

When an Indian burns himself  
 He cremates his flesh and bone.  
 Does he fear holy torment,  
 Or the pressure of the grave  
 Upon his flat skeleton?

(Abu al-Ala al-Ma'arri (973–1057),  
*Birds through a Ceiling of Alabaster*,  
 Penguin Classics, 1975)

We can bury her, burn her or dump her.  
 (Line remembered from the Undertaker's sketch,  
*Monty Python's Flying Circus*)

## Chapter 1

### Approaches to the archaeology of death Robert Chapman and Klavs Randsborg

What could be more universal than death? Yet what an incredible variety of responses it evokes. Corpses are burned or buried, with or without animal or human sacrifice; they are preserved by smoking, embalming or pickling; they are eaten – raw, cooked or rotten; they are ritually exposed as carrion or simply abandoned; or they are dismembered and treated in a variety of ways. Funerals are the occasion for avoiding people or holding parties, for fighting or having sexual orgies, for weeping or laughing, in a thousand different combinations. The diversity of cultural reaction is a measure of the universal impact of death. But it is not a random reaction; always it is meaningful and expressive.

(Huntington and Metcalf 1979, p. 1)

The archaeology of death is not a new subject. An interest in the mortuary practices of past human cultures has been evident throughout the development of archaeology to its present disciplinary status. Indeed there is little to match the discovery of an impressive new grave assemblage in generating both professional and public enthusiasm and demonstrating 'the universal impact of death'. The recent finds of a Celtic chieftain's tomb in southern Germany and the claimed tomb of Philip II of Macedon in northern Greece support this contention. But such finds sit on the tip of literally thousands of burials known and analysed by prehistoric and historic archaeologists in every part of the world. In addition to their overall frequency, the myriad variable forms in which they occur ('the diversity of cultural reaction') have ensured that

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data on mortuary practices have played a central role in the study of social, cultural, chronological, ethnic and racial problems.

If we accept the view expressed by Huntington and Metcalf that the cultural reaction to death is not random but 'meaningful and expressive' then we must concern ourselves with the problems of meaning and expression. Of course these problems can be approached at different levels (e.g. 'emic' and 'etic' – Harris 1969). In this volume the central argument is that archaeologists need a body of theory in order to relate the mortuary data at their disposal to patterns of human behaviour within past human societies. Within the last two decades such theoretical perspectives have been found within the New Archaeology and directed towards the study of social organisation and the dynamics of cultural systems. But given the emphasis placed upon the potential of mortuary data, it seems somewhat surprising that there has been only one book devoted to it within the last ten years (Brown 1971*b*). Doctoral dissertations and papers abound and there is an excellent review article by Tainter (1978) but, even though *Approaches to the Social Dimensions of Mortuary Practices* (Brown 1971*b*) went out of print within two years of publication, no further attempt has been made to integrate the wide range of research in a single volume.

This book represents an attempt to refocus archaeologists' attention upon the meaning and expression of cultural reactions to death. In keeping with the series in which it appears, the emphasis is on the new directions of current research. Some continuity with the earlier book is evident in the content of several papers and also in the presence of that volume's editor. The evolution and critical appraisal of the ideas presented in 1971, as well as the subsequent emergence of new approaches, are central to this volume.

In order to relate the studies presented in this book to each other and to past and present research into the archaeology of death, some coherent introduction is necessary. We do not pretend that what follows is an exhaustive presentation of work in the field of mortuary studies. Our discussion centres initially upon prehistoric Europe, since this is the area in which our own research has been pursued, but broadens out subsequently to consider research pursued in North America and elsewhere. We do not see these geographical limitations as restricting the value of the discussion, since we believe that the focus upon problems, approaches and theory gives it a wider relevance. All but one (Randsborg) of the papers published in this volume are concerned with pre-state societies, but we refer also to mortuary practices in more complex societies. We begin by trying to document the problems for which mortuary practices were thought to provide a critical testing-ground at earlier periods in the history of archaeology. Then we examine the anthropological perspectives introduced in the New Archaeology and applied to the analysis of prehistoric cemeteries. The many stimulating problems which have been raised by these approaches are discussed. The wider perspectives of regional analysis, the measurement of biological distance,

palaeodemography, palaeopathology and the emerging field of dietary analysis are added to provide a broad illustration of the range of problems upon which the analysis of mortuary practices is being focussed.

#### **Speculation, chronology and normative thought**

In the pre-scientific period of archaeology's development in both Old and New Worlds, antiquaries, travellers and the public at large came into contact with burial mounds and other forms of monumental burial from a very early date. In Europe such mounds were believed to contain the direct ancestors of the local populations and were central to disputes over national boundaries. More often speculation centred upon the identity of the builders (who were to be found in the annals of history or in folk tales), a trend which culminated in the Romantic period of the early nineteenth century. In searching for the particular groups responsible for these mounds (frequently known as Giants' Graves) the early antiquaries and historians often reached what we would now regard as eccentric conclusions. For example the megalithic tomb at New Grange in the Boyne valley of Ireland was at different times attributed to the labours of Egyptians, Danes and Phoenicians (Daniel 1964, p. 24). The Danes were also one of the groups looked to for an origin of the mounds of the Ohio valley in North America (Willey and Sabloff 1974, pp. 30–4).

In the late eighteenth and the nineteenth century, burials became the subject of the first systematic excavations. Pioneers such as Thomas Jefferson in Virginia (Willey and Sabloff 1974, pp. 36–8), Colt-Hoare and Cunnington, Bateman, Mortimer and Greenwell in England, and Worsaae in Denmark (Marsden 1974; Daniel 1964, 1975) began excavation of literally hundreds of burial mounds. The quantity of data on mortuary practices and grave goods (albeit of variable quality) from the excavations carried out throughout the nineteenth century was on such a scale that we are still trying to collate it in comprehensive corpora. Although excavators were still concerned with the identification of the builders of such mounds, the development of the Three-Age system in Denmark helped to put such research in a less speculative context. Indeed it was the work of Worsaae (1843, 1849) on Danish burial mounds which not only helped to verify the Three-Age system, but also established the chronological approach to the analysis of mortuary practices: Worsaae's Law (i.e. those artefacts found together must have been used together) has been described as 'the first use of grave associations to solve a chronological problem' (Rowe 1962, p. 130). It was the extension of this approach, as well as the development of the typological method, that enabled such scholars as Oscar Montelius (e.g. 1885), Paul Reinecke (e.g. 1904–11) and Joseph Déchelette (e.g. 1908) to produce the chronological schemes which provided the basis for the study of European prehistory in the present century.

Mention of these early developments, particularly in Scandinavian archaeology, should remind us that the foundation in the nineteenth century of museums and other 'antiquarian' institutions devoted to local or regional studies

greatly aided the collection of data on prehistoric and early historic burials. This early establishment of European museums was of the utmost importance, since it saved enormous amounts of material which would have been lost in the face of the economic expansion of early industrialism, with its intensive agriculture, building of railways and roads and rapid development of towns. For this reason it has proved less difficult to undertake regional analyses of mortuary practices in Europe than in many parts of the world where reliance is placed solely on modern excavations and recently developed regional sampling strategies.

It should be stressed that, for the Neolithic, Bronze and Iron Ages, burial evidence was the most substantial body of data available in the nineteenth century. Known settlements were few outside the regions with monumental or stone structures. Within Europe the notable exceptions (apart from the settlements of the Aegean Bronze Age excavated by Schliemann) were the Danish 'kitchen-middens' and the Swiss lake-side settlements. These were unusual in that the former were easily visible and the latter were well preserved under subsequent rises in lake levels. Elsewhere, and with the exception of the 'tells' of south-east Europe, settlements were only more rarely distinguished by their surface cultural materials. It was not until the twentieth century that more attention was given to settlement excavation, with important implications for the interpretations which had previously been based upon the evidence of mortuary practices. In short we state that the early history of archaeology was very much the history of burial studies.

In addition to the chronological approaches, some inferences about social organisation were made. In general the late-nineteenth-century archaeologists were interested in the same questions as ethnographers and other students of society in the Victorian Age. One example here concerns the relations between the sexes. In Denmark it was noted that Bronze Age women with rich graves 'were not the slaves of the men' and culture must have been on a relatively high level, since African societies with marriage by purchase were considered 'primitive' by those studying the evolution of culture (e.g. Müller 1897, pp. 400ff.). Most observations, however, concerned social stratification and other social roles, as reflected in the presence of certain artefact types like weapons, tools, keys etc. (e.g. Müller 1897, pp. 401ff.).

A greater concern with social organisation as a relevant variable in the understanding of mortuary practices also appeared in early-twentieth-century anthropology (e.g. Hertz 1907; Durkheim 1915), and replaced the later-nineteenth-century concern with primitive religion (e.g. Tylor 1871; Frazer 1886).

In the twentieth century the chronological, social and religious approaches to the archaeology of death have been continued, although there has been much variation in their adoption and frequency within both the Old and New Worlds. Whether or not stratified sites and absolute chronologies are available, typologies and seriations of material from mortuary

contexts continue in use in an attempt to analyse both spatial and temporal variations in culture. The central and West European Bronze Ages provide good examples of this approach. With the advent of multivariate analyses and computer simulations, as well as a general increase in the use of mathematics and statistics in archaeology, more refined examples of seriation and chronological ordering have emerged (e.g. the series of analyses of the La Tène period cemetery at Münsingen-Rain, Switzerland – Doran and Hodson 1975; also Renfrew and Sterud 1969; Graham, Galloway and Scollar 1976). The seriation method of 'sequence-dating' devised by Petrie (1899) to cope with nine hundred predynastic Egyptian graves has been reviewed over half a century later by Kendall (1963), in order to examine statistical problems inherent in the original work. Finally the simulation of cemetery formation has been developed in an experiment in the formulation and evaluation of hypotheses (Doran 1973).

Although the chronological approach has been pursued this century, the first fifty years were dominated by the normative, cultural approach. Within anthropology the reaction against the theory of unilinear evolution led to the rise of diffusion as a mechanism proposed in explanation of changes in material culture in time and space. Under the influence of German ethnologists such as Graebner and Schmidt and Americans such as Boas (e.g. 1940) and Wissler (1922), much attention was given in anthropology and archaeology to the definition of culture-areas and the flow of traits within and between them. Within European prehistory the large amount of mortuary evidence from excavations and museum collections played an integral part in the recognition of regional as well as chronological variations in material culture. The main formulation was that of Childe, who defined and interpreted the 'culture' as follows:

We find certain types of remains – pots, implements, ornaments, burial rites, house forms – constantly recurring together. Such a complex of regularly associated traits we shall term a 'cultural group' or just a 'culture'. We assume that such a complex is the material expression of what would today be called a 'people'. Only where the complex in question is regularly and exclusively associated with skeletal remains of a specific physical type would we venture to replace 'people' by the term 'race'.  
 (1929, pp. v–vi)

The types (including burial rites) were 'socially approved' (1956, p. 8) and common to the members of particular societies at particular times:

Community of tradition imposes on all members of the society in question a common pattern of behaviour. *This must result in the production of standard types, which, if they be artifacts, burial rites or remains of repasts, archaeology can identify.*

(1956, pp. 9–10, our emphasis)

An obvious condition for the association of types is that they shall be in use or occupation at the same time. All types thus associated should then have the same chrono-

logical co-ordinate. But repeated association requires no less that they shall be used by the same society, that is *by persons inspired by the same common tradition of wood-working, fighting, dress, domestic architecture and burial rites.* (1956, p. 16, our emphasis)

This then was a 'normative' view of culture (see Binford 1965), that common patterns of behaviour produced spatial regularities in traits, including mortuary practices, and these were crystallised into 'cultures'. Similarities and differences between cultures in such features as inhumation or cremation, individual or collective burial and the forms and average dimensions of graves were interpreted in terms of diffusion or population movement. Binford summarised the assumption behind such an approach as follows: 'the degree of formal similarity observed among independent sociocultural units is a direct measure of the degree of genetic or affiliational cultural relationship among the units being compared' (1971, p. 9). While in North America Kroeber (1927) argued that burial rites should be considered along with 'fashions', it was Childe's opinion that they belonged to the field of religion: in itemising the different aspects of cultures he placed burial rites under the heading of 'Ideology' (1956, p. 131).

Mortuary practices were therefore an integral part of Childe's cultural framework. The later prehistory of Europe was systematically organised in successive editions of *The Dawn of European Civilisation* (e.g. 1925, 1957) into a series of cultures. Study of the distribution of traits allowed the inference of diffusion or population movement. Where such traits and indeed whole cultures occurred over thousands of square kilometres within a short period of time, as in the case of the Corded Ware/Battle-Axe and Bell Beaker cultures, such inferences were thought justified. Physical anthropology came to the support of these inferences with its use of cephalic indices to define different racial groups. When such traits as mortuary practices showed discontinuities from one culture to its successor (e.g. from communal to single burial), inferences of diffusion or population movement were again drawn. Such discontinuities became of particular importance in those areas in which historical and/or linguistic evidence was being used to detect the existence and spread of ethnic or linguistic groups. It has been argued that the spread of pit-graves or ochre-graves, along with battle-axes and other traits, demonstrates the spread of the Indo-Europeans from their southern Russian steppe 'homeland' in the late fourth and third millennia B.C. (e.g. Gimbutas 1973). Similarly the appearance of widespread Urnfield cremations in the late Bronze Age has been discussed in relation to the origins of Celtic-speaking tribes (e.g. Childe 1930). This equation of 'cultures' with ethnic, racial or linguistic groups was carried to its extremes by Germans such as Kossinna (Daniel 1964).

In spite of Childe's insistence that such 'cultures' be defined by many aspects of life, he was compelled to admit that many of them were known solely from their mortuary practices (1956, p. 122). This was certainly the case with the Corded Ware/Battle-Axe culture and the Bell Beaker culture

mentioned above. With the subsequent excavation of many more settlements, it is now apparent that many cultural discontinuities (whether in time or space) were more apparent than real. Recent years have also seen mounting criticism of the general normative, cultural approach (e.g. Binford 1965; Renfrew 1977; Hodder 1978*b*; Chapman 1979), whether in Europe or North America. But the emphasis upon the definition of regularities or 'norms' in mortuary practices still survives in many areas, as can be seen from a recent survey of the European Bronze Age (Coles and Harding 1979). Similarly the simple explanation of such practices in terms of religious beliefs is still in the minds of many prehistorians.

When it came to the social approach to the archaeology of death, the first half of this century revealed a strong inclination towards the broad horizontal (e.g. tribal areas) rather than the local vertical (e.g. social stratification) dimensions of prehistoric societies. While Childe and his contemporaries related their 'cultures' to 'peoples' and examined their inter-relationships, as seen in trait distributions, they also used the burial evidence to infer social distinctions within such cultures. Notable here were interpretations of the existence of Bronze Age 'chiefs' or 'aristocrats', based upon such features as large mounds and rich grave furnishings. Examples of these included the Wessex culture barrows of southern England (Childe 1957), the Unetice culture burials of Helmsdorf, Leubingen (fig. 1.1) and Łęki Małe in Germany and Poland (Gimbutas 1965) and the Argaric culture burials in south-east Spain (Blance 1960). But such interpretations treated the rest of these prehistoric societies as being rather homogenous. One exception to this was the work of the German Otto (1955) on the Unetice culture, from the burials of which he inferred the existence of four levels in a social hierarchy. Warriors and archers were inferred from a number of contexts, while in Scandinavia there was a continuation of the discussion begun in the last century on the status of individuals from Bronze Age mounds (e.g. Moberg 1956). For example it was suggested that craftsmen belonged to the lower levels of society, since tools were not included among 'aristocratic' burials (Brøndsted 1939).

A less speculative basis for social inference existed in North America in the form of ethnological and archaeological research into recent Indian tribal customs and cultures. The observations on mortuary practices among these tribes by early travellers, traders etc., were employed in the interpretation of burial mounds and cemeteries, as can be seen, for example, in the series of Bureau of American Ethnology Bulletins published by the Smithsonian Institution (e.g. Bushnell 1920, 1927). These volumes include references to high-status burials, such as those of particular chiefs, and to sub-groups such as clans and phratries within tribes. To illustrate this point we refer to a quotation from the work of F.H. Cushing on the Tarpon Springs mound on the Gulf of Florida:

(the skeletons) with notable exception — probably those of chiefs and head men — had been dismembered previously to interment, but were distributed in distinct groups that I regarded as communal or totemic and

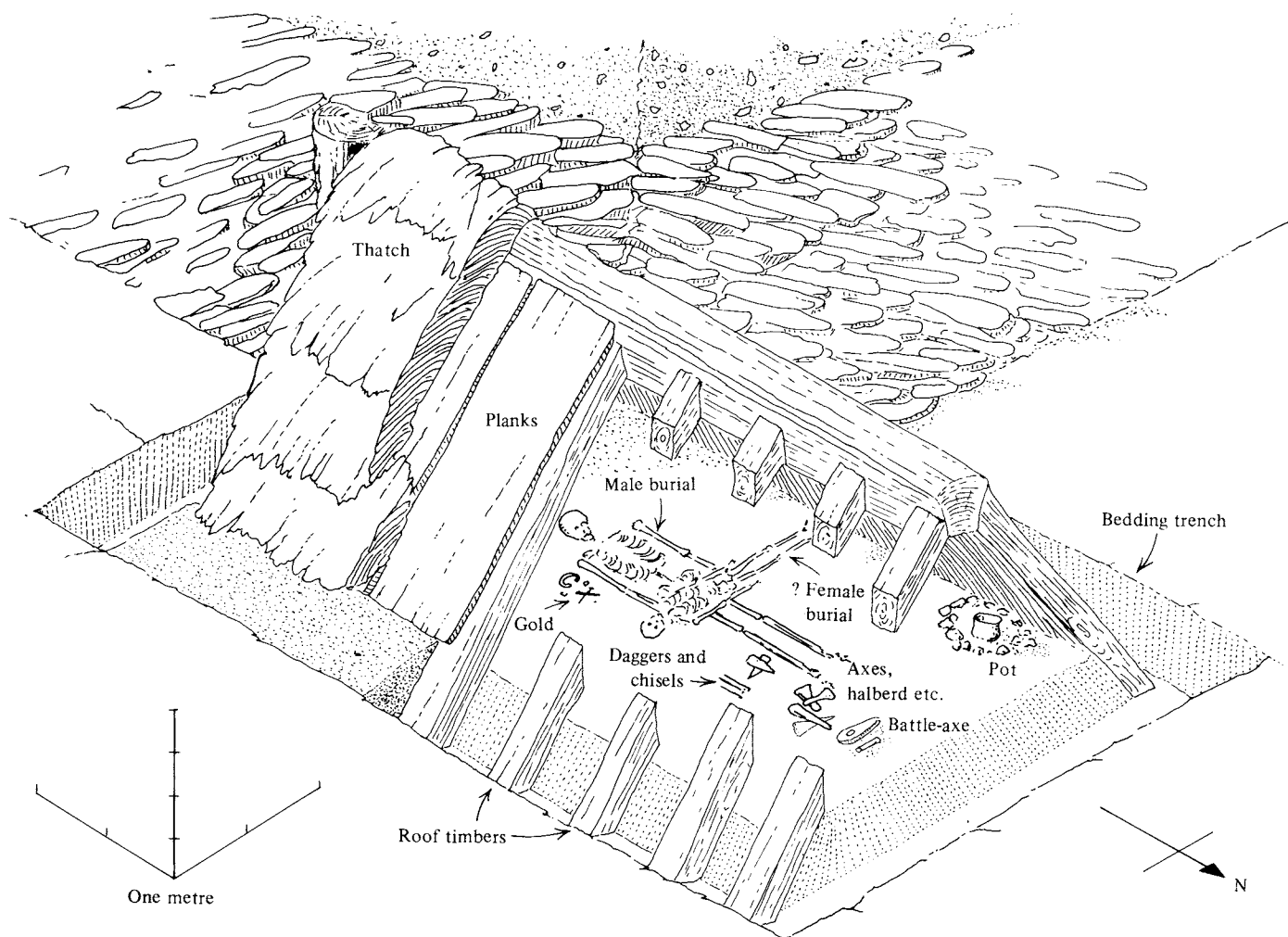


phratral, and of exceeding interest; for they seemed to indicate that the burial mound had been regarded by its builders as a tribal settlement, a sort of 'Little City of the Dead', and that, if so, it might be looked on as still, in a measure, representing the distribution and relation of the clans and phratries in an actual village or tribal settlement of these people when living. Moreover in the minor disposition of the skeletons that had not been scattered, but had been buried in parts, or else entire and extended, in sherd-lined graves or wooden cists within and around each of these groups, it seemed possible to still trace somewhat of the relative ranks of individuals in these groups, and not a few of the social customs and religious beliefs of the ancient builders. This possibility was still further borne out by the fact that with the skeletal remains were associated, in different ways, many superb examples of pottery and sacrificial potsherds, and numerous stone, shell and bone utensils, weapons and ornaments. (quoted in Bushnell 1920, p. 117)

From our side of the Atlantic it seems as if this 'possibility' was not actually realised in early-twentieth-century archaeology and more emphasis was placed upon normative cultural studies of mortuary practices. In addition it is worth noting two points: first that early writers in the nineteenth century often concentrated upon the mortuary rites for higher-status individuals such as chiefs (Swanton 1911); secondly that Kroeber's (1927) view of mortuary practices being classed alongside 'fashions', rather than within the field of social expression, was widely influential. The methodological basis for a social analysis of mortuary practices within archaeology had not been formulated.

Thus the archaeology of death had moved from speculative to chronological and cultural approaches by the early 1960s. At the same time evidence from sources in history, linguistics and physical and social anthropology was introduced to help explain both high-status burials and the appearance of major discontinuities in the archaeological record and in mortuary practices in particular. But the development of

Fig. 1.1. An early Bronze Age 'chieftain' from eastern Germany: the wooden mortuary house under a barrow at Leubingen. Source: Piggott 1965, fig. 67.



the earlier anthropological perspectives of Durkheim and his followers, linking mortuary practices to social structure, had to wait until the last two decades.

#### **Mortuary practices, society and the New Archaeology**

Among the central assertions of the New Archaeology was the denial of any essential limitations on our knowledge of the past. Binford (1968) argued strongly against the pessimistic view, current in the 1950s, that archaeologists could come to reliable conclusions only about the technology and economy of past societies, while social organisation was beyond the limits of reference. In Binford's opinion the adoption of a systemic approach and the search for a theoretical basis upon which archaeologists could construct relationships between material culture and other parts of the total cultural system led the way towards the abandonment of this position. It is important to note that the analysis of mortuary practices played a central role in demonstrating the veracity of this argument. As far as social organisation was concerned, complementary research was undertaken on disposal practices, from both archaeological and anthropological contexts, and on the analysis of structural features and artefact distributions within settlements (e.g. Deetz 1965; Hill 1968; Longacre 1968; Whallon 1968).

Although initially developed in his study of the Galley Pond Mound (1964), Binford's ideas on mortuary practices were not fully published until 1971. We must present his main points in some detail, since along with the work of Arthur Saxe (1970) they have been fundamental to many subsequent attempts to analyse the social dimensions of mortuary practices. Binford's paper consists of three main parts. First he presents what he calls the 'philosophical perspectives' of late-nineteenth- and early-twentieth-century anthropologists working on mortuary practices. In the work of Tylor and Frazer the disposal of the dead was studied within the context of 'primitive religion': ideas and beliefs were invoked as the reasons for particular mortuary practices. Binford refers to this as the 'rationalist-idealist's argument'. A different perspective was subsequently visible in Durkheim's followers, Hertz and van Gennep, who related the disposal of the dead to other aspects of the social system. Differences in mortuary practices could be attributed to the varying status of individuals within society, as well as such factors as mode of death. Furthermore mortuary rites were to be understood like other 'rites of passage', as marking a transition in the status of individuals, in this case into the afterworld. Now it was this theoretical perspective which had received little attention within archaeology. But in this, as in the earlier works of Tylor and Frazer and the later publications of Radcliffe-Brown and Malinowski, there was still an overall emphasis on 'mortuary custom in the abstract or focussed on particular categories of mortuary practices' rather than on observed variability in these practices within and between societies.

The work of anthropologists and archaeologists who have been concerned with explaining such variations in mor-

tuary practices forms the second part of Binford's paper. Such approaches are referred to as 'historical-distributional' and were exemplified in the cultural studies of mortuary practices outlined above. Binford's critique of these approaches in relation to mortuary practices forms an integral part of his general attack on the practice of culture history (cf. Binford 1965, 1972). He summarises the assumptions of this approach as follows:

(1) Culture is a body of custom which arises in the context of the conceptual-intellectual life of peoples; it distributionally varies directly as a function of the patterns of transmission and communication among peoples, and with the differential capacities or opportunities for intellectual experience . . .

(2) The customs of a single sociocultural tradition were originally uniform and formally distinct . . .

Multiple practices observed among sociocultural units result from cultural mixing or hybridization in the past . . .

(3) For practical purposes, the degree of formal similarity observed among independent sociocultural units is a direct measure of the degree of genetic or affiliational cultural relationship among the units being compared.

(1971, p. 9)

These assumptions are documented by reference to studies of mortuary practices.

Binford devotes particular attention to a paper by Kroeber (1927), who argued that mortuary practices may be less useful than other cultural traits in reconstructing cultural history, since they were unstable and owed that very instability to a behaviour similar to that of other fashions. Binford refutes the instability argument by indicating examples of mortuary practices which exhibited long-term stability. Clearly there was much evidence for both temporal and spatial variation in the stability of mortuary practices. As for the grouping of mortuary practices alongside 'fashions' Binford cites ethnographic cases which

consistently link formal differentiation in mortuary rites to status differences and to differences in the group affiliation of the deceased. This linkage demonstrates a set of mutual dependencies between forms of mortuary rites and social organizational features. We would then expect that other things being equal, the heterogeneity in mortuary practices which is characteristic of a single sociocultural unit would vary directly with the complexity of the status hierarchy, as well as with the complexity of the overall organization of society with regard to membership units and other forms of sodalities.

(1971, pp. 14–15)

Binford concludes this section by arguing that Kroeber's main propositions, although now refuted, were an important initial stage in a critical examination of the cultural-history approach and its assumptions outlined above.

The last part of Binford's paper is directed towards a study in comparative ethnography which enables him to

evaluate the success or failure of the culture history approach to the study of mortuary practices. He begins by arguing that the forms taken by symbols in mortuary practices should not be confused with what is actually being symbolised. Thus different disposal methods (e.g. inhumation, cremation) may have had a different significance in different societies (cf. Haglund 1976). Simply to compare these symbols and deduce some formal relationship between several societies, as is done in the culture-history school, becomes an illusory exercise. But what aspects of social organisation may be symbolised?

It is proposed here that there are two general components of the social situation to be evaluated when attempting to understand the types of social phenomena symbolized in any given burial situation. First is what we may call, with Goodenough . . . the *social persona* of the deceased. This is a composite of the social identities maintained in life and recognized as appropriate for consideration after death. Second is the composition and size of the social group recognizing status responsibilities to the deceased. We would expect direct correlations between the relative rank of the social position held by the deceased and the number of persons having duty-status relationships vis-a-vis the deceased . . . Also we would expect that the facets of the *social persona* symbolically recognized in the mortuary ritual would shift with the levels of corporate participation in the ritual and hence vary directly with the relative rank of the social position which the deceased occupied in life.

(Binford 1971, p. 17)

The main dimensions of the social persona which are recognised in mortuary practices are age, sex, social position, social affiliation and conditions and location of death.

Preliminary tests of these propositions are provided on a sample of 40 non-state societies taken from the Human Relations Area files. First a calculation was made of the average number of dimensional distinctions for four different subsistence types, hunter-gatherers, shifting agriculturalists, settled agriculturalists and pastoralists, which Binford argued represented 'a very crude index' of societal complexity. The results (table 1.1) show an interesting difference between settled agriculturalists and the other three. Secondly, the frequency with which the dimensions of the social persona were recognised in the mortuary practices of these different subsistence types was tabulated (table 1.2). The results gave some support to Binford's contention that, with increases in social complexity, the dimensions of social position and affiliation assume greater importance in mortuary practices. Thirdly Binford discussed correlations between the different dimensions of the social persona recognised in mortuary practices and the form which those practices took (table 1.3).

This analysis led Binford to employ his conclusions relating 'the form and structure which characterize the mortuary practices of any society' to 'the form and complexity of the organizational characteristics of the society itself' (1971, p. 23) to attack each of the three assumptions of the culture

Table 1.1. *Source: Binford 1971, table II.*

Subsistence category	Average number of dimensional distinctions per category
Hunters and gatherers	1.73
Shifting agriculturalists	1.75
Settled agriculturalists	3.14
Pastoralists	1.66

historian (see above). Mortuary practices are no longer to be used as indications of cultural diffusion or 'fashions', but rather they should be analysed within the context of variations in society and social complexity.

A similar concern with the potential of mortuary practices for social analysis was visible in Saxe's doctoral dissertation (1970), although he was less concerned with using this body of data to strike at the roots of traditional archaeology. Like Binford he argued that mortuary practices could be analysed within the context of the social system and emphasised that this approach required a concern with processual rather than formal regularities (1970, p. 1). The formal comparison of disposal methods told us little about the organisation of mortuary practices and what they actually symbolised. Saxe also adopted a cross-cultural perspective to test eight hypotheses regarding the organisation of mortuary practices in three societies: the Kapauku Papuans of New Guinea, the Ashanti of West Africa and the Bontoc Igorot of Luzon (Philippines). This more detailed study must be seen as essentially complementary to Binford's broader examination of the ethnographic record. Both used the concepts of role theory (e.g. social identity and social persona). Saxe's formal analysis of the mortuary practices of these three societies was employed to define disposal types which represented different social personae: in the case of the Bontoc nine such personae were recognised, such as old respected men, married/unmarried males/females and children less than seven years old. The eight hypotheses received variable support from these three societies, but what is important is that these modern test cases confirmed the social approach to mortuary practices argued by Binford.

It is important to note that the Binford/Saxe hypotheses and philosophical perspectives have formed the basis of many social analyses of mortuary practices undertaken in the last decade. One of Saxe's hypotheses, relating disposal areas to corporate groups, has been further tested by Goldstein (1976, this volume), while Tainter has expanded upon Binford's ideas to link energy expenditure in mortuary practices to the rank of the deceased in a sample of 103 ethnographic cases (1973a, 1975a). This proposition has also received support from contemporary American society. Rathje (1979, pp. 5–6) reports the results of work on Tucson cemeteries which show correlations between the deceased's job/income level and the form of the grave marker. Although sample size was small, a study

Table 1.2. Source: Binford 1971, table III.

Dimensional distinctions	Hunter-gatherers	Shifting agriculturalists	Settled agriculturalists	Pastoralists
Conditions of death	1	0	6	1
Location of death	1	1	0	0
Age	2	1	7	1
Sex	12	4	10	3
Social position	6	5	11	0
Social affiliation	4	3	10	1
Total cases	15	8	14	3

Table 1.3. Source: Binford 1971, table IV.

	Conditions of death	Location of death	Age	Sex	Social position	Social affiliation
<b>Body</b>						
(1) Preparation	—	—	—	—	2	—
(2) Treatment	2	1	—	—	2	2
(3) Disposition	2	1	3	—	2	1
<b>Grave</b>						
(4) Form	1	—	1	—	3	1
(5) Orientation	—	—	—	3	—	9
(6) Location	3	—	7	—	8	15
<b>Furniture</b>						
(7) Form only	—	—	—	16	5	—
(8) Quantity only	—	—	—	—	9	—
(9) Form and quantity	—	—	—	—	7	—

of the mortuary practices of Mexican-American families also provided examples of the cause of death (e.g. breast cancer, drug overdose) being more important than the deceased's socio-economic status in deciding the energy expended on the funeral. Lastly it was suggested that in periods of political or economic stress the presence of the deceased's family and religious affiliations on the grave marker would increase. Another contemporary example of the use of grave markers to symbolise such attributes of the deceased comes from rural cemeteries of the last hundred years in Hungary: differences of size, shape (fig. 1.2) and colour were and are still employed to symbolise religious affiliation, age, sex, marital status, social status, profession and way of death (Zentai 1979). In accordance with Binford's expectations the use of such symbols varies between communities, so that the same dimension (e.g. age) may be symbolised by different forms (e.g. different colours of grave posts).

The social perspectives of mortuary practices have by no means convinced all archaeologists. Some, including a large number of British archaeologists, still prefer to view the disposal of the dead within the context of 'intangible' religious beliefs. Thus Piggott has stated that 'grave archaeology from

the start presents us with evidence which is the product of complex mental situations and emotional states now irrecoverable' (1973, p. 10; cf. Wilson 1976, p. 3) and places this study 'within the field of religion' (1973, p. 14). Those archaeologists who follow this line of interpretation also show unease with the use of ethnographic evidence and derive support from a cautionary paper by Ucko (1969). Among other things he pointed out that burial practices are not necessarily indicative of afterworld beliefs, that grave goods do not always reach the grave, that absence of grave goods does not necessarily imply low status or poverty, large funerary structures do not always reflect rulers or chiefs and that body orientation varies in many ways. This variation observed in ethnographic studies disturbed many archaeologists (e.g. Hunter 1975, p. 80), all of whom seem to have neglected Ucko's two most important generalisations. First there may be many similarities in the disposal of the dead which do not reflect contact between people (1969, p. 275). Secondly 'in the vast majority of cases known ethnographically, a culture or society is not characterised by one type of burial only, but . . . on the contrary, one society will undertake several different forms of burial, and . . . these forms will often be correlated with the status of the deceased' (1969,



p. 270). In both cases Ucko is echoing the conclusions of Binford and Saxe.

Within the social approach to mortuary practices attention has been focussed upon the detection of ranking in prehistoric societies by analysis of their individual cemeteries (Tainter 1978; Brown, this volume). Concern with a more regional approach has been limited (e.g. Randsborg 1975*a, b*). James Brown (this volume) documents three major arguments that have been employed in the analysis of ranking. First there is the effort-expenditure principle proposed by Binford (1971) and expanded by Tainter (1973*a*, 1975*a*, 1978), who proposes that 'higher social rank of a deceased individual will correspond to greater amounts of corporate involvement and activity disruption, and this should result in the expenditure of greater amounts of energy in the interment ritual' (1978, p. 125). This energy expenditure will be reflected in the complexity of body treatment, the location and construction of the burial container and the extent and duration of ritual mortuary behaviour. Problems arise in the actual measurement of energy expenditure (Tainter 1978, p. 128; Goldstein, this volume), in the possible noise generated by parallel status relationships (Goldstein, this volume) and in the possible confusion of rank differences with stages in the interment ritual of individuals (Brown, this volume; Tainter 1978, p. 128). Secondly there is the argument that cer-

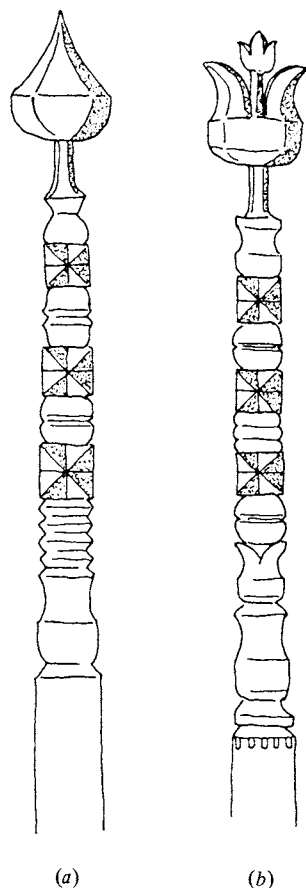
tain artefacts and attributes symbolise authority within society and that when these can be shown to cross-cut age/sex/personal quality distinctions, then some form of ranking is indicated (e.g. Stickel 1968; Larson 1971; Peebles 1971; Shennan 1975; but note also examples where such symbols do not cross-cut sex differences, but ranking is still indicated – e.g. Randsborg 1975*b*). Apart from the problems of preservation of such symbols in the archaeological record, the reliance upon this sole dimension of mortuary practices has been criticised. Indeed Tainter has published results of a cross-cultural survey which show that less than 5% of a sample of 93 societies used grave goods to symbolise status differences (1978, p. 121). Thirdly there is the demographic structure of skeletal populations and its agreement with or departure from that which would be expected in a 'normal' population.

Techniques used in the analysis of prehistoric mortuary practices have ranged from relatively simple tests of significance of association between age, sex and grave goods (fig. 1.3; e.g. Milisauskas 1978; Saxe 1971), to the nearest-neighbour analysis of burials within cemeteries to detect the nature of their spatial patterning (e.g. Peebles 1971; Tainter 1976) and computer programmes for cluster analysis (fig. 1.4; e.g. Shennan 1975; Hodson 1977), monothetic-divisive analysis (e.g. Tainter 1975*b*; King 1978), principal-components analysis (van de Velde 1979) and formal analysis (fig. 1.5; e.g. Saxe 1970; Brown 1971*a*). The use of entropy measurement, derived from information theory, has been recommended by Tainter both as an aid to formal analysis (1978) and in the detection of the degree of organisation reflected in the mortuary practices of past social systems (1977*b*, 1978). There have also been case-studies of the relative efficiency of these different techniques applied to the same data. Tainter (1975*b*) concludes that monothetic-divisive methods are most successful in isolating burial clusters, but Mainfort (1977) is less conclusive: while monothetic-divisive methods distinguished high-status burials they were less successful in dividing up the medium- to low-status burials, a pattern which was exactly reversed by the use of cluster analysis. In geographical range these analyses have covered hunter-fisher-gatherers from California (e.g. King 1969; Stickel 1968; King 1978) to the Sudan (Saxe 1971) and ranked societies from the eastern United States (e.g. Brown 1971*b*; Peebles and Kus 1977; Greber 1976; Mainfort 1977; Rothschild 1979; Brown, this volume; Goldstein, this volume) to Bronze Age Czechoslovakia (Shennan 1975).

Many of these studies have been concerned with using these techniques to place prehistoric societies on an evolutionary scale, such as Service's 'bands', 'tribes' and 'chiefdoms' and Fried's 'egalitarian', 'ranked' and 'stratified' societies (e.g. Brown 1971*b*; Peebles and Kus 1977; Chapman 1977, 1980). Such an approach has come under criticism as being concerned with rather general classification as opposed to detailed analysis and actual measurement of social variation (Tainter 1977*a*, 1978).

From this discussion it can be seen that the philosophy and methodology of the social approach to mortuary practices

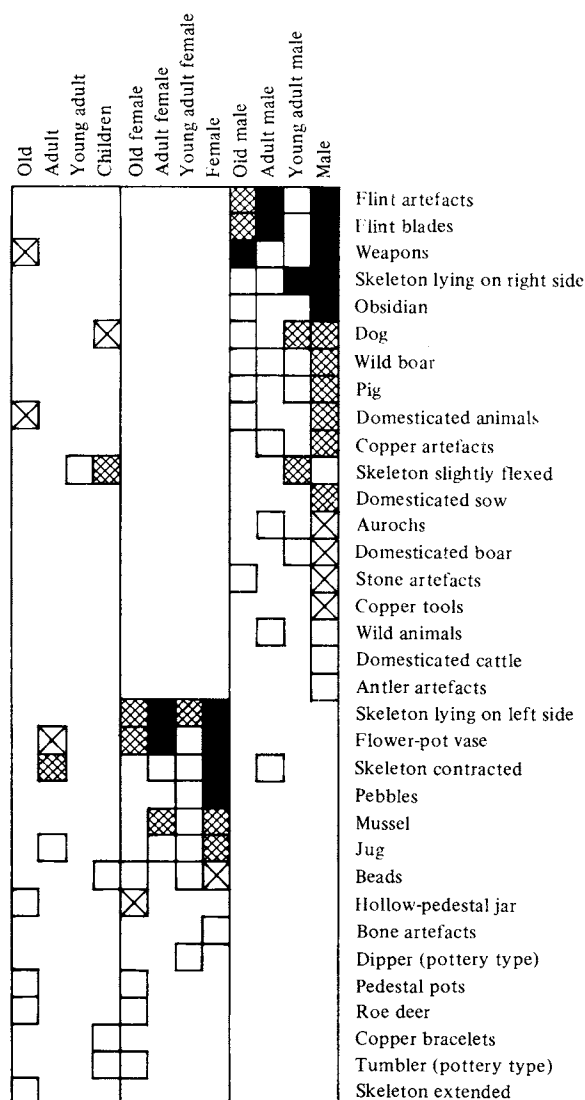
Fig. 1.2. Examples of knobbed headboards from Alsora Kosol (Transylvania): (a) male, (b) female. Source: Zentai 1979, fig. 3.



played an integral part in the emergency of the New Archaeology. Within that tradition comparative ethnography has provided the source for hypotheses relating the disposal of the dead to the organisation of human societies and quantitative analyses have been applied to an ever-increasing number of individual cemeteries. The detection of co-varying patterns of age, sex and grave goods within such cemeteries has led to a proliferating discussion on the degree of ranking exhibited by

past societies, whether or not an evolutionary typology was applied. While this concern with social analysis has been an invigorating corrective to the excessive concern with economic archaeology which characterised some areas of the discipline in the 1960s, a more critical evaluation is now necessary. Such an evolution is already in evidence for some of the major theoretical and procedural bases of the New Archaeology (e.g. Schiffer 1978; Dunnell 1979) and there seems no reason why it should not be directed towards mortuary analyses. Specifically, which problems remain unsolved and undiscussed and which new areas of research promise to further our understanding of the nature of past societies?

Fig. 1.3. Association of burial data with age and sex groups from the late fourth-millennium bc cemetery at Tiszapolgar-Basatanya (Hungary). Note the examples of highly significant associations with males and females. Source: Milisauskas 1978, fig. 6.25.



Significance is based on Fisher's Exact Test

- 0.05 - 0.02
- ⊗ 0.019 - 0.01
- ▨ 0.009 - 0.001
- 0.0009 or higher

**Formation and transformation**

One of the basic assumptions of the New Archaeology was that human behaviour left a fossilised record in the form of spatial patterns of variation and co-variation of artefacts

Fig. 1.4. Single-link cluster analysis of functional artefact-types regularly associated in 'good' graves from the early Iron Age cemetery at Hallstatt, Austria. Source: Hodson 1977, fig. 3.

