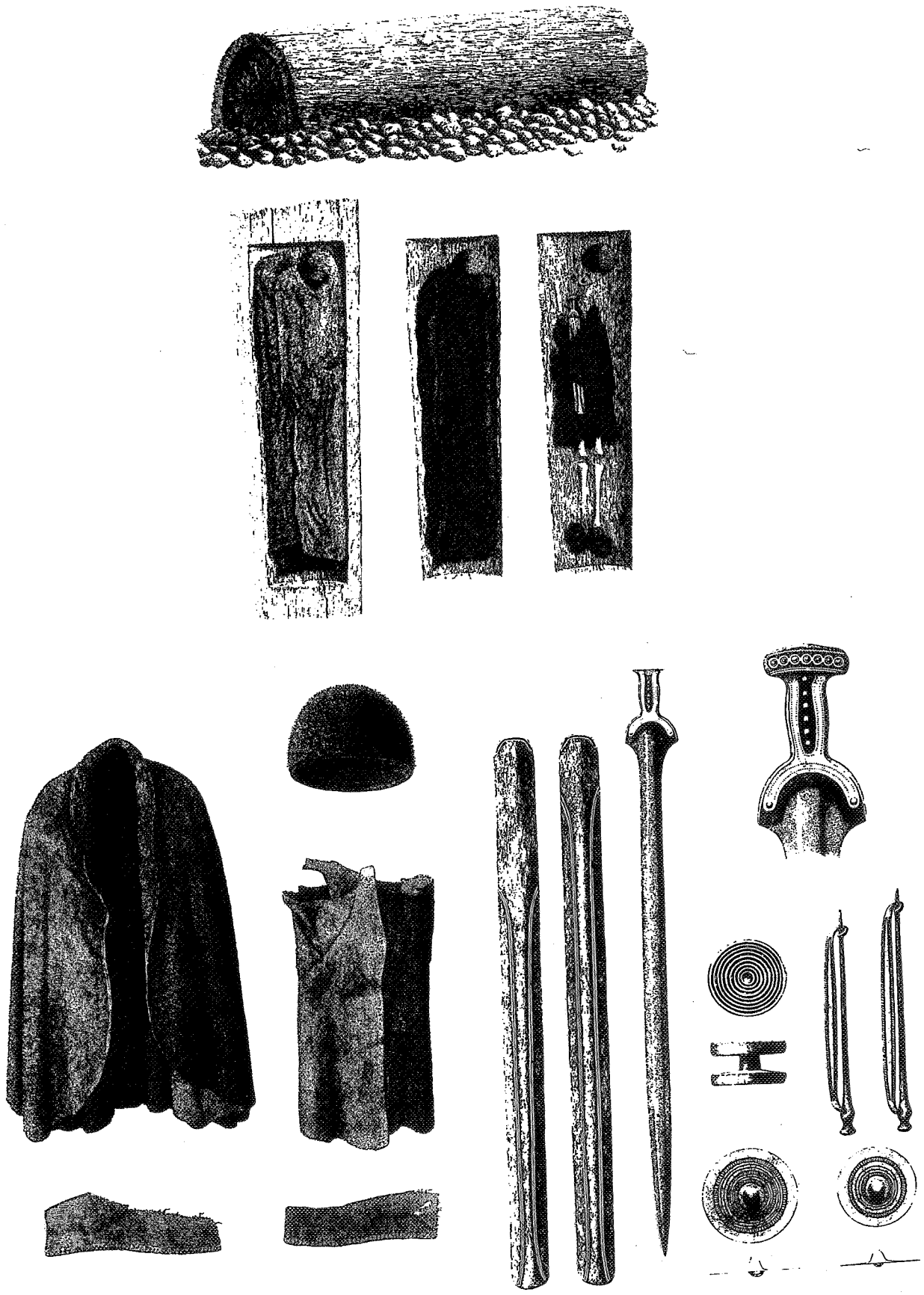
n's 'open societies'). Priestly
mystification of chiefly
powers that were based, in reality, on the political monopolization of production, alliances and long-distance exchange. Naturally such a system exhibited considerable local and regional variation in consumption which can be shown to be linked to different regional trajectories of production, population density and exchange (Kristiansen 1978a; 1981a). In the following, however, we will concentrate on the more general temporal trends in wealth consumption, especially the relationship between male/female prestige goods, to which we shall now turn.

Male–female relationships. Fig. 12 shows the relationship between male and female prestige goods deposited in graves and hoards.[13] As can be seen, the general trend is very significant: from male dominance to female dominance. In period I female ornaments were hardly produced, but this situation drastically changed in period II. It should be added, however, that the absolute number of female depositions does not increase much after period II. Thus, the very marked difference is mainly due to a decrease in the deposition of swords. As the number of male burials without swords (indicated by the presence of razors or tweezers) remained more or less stable throughout the Bronze Age, the decrease in sword depositions reflects a changed attitude towards the demonstration of male status (see Kristiansen 1978a: Fig. 9 for sword–grave ratio). Before trying to explain this pattern, let us consider some of the changes which accompany it.

Status diversity. If we consider next the demonstration of

Fig. 9a. Group of Early Bronze Age barrows from northwestern Jutland, situated at a narrow strait Uilsund in the Limfjord area (photograph: the Ancient Monument Directorate).

Fig. 9b. Early Bronze Age warrior burial from Muldbjerg in western Jutland with oak coffin and clothing fully preserved.



social position as reflected in numbers of different prestige goods or sumptuary goods in burials and hoards, a marked trend can be observed. According to Levy (1982: 69ff) male deposition reveals a maximum diversity in period II, then a decline, and again an optimum in period V (but lower than II), followed by a steep decline in period VI. Female depositions, however, which are more numerous, steadily increase from period II to V, and then also decline. Although these observations are rather crude, they correspond quite well to more detailed analyses of both Early-Bronze-Age male ranking (Kristiansen, in press) and of Late-Bronze-Age hoards (Kristiansen 1974a).

The decreasing diversity index of social distinctions in male equipment is also accompanied by a blending of formerly distinct types of swords for chiefs and warriors respectively. In the Late Bronze Age such typological distinctions disappear, together with other diagnostic features of chief and warrior. In general, swords display much less artistic skill in their manufacture during the Late Bronze Age.

Quite an opposite development characterizes female

Fig. 9c. Chiefly male burial from Guldhøj in southern Jutland, the folding stool, originally with a seat of otter skin, the wooden cup decorated with tin sprags ((b) and (c) after Boye 1896).

ornaments. They maintain their artistic quality and reach a climax with respect to exaggerated and extremely impractical design in period V. The decline in diversity in period VI is due to the introduction of a new tradition of depositing pairwise neckrings, already apparent in period V, but now dominant. This is accompanied by a stylistic break with the old Nordic tradition and the introduction of a new tradition of manufacture strongly influenced by the Hallstatt Culture. The reduction in diversity is, however, to some extent compensated for by the quantity of bronze stored in each pair of rings. It should be noticed that period I reveals very similar characteristics, but in male equipment: few and heavy forms, mostly imports or local imitations.

Let us now consider some of the accompanying changes in ritual and religion.

Ritual and religion. During period I only a few bronzes occur in burials, the greater part are found in hoards, due to the scarcity of bronze. By the end of period I the situation is gradually changing and during period II the Nordic Bronze Age

Fig. 10. Some examples of Late Bronze Age ritual gear: (a) lurs, (b) horned helmets and (c) set of golden drinking cups hoarded in an imported bronze vessel probably for holding the liquor.

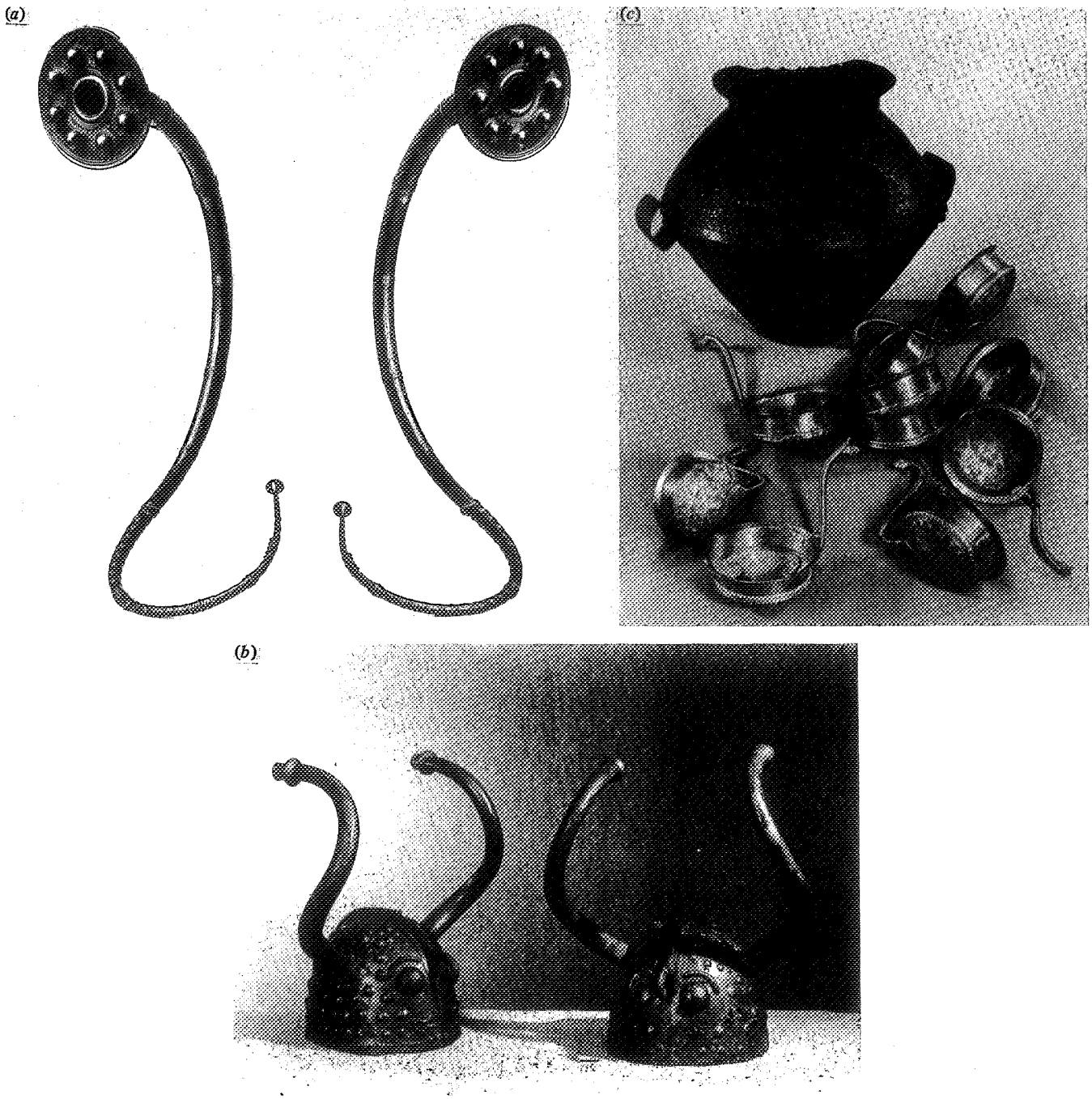
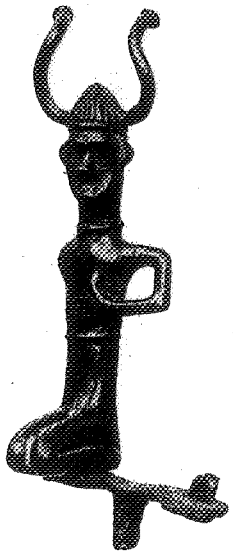
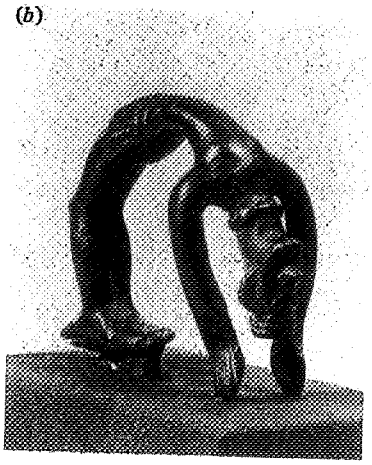


Fig. 11. Ritual scenery as presented in bronze figurines and rock carvings: (a) male warrior chief with horned helmet and ritual axe (originally a pair); (b) female priest in a short corded skirt doing ritual acrobatics; (c) drawing from 1779 of the complete set of bronze figures of which (a) and (b) are the only surviving; (d) rock carvings from Bohuslän, Sweden, of a ritual wedding; and (e) lur-blowing men with horned helmets and a ship with a life tree ((d) and (e) are from Glob 1974).

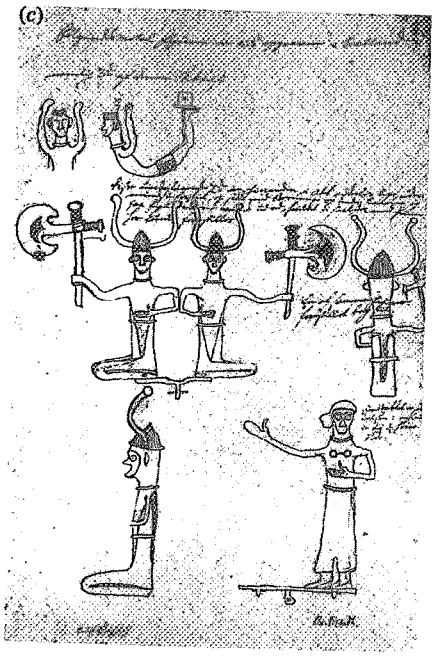
(a)



(b)



(c)



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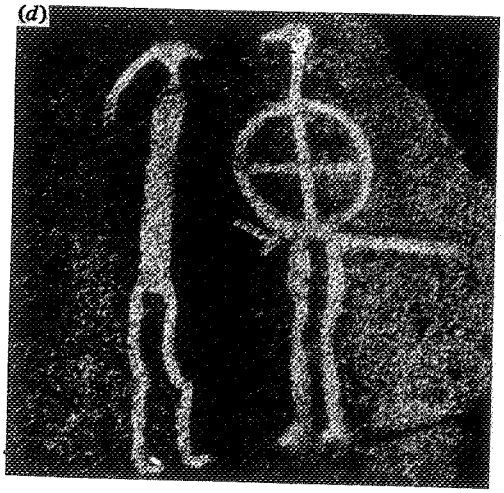
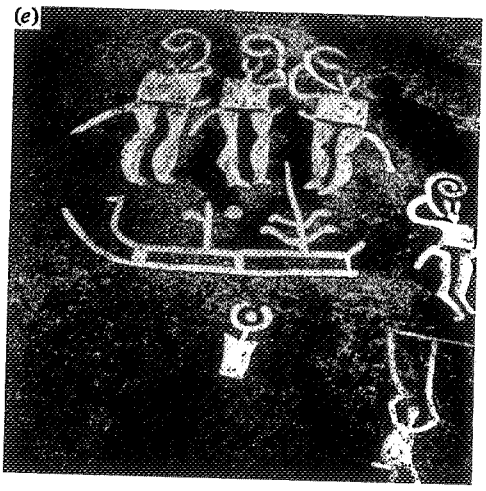


(e)



reaches its peak. The major part of the tens of thousands of impressive barrows was constructed during this period and the inhumation burials of both men and women were accompanied by rich sumptuary goods. The tradition of ritual hoarding, however, still ran parallel, mainly consisting of female ornaments, often with two or three individual sets in each hoard. But we also find a few hoards with communal ritual gear, such as double votive axes, not to forget the unique sun chariot.

Period III represents a continuation of the ritual practices of period II, although cremation is adopted. This, however, does not otherwise affect burial rites. Ritual hoarding is rare. Period III still sees the construction of quite a large number of chiefly barrows, but it becomes more common to use existing barrows for new burials, adding one or two metres to the barrow.

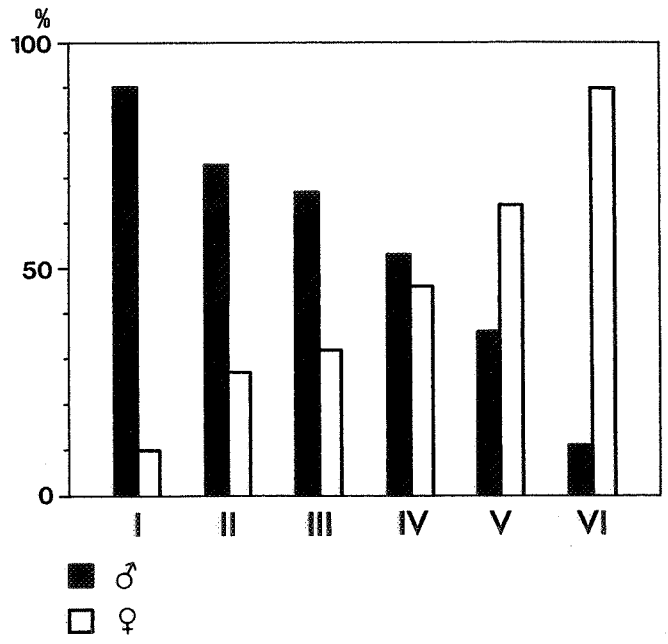
In periods IV and V most burials are deposited in earlier barrows. The urn is now commonly employed to hold the burnt bones, and grave goods are reduced to small personal items and finally miniatures of swords. A few big chiefly barrows with rich grave goods were built during these periods. They are situated in the centre of densely settled areas with many ritual hoards (Jensen, in press). In areas of settlement expansion, small urn barrows are constructed. Sumptuary goods are mainly deposited by ritual hoarding, often representing the equipment of several persons (Kristiansen 1974b). The manufacture and deposition of ritual gear reaches a climax. New types are employed such as horned helmets and shields, golden cups and equipment for horse-drawn wagons, just as earlier types such as the *lurs* reach their ultimate development. Period V represents the climax of these processes.

In religion the Early Bronze Age double-axe symbolism of warrior gods and sun symbolism of fertility is added to with new snake symbols of the central European mother goddess. Warrior symbolism is reinforced by the pairwise employment of ritual helmets with double ox horns, and shields. Ritual feasting is shown by drinking sets in bronze and gold (during the Early Bronze Age represented by elaborate wooden cups ornamented with tin sprags). Ritual animal symbols also include the horse, ox and swan/duck.

We may summarize the main trends as follows: the Late Bronze Age is characterized by increased ritual hoarding of prestige goods and of costly ritual gear accompanied by increased ritual and religious complexity, at least as evidenced in bronze and gold work. Much of this was probably present in the Early Bronze Age in organic material, although not all. At the same time we witness a marked decrease in mound building and in the deposition of prestige goods in burials. Thus, the hoarding frequency nearly represents an inversion of the frequency of building barrows. Period VI seems to reflect a partial reorganization of religious practices with its dominance of double neckrings and its scarce ritual evidence. Some of the communal ritual gear of period V, however, may have been deposited in this period.

When looking for factors that might have affected the above changes in ritual and consumption we should consider both the supply situation of bronze and the subsistence economy.

Fig. 12. Relationship between male/female consumption of prestige goods based on swords (male) and ornaments (female) from burials (mainly Early Bronze Age) and hoards (mainly Late Bronze Age). Early Bronze Age (after Broholm (1943–4) Late Bronze Age after Thrane (1968) and author's data. The figures of period I should be regarded as an approximation (drawn by Catherina Oksen).



The supply of bronze. The supply situation is difficult to estimate without entering into a circular argument. As we are analysing fluctuations and overall changes in consumption, we can hardly then use that parameter to infer the quantity of bronze supplied by long-distance exchange from central Europe. However, the relationship between consumption and the quantity of bronze circulating above the ground may be tested by analysing the wear of prestige bronzes as an indication of how long they circulated before deposition. Such an analysis has shown that increasing circulation time reflected decreasing supplies of bronze, although the relationship is rather complex (Kristiansen 1978a). According to this, period II (especially its later part) and the beginning of period III, represent a climax in bronze supplies. Then follows a period of very scarce supplies in the twelfth century, until supplies are resumed in late period III (late twelfth, early eleventh century). The beginning of period IV witnesses another decline in supplies, and they do not increase significantly again until late period V/early period VI (800–600 BC). This is followed by a steep decline in late period VI until supplies are finally cut off with the advent of the Pre-Roman Iron Age, when iron gradually makes its appearance (c. 500 BC). However, consumption of double neckrings continues into the beginning of the Pre-Roman Iron Age, but all these rings are heavily worn.

The general picture of the supply situation throughout the Bronze Age is summarized in Fig. 13. It can be supported by independent evidence – for instance the quantity of bronze invested in casting prestige objects. By period III we see an initial trend towards saving bronze (many more swords with pommels instead of full hilts), but especially in period IV we witness an explicit concern with bronze-saving castings (hollow neckrings, thin armrings instead of massive ones and so on). It is not until late period V that prestige bronzes generally regain their weight.

Finally the relationship between the number of imports and circulation time during the Late Bronze Age was tested in three regions to see how this conformed to the above picture (Fig. 14). As can be seen, circulation time and number of imports are inversely related to each other, that is, the more imports the shorter the circulation time. This would seem to confirm our hypothesis that increasing circulation time reflects periods of declining supplies of bronze. Again we should leave both period I and VI out of consideration as they represent specific cases of foreign influence characteristic of the beginning and the end of the Bronze Age. When doing so, it is well known that both period II and period V represent climax periods with respect to the number of foreign imports and imitations.

All in all we have substantial evidence to support the picture presented in Fig. 13.

Subsistence economy. Changes in the exploitation of the landscape as reflected in pollen analyses are rather badly documented for the Bronze Age in Denmark. However, recent analyses both in Denmark and Sweden have shown that a remarkable expansion of open land and pastures took place from around 2400 BC. The permanent nature of open land is confirmed by analyses of pollen and plant remains from well-preserved Early-Bronze-Age burials. These indicate extensive hard-grassed pastures and heathlands, reflecting a pastoral economy dependent on cattle (milk, meat and hides) and sheep (wool production). Barley was the dominant crop. Generally some 30–40% of the land was settled according to the distribution of graves (Kristiansen 1978a: Fig. 13). The settled areas seem to have been heavily deforested, especially central and western Jutland, the Thy region and northwestern Zealand. In the two latter regions, perhaps the most densely settled, this is even reflected in a dominance of stone cists for burials instead of the normal oak coffin, probably due to the scarcity of oak-mixed forests in the settled areas.

In accordance with the dominance of a pastoral economy in an open environment, light or average soils rather than heavy soils were preferred for settlements throughout the Bronze Age (Kristiansen 1978a: Fig. 11). Period III sees a trend towards heavier soils, but this was reversed again from period IV onwards. By the Late Bronze Age some changes, both in settlement and subsistence, can be observed. The settled areas are reduced due to settlement concentration, and the exploitation of the landscape consequently increased. This is reflected in pollen analyses by a further increase of open land, in the collecting of weeds from fallowed fields and in the now rapid expansion of beech on former pastures. At the same time temperature gradually declined and humidity increased, reaching a climax around 600 BC. These ecological changes, it seems, were accompanied by agricultural intensification. During the Late Bronze Age small bronze sickles are numerous, as distinct from the Early Bronze Age, and they are mainly found in female burials and hoards. Also ploughing is made more efficient by the introduction of the compound bow-ard. In periods V–VI wooden double-spades occur in northern Jutland, also reflecting intensified agricultural exploitation.

Thus, the Late Bronze Age is characterized by agricultural intensification and settlement concentration within the light soils of the old settlement areas. At that time, or perhaps a little later, agricultural production was reorganized, and settlements became more stable, reflected in the appearance of 'Celtic fields' all over southern Scandinavia. This was accompanied by the adoption of iron technology (for a discussion, see Kristiansen 1978a; 1981a; Stumann 1979; Windelhed 1977).

Fig. 13. Graph suggesting the quantity of bronze supplied to northern Europe during the Bronze Age (periods I–IV) (drawn by Catherina Oksen).

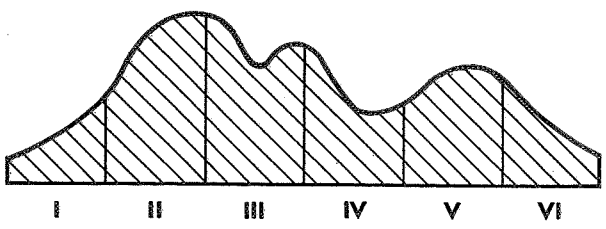
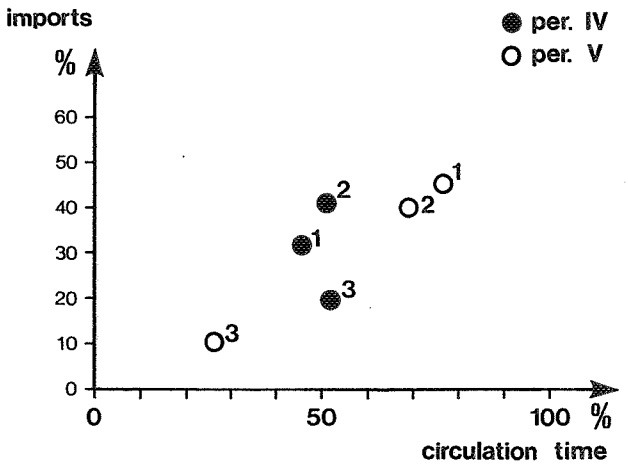


Fig. 14. Relationship between number of imports (minus imitations) and circulation time during the Late Bronze Age (period IV–V) on Zealand (Zone 1), Fuen (Zone 2) and northern Jutland (Zone 3). Circulation time decreases from left to right. Imports after Thrane (1975) (drawn by Catherina Oksen).



Interpretations and explanations. As will be clear from the above outline, no simple answer can be given to our original question: what determines changes in ritual and wealth consumption in an otherwise stable social organization characterized by cultural continuity? It can also be seen that some marked changes occur in the Final Bronze Age, period VI, which link this period closely to the first period of the Pre-Roman Iron Age. But let us first consider the unbroken tradition of the Nordic Bronze Age down to period VI.

As no single hypothesis accounts for the variation in the evidence, let us start by rejecting the more simple and obvious interpretations, one by one, and then in the end piece together what is left over.

1 It is clear that the change in burial practices from inhumation to cremation does not account for the reduction of male prestige goods, although it may explain why prestige goods in general are consumed by ritual hoarding rather than in burials from period IV onwards. Yet, cause and effect are not easy to determine. However, occasional ritual hoarding is a much cheaper method of consumption than the regularity of burial consumption, and that may be the more significant point (Kristiansen, in press).

2 This raises the question of the effects of the supply situation. For many years it was believed that the frequent hoarding and the decline in burial consumption during the Late Bronze Age reflected a situation of abundance, bronze being so common that it was no longer employed for personal prestige items that were therefore frequently hoarded and remelted. As has been demonstrated, however, this is not the case, rather the opposite. The decreasing supplies do seem to conform quite well with the shift from burial consumption to ritual hoarding, as a means of maintaining chiefly consumption and display in a period of scarcity (since period IV). Hoarding during periods II–III on the other hand was a complementary practice to burial consumption (Randsborg 1974: Fig. 6). When supplies increased during late period V, the ritual system had adopted ritual hoarding and urn burials without prestige goods as consistent features. But again, we are still left with the decrease in male consumption unexplained. Perhaps we should look more closely at the relation between decreasing social attributes and increase of ritual gear and ritual hoarding. Do these changes reflect a 'real' change in male social structure or an ideological change of representation?

3 It has been shown that the decrease in male status diversity and in the consumption of prestige goods had already begun with the advent of period III, that is shortly *before* the supply situation worsened. At the same time the number of female burials increased and they also witnessed an increase in status diversity. It would seem, then, that the need to signal male wealth and status in burials had decreased, due to a stabilization of the hierarchical social structure which had evolved during late period I and flourished during period II. This argument is supported by the fact that male burials in northern Germany (Mecklenburg) reach a climax both with respect to consumption and status diversity in period III, at the same time as this area was integrated into the alliance and exchange system of the Nordic Bronze Age.

Thus, the decline in male status diversity and prestige consumption did not in the first place reflect a real decline in social complexity, but rather a change in the ideological manifestation of wealth and status. This can be interpreted as reflecting a stabilization of male social structure. The continuity of chiefly burials is further testified by the unbroken employment of razor and tweezer in burial equipment throughout the Late Bronze Age.

At the same time, however, the investment in ritual gear was heavily increased, as was its consumption by ritual hoarding. Whereas, in the Early Bronze Age, ritual gear, such as double axes or early *lurs*, were rarely deposited, we are suddenly presented with a widespread hoarding of such implements. In the Early Bronze Age they might just as often have occurred in male burials, they are now almost exclusively deposited in an isolated ritual context of hoarding. It should be noted that most of these rather elaborate and extremely valuable sumptuary goods were attributes of male priestly and chiefly functions – *lurs*, shields, horned helmets, and probably also the golden drinking cups. It would seem then that the focus of male display and competition did shift from *personal attributes* of chiefly, mainly warrior functions, to chiefly, mainly priestly, more *communal functions*. The reinforcement of priestly functions would conform well with a situation of scarce supplies of bronze leading to increased competition of alliances on the one hand and to communal display, rather than personal display, on the other. Also the continuous accumulation of new religious impulses from central Europe can be seen to be part of chiefly, priestly control and ritual competition. Such communal ritual competition and display served to regulate and compensate for destructive inter-communal warfare in a period of declining supplies of bronze. (Otherwise, personal weapons should have been relegated from status display and consumption due to their regular use.)

Having now shed some light on the change in male status display we are still left with the increase of female consumption unexplained. Let us, however, bridge our analyses by first considering the construction of chiefly barrows and their implications for our analyses.

4 The decline in the construction of chiefly barrows during period III, and the employment of existing barrows for secondary burials during the Late Bronze Age would seem to conform quite well with the proposed explanation of increasing social stabilization with less need to exaggerate and legitimate chiefly superiority. The need was rather to emphasize the unbroken rule of chiefly lineages by employing the barrows of the chiefly ancestors for their successors. Later the rise of regional political centres and new ruling chiefly lineages during the Late Bronze Age resulted in the construction of a few monumental chiefly barrows, whereas subordinate local lineages in new settlement areas employed small urn barrows. Such centralization processes and the concomitant employment or revival of old traditions of display would conform well with the above proposition that wealth consumption and monumental barrows are closely linked to the legitimation of rising elites, based on the political and military success of male chiefly lines. That might also account for the pronounced male dominance in the early phases of social stratification (period II and III).

5 Although this is probably true, there is more to it than social dynamics. Barrows, it should be remembered, also relate very closely to the exploitation and control of land, and ultimately to subsistence, by the repeated removal of the fertile upper layers of soil for their construction. In fact, the 40,000–50,000 or so Bronze Age barrows represent the devastation of several hundred thousand hectares of good soil in a period of a few centuries. In a situation of continuous expansion this would scarcely harm production. However, the settlement territories of the Early Bronze Age had for the greater part been continuously exploited since the Single Grave Culture (in Jutland) and the Late Neolithic (in eastern Denmark). Although this exploitation formed part of a gradual cyclical movement of fields and pastures, the overall productive potential of the settled areas must have decreased. Owing to increasing soil degradation, marginal lands were given up and from the Late Bronze Age settlements clustered. The pressure on land was further increased, leading to an intensification of production. Consequently, the final decline in mound building (from period IV) can be explained as a function of increasing contradiction between ritual/political and economic demands, demonstrating the intricate interaction between social, economic and ecological factors in the decline of mound building and the stabilization of social hierarchies.

The development of chiefly, communal ritual and ritual hoarding would also seem to represent a ritual/political response to a situation of increasing social and economic contradictions – the reinforcement of the mythical and religious powers of chiefly lines served to legitimize and stabilize the political superstructure of an increasingly degraded economic base, reflected in among other things the decline of the construction of monumental barrows. We are led finally towards the sphere of production and the question of its impact on changes in male/female status consumption.

6 As demonstrated earlier, the Late Bronze Age is characterized by gradual changes in settlements, climate and ecology, leading to intensification of production and increased exploitation of the landscape. The character of this intensification is more precisely indicated by technological innovations, such as the compound bow-ard, and by the increase of cereals in pollen diagrams. All in all a heavier dependency on agricultural production is evident. The giving up of some marginal lands and the spread of the beech point in the same direction – pasture land was given up. This trend would gradually lead to a more stable and permanent settlement pattern, and a regulation of fields and pastures. In the end the transmission of land, rather than livestock, would become a major focus.

With this background the widespread occurrence of small bronze sickles in both hoards and burials makes sense. Harvesting and the preparation of fields now became a major activity which, according to the find context of sickles, was mainly carried out by women. It would seem then that the changed position of women should also be related to a gradual shift from a pastoral economy towards a more agricultural economy – or at least that agricultural production became more important in a period of ecological degradation and the lowering of productive potential of the settled areas. The dependence on agricultural land rather than pastures also changed the focus of male prestige from alliances/warfare and the accumulation of livestock towards the preservation and maintenance of productive land.

Thus, the rise of female ranking and wealth display should probably be related both to the stabilization of male ranking, allowing wealth to be invested in wives and daughters, and to the increased importance of females in production and alliances.

The exchange of females in regional alliance politics can be demonstrated already from late period I between northern Germany and Zealand and such alliance politics seems to have been an important aspect of political expansion and control of the exchange of bronze (Kristiansen 1981a: 254ff). This would account for the development of female ranking and wealth display, but not for the decline in male wealth display from period IV onwards. However, in a period of declining supplies of bronze, females

might have increased their importance as a medium for establishing alliances and maintaining the flow of bronze. Thus, the increase in female ranking and wealth display and the concomitant decline in male display can be explained as a function of decreasing supplies of bronze.

I thus propose that the decline in male display – or rather the conversion from social to communal ritual wealth – and the increase of female display of wealth from late period III onwards should be seen as a combined result of declining supplies of bronze, intensification of agriculture and increased importance of females in alliance politics and in agricultural production. It may further be suggested that these changes were accompanied by changed rules of inheritance and transmission of land through both male and female lines. The details of the ultimate consequences of this development, leading to the final collapse of the theocratic prestige-goods system of the Bronze Age and the reorganization of both settlements and economy during the Pre-Roman Iron Age, are beyond the scope of this article (see Kristiansen 1980; Pearson, this volume).

7 As will be clear from the above analysis, we are dealing with a complex interplay between processes of social, economic and ritual change, some of them general and some of them more specific. I have tried – by scientific trial and error (falsification) – to construct a processual chain of events (1–6 above). As general processes I have considered the concomitant rise of ruling elites/monumental barrows/display of male wealth, followed by consolidation, decline of monumental barrow building/of male wealth display and increase of female wealth display. These processes, however, are accompanied by changed conditions of production (ecological degradation and agricultural intensification), leading to decreasing supplies of bronze and further changes in wealth consumption from burial to hoarding, and an increase of communal ritual and of female wealth display. It may further be suggested that this sequence should be regarded as irreversible, triggered by the social and political dynamics of the Bronze Age prestige-goods system, and constrained by the ecological and technological conditions of a small-scale economy in a temperate habitat.

With respect to the proposed general processes of the rise and consolidation of ruling elites and their archaeological correlates, we find a rather similar pattern during the Iron Age. Thus, after the reorganization of settlements and economy during the Pre-Roman Iron Age (500–100 BC) accompanied by settlement expansion into previously forested heavy soils, we suddenly find a horizon of rich male weapon burials from 100 BC, reflecting long distance contacts with the Celtic world. During the following Early Roman period (0–200 AD) rich female burials also make their appearance, together with Roman imports, and from 200–400 AD, the Late Roman period, male weapon burials disappear and rich female burials dominate (Hedeager 1978; 1980; Hedeager and Kristiansen, in press; cf. Pearson, this volume). Huge depositions of weapons in moors demonstrate conflict and war between competing regional kingdoms. From 400–800 AD, after the collapse of the Roman Empire, wealth disappears from burials and is hoarded instead. At the same time, pollen diagrams reflect marked changes in the exploitation of the landscape – pastures are given up and agricultural production is probably intensified, a development that had begun by 200 AD.

This sequence – although taking place within a different social and economic framework – has much in common with the Bronze Age sequence and might indicate that we are dealing with a more general pattern. The rise of Viking kingdoms during the ninth and tenth centuries also reveals an initial sequence of male warrior burials as well as runic monuments (Randsborg 1981).

Thus, I believe that the Bronze Age of northern Europe highlights some of the general conditions and developmental processes that govern the relationship between material function and cultural form in ranked and stratified societies.[14]

Conclusion

Some questions have been posed, some answers proposed and the reader may now deliver his or her judgement. When doing so, however, the ultimate purpose of this article should be remembered – to demonstrate the necessity of distinguishing between material function and cultural form as a prerequisite for interpreting and explaining social organization in archaeological terms. This can only be done by considering cultural form within a larger framework of production and reproduction in order to determine its material functions. I have tried to illuminate the potential and the necessity of such an approach by examples from later European prehistory (4000–500 BC). It is suggested that archaeologists should be searching more consistently for the conditions that govern cultural manifestations of material functions in societies at various levels of social complexity and in various stages of their development. This determines the interpretations and explanation of a major part of the archaeological record.

Notes

The general theoretical position adopted in this article is derived mainly from structural Marxism as it has been developed and applied in recent works by Jonathan Friedman and Mike Rowlands especially, heavily influenced, however, by Maurice Godelier's version of structural Marxism and the World System theory of Emmanuel Wallerstein. I have not considered other

Marxist directions, partly because of my ignorance of them and partly because I have not found them useful in an archaeological context. This is the case, for example, with respect to the German 'Frankfurt School', as it is mostly concerned with sociology, although a (rather primitive) historical and evolutionary perspective has been taken up in recent years (Eder 1976; Habermas 1976; discussed in Götze and von Thienen 1981). Also I have not considered the application of Marxist theory to archaeology in the communist countries (discussed in Klejn 1977), in part due to my lack of knowledge of the Russian literature, but especially due to the fact that in most East European countries so-called Marxist explanations normally consist of a few mechanical statements at the end of an otherwise traditional archaeological analysis. To my knowledge it is only in East Germany that one finds an explicit concern to combine Marxist theory with archaeological method (Herrmann 1965; 1979; Herrmann and Sellnow 1973; Otto and Brackmann 1975) and social anthropology (e.g. the journal *Ethnographisch–Archäologische Zeitschrift*).

1 One of the basic problems in a mathematical approach to transformations is methodological/empirical. In most cases of major social transformations in prehistory and early history the nature of the empirical evidence changes drastically just as we witness major breaks in cultural continuity. This implies that it is rarely possible to apply methodological parameters that cover 'both sides' of such transformations. One may apply specific parameters designed for, let us say, the evidence of the Bronze Age or the Iron Age, but not for both periods. This empirical and methodological incompatibility implies that explanations remain within the realm of intelligent interpretation and theoretical deductions. Mathematical approaches to transformations consequently remain a heuristic device – a tool for thinking rather than for concrete analysis. This is apparently also the position taken in Renfrew's suggestive introductory article (Renfrew 1979). With respect to the scientific framework of New Archaeology – generally more rigorously prescribed than performed – I still find that some of the best critical discussions of the limitations of such a framework are a handful of earlier articles by Adams (1974), Flannery (1972; 1973), Freeman (1968), and Kushner (1970), going far beyond the trivialities of ideographic/nomothetic and induction/deduction debates.

2 I consider C.J. Thomsen's Stone, Bronze, Iron Age scheme, and Worsaae and de Mortillet's discovery of the Old Stone Age mainly as empirical observations, fundamental, but with little or no bearing upon evolutionary theory, except in very general terms.

3 The methodological and theoretical hangovers of German archaeology are evident in the historical self-critique in Eggers's book of 1959, which should be compared with Jacob-Friesen's book of 1928. See also Hachmann, Kossach and Kühn (1962) and Klejn's review of this general research tradition (1971; 1974) which primarily failed because it was unable to develop common criteria for different types of migration, invasion and diffusion (examples and discussion in Adams 1968; Myhre and Myhre 1972. For an interesting New World attempt, see also Thompson 1958).

4 Willey and Phillips's *Method and Theory in American Archaeology* (1958) and Clarke's *Analytical Archaeology* (1968) represent related attempts at an alternative solution through the analytical and methodological refinement of the traditional framework, in Clarke's book supported by quantitative methods and statistics.

5 I am here especially thinking of 'primitive' or small-scale societies (bands and various forms of tribal structures) and not the more developed systems, such as asiatic or feudal states, with a long and outstanding Marxist research tradition not taken into consideration in this article.

6 The same explanatory limitations characterize ethnoarchaeology. Although the experience gained from such fieldwork has proved extremely valuable with respect to understanding the nature and the properties of the archaeological record one should be very careful not to infer general explanations from such local studies, just as their social significance for archaeology is to be understood in the context of the present day world economic system, a point which is generally not sufficiently realized. A good critical discussion of the theoretical framework of ethnoarchaeology has recently been offered by Schiffer (1978).

7 In an earlier paper I have attempted to outline some basic features of the evolution of tribal systems in temperate northern Europe 4000–500 BC (Kristiansen 1982), and the reader is referred to this article for references to relevant literature (note 1). For valuable advice and discussions on neolithic ritual I want to thank Sven Thorsen, the Ancient Monuments Directorate and Klaus Ebbesen, University of Copenhagen.

8 A clue to the social and ritual value attached to battle axes is given by the fact that only one had been ritually buried at the regional causewayed camp at Sarup (Andersen 1980: Fig. 24).

9 We lack any systematic analysis of the average quantity of stones contained in undisturbed megaliths and the amount of virgin stone-scattered land needed to supply this quantity. If we make a conservative guess of 5–10 ha. per megalith and estimate the original number of megaliths as approximately 20,000 the implications are quite suggestive.

10 This argument is further supported by the fact that megaliths cluster distinctively on the best soils in southern Scandinavia and are very scarce or absent on the poorer, light soils.

11 With respect to literature, the reader is referred to the bibliography in Kristiansen (1981a) with the addition of a forthcoming conference report from a Bronze Age seminar held in Lund, May 1982.

12 Chiefly male double burials might indicate a division of 'priestly' and 'political' functions, originating in the Single Grave Culture. This pairing is also strongly evidenced in religious symbolism.

13 For a definition and analysis of ritual hoards, see Levy (1982). From this it is clear, however, that ritual hoarding can be regarded as an alternative way of depositing personal sets of sumptuary goods.

14 After the completion of the manuscript, the book *Ranking, Resource and Exchange* has appeared (Renfrew and Shennan 1982) with a collection of stimulating papers, many of them bearing upon the problems discussed in this article. With respect to the Danish evidence Shennan's paper elegantly revives the old problem of amber (Shennan 1982). This I deliberately avoided in my earlier papers, as I wanted to show that the major factors were rather rooted in subsistence and the organization of production, with amber on top of that as a dependent variable (otherwise northwestern Europe should not have seen a decline during the Late Bronze Age). Shennan's paper, however, puts the Bronze Age evidence into a refreshing long-term perspective that seems compatible with such a view. Randsborg's paper (1982), on the other hand, although it has some stimulating ideas, must be rejected for its simplistic climatic determinism, an approach lately taken to its extreme by Bouzek (1982). Also Hodder (1982) *Symbolic and Structural Archaeology* and Renfrew, Rowlands and Segraves (1982) *Theory and Explanation in Archaeology* appeared after the completion of the manuscript. References have therefore been determined by my knowledge of the manuscripts in draft versions.

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