

**ORIGINS OF SEDENTISM:
POSSIBLE ROLES OF IDEOLOGY AND
SHAMANISM IN THE TRANSITION**

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Except as otherwise acknowledged, all work for this thesis is my own.

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Recognising causal links between religious practices and socio-political structures, it is argued that the transition to settled life during the Neolithic was the product of social and political changes brought about by the institutionalisation and manipulation of ideology. These were employed by ambitious, influential individuals using sedentism as a strategy to achieve social control and the power, status and appropriated wealth (labour and resources) this engendered. A key factor in this was the materialisation of ideology, making visible the supernatural.

Exploration of the ideopolitical nature of cultural elements — social, economic, and political — integral to the transition among Southwest Asian societies who experienced the profound changes involved, identified a nexus between increasing intensity of shamanistically manipulated ideology and progressive decrease in mobility. Furthermore, it reinforced the pivotal role played by shamanism in the transitional process, and that it was facilitated and maintained by the generation of ongoing socio-ideological stress. Emergence of personal and group individualism during the transition, but particularly in the latter part, saw competition in both hierarchical and heterarchical contexts for social control. In the course of this, shamanism was also employed by other influential individuals and became hybridised in the form of the quasi-divine shaman-priest-leaders operating ceremonial centres from which they dominated the activities of regional populations.

A model derived from the archaeology of selected sites in Southwest Asia is presented that views the transition as a three-phase process reflecting the emergence and progressive intensification of a collective psychology, this manifest in new ideology, the growing importance of ‘place’, and individualism and social complexity not previously experienced. Also apparent is that initiation of the transition was associated with a new ideology and driven by shamanism, with the influence of the various agents involved becoming increasingly evident in a range of interrelated behavioural trends and developments. Each phase of the model sees ideology taken intentionally and necessarily to a higher level of intensity, providing a longer-term perspective on the relationship between ideology and economy.

Evidence from the British Isles 5000-2000 calBC used for model validation confirmed that where ideology is evident in the archaeological record shamanism was influential, and emphasised the ideological context of the settlement foci and controlling agencies. Behavioural trends become more developed throughout, despite site context and location. While variation was apparent among the subregions in the extent to which a more settled way of life achieved, the overall effect in each was to bring dispersed communities together long-term, ideopolitically controlled in geographically confined contexts by site or wider location. People were being aggregated more regularly and co-operatively; this clearly facilitated by ideology. The British evidence also indicated that settled life did not necessarily equate precisely with the criteria of settled life, i.e., living permanently in durable structures on one site; rather, there was flexibility in the way these might be exhibited. Furthermore, full-time sedentism was shown to be preceded by permanent ceremonial structures and their ideological context.

Contemporary archaeological thinking does not envisage a purely economic rationale for the hunter-gatherer way of life, and suggests an ideology-based one was important. It has been speculated, for example, that the first domesticated plant species were less dietary than social or symbolic, a practice common ethnographically as a means of providing exotic plants for ritual and other cultural purposes (Dinely 2004; Farrington 1989; Farrington and Urry 1985; Thomas 1999). Therefore, if all aspects of hunter-gatherer life are interrelated, then inferences made in an ideopolitical context are no less valid than those economic. No longer is material culture seen simply as reflecting the hunter-gatherer economy but that particular artefacts (e.g., equipment made of basalt; and the shape of pestles) can have meanings beyond subsistence and the economic. Indeed, some aspects of the transition to a settled existence may not have an archaeological signature but may be inferred from other material (e.g., parietal art). Similarly, some material may have had purpose other than that for which it appears to have been produced. There are indications in Britain and Ireland that the first use of pottery was as prestige, special-purpose utensils involved in discrete acts of consumption, and only later did it find a place in everyday practices. This is reflected in pot size, raw material, quality of workmanship, and decoration (Herne 1988:17; Thomas 1999:96-99).

Accordingly, an unblinkered approach to the archaeological record is considered essential, and its examination undertaken in totality. When the record is approached only from a subsistence perspective, evidence of other explanations is excluded or, at least, overlooked. For example, does the presence of weapons only reflect conflict and intergroup hostility, or was social status the prime purpose; and were cereals being collected for eating or brewing? One example is the Colledge (2001) research on plants and founder crops in the Levant which has no discussion of those with hallucinogenic and/or other cultural qualities.

One problem is that some cultural attributes can be inconclusive as markers of sedentism. This, however, is mitigated by assuming that whether or not permanent year-round occupancy can be established conclusively, mobility changed in terms of longer and multi-seasonal aggregation; particular sites came to be occupied more regularly for longer periods than others; and some sites were occupied long-term and regionally dominant.

At a general level, the search is for ideological features in the archaeological record that might directly, or by inference, indicate individuality, shamanistic behaviour, societal stress, and social control, and relationships between them. A number of lines of evidence are pursued, but particularly with respect to Dunnell's (1999) waste scenario and that of bet-hedging from evolutionary ecology (Seger and Brockmann 1987), whereby these practices and related objects are seen as 'cultural elaborations' in the context of wasteful behaviour with 'waste' defined as the use of energy for long-term survival rather short-term reproduction. Such behaviour is considered to relate to stress generated by severe and/or unpredictable conditions impacting on the way of life. The bet-hedging model indicates that mobility is inversely correlated to the degree to which individuals invest energy in cultural elaboration. Evidence is also sought for sequential relationships between environmental variation, ideological response to it, and the nature/effect on settlement, particularly with regard to: change which may have been recognisable within living/generational memory; significant variation over time in resource productivity or availability; and alteration in site patterning to reflect change in subsistence practice in pursuit of settlement stability.

Any attempt to account for the 'why' and 'how' in the transition to sedentism must identify the necessary data. If the source is the archaeological record, problems are encountered in terms of its nature (material form, symbolism, etc.), its preservation, and its interpretation. On the other hand, if the source is ethnographic, then the concern is that extant groups are not necessarily representative of

prehistoric peoples. The value of an ethnographic approach has been demonstrated in analysis of two Kiowa Indian rock art sites in which ethnography assisted interpretation not only in the identification of material culture objects, but also in revealing motives behind its production and the complex meanings embodied (Jordan 2001:121-126). For this reason it may be argued that universalistic assumptions about humans can be accepted so as to permit understanding the past in conjunction with available evidence. White (1995:112), for example, noted that in Southeast Asia “while archaeological evidence from the prehistoric period immediately preceding the formation of states in the region is very sparse, awareness of later outcomes from historic times can put the prehistoric archaeological evidence into clearer perspective”. Similarly, Johnson and Earle (2000:45) stated that while prehistoric societies are long gone, “we may accept a universalistic assumption about humans that allows us to understand the past in conjunction with available archaeological evidence, namely that the processes operating in the present apply also to the past to the degree that conditions were the same then as now”.

Noble and Davidson (1996:227) stated that an archaeological record does not speak for itself and must be interpreted. They emphasised that a theoretical framework needs to be articulated for its coherent understanding. Paddayya (1980:624) considered that the record should be made to yield information about the nonmaterial (social, religious, political, etc.) aspects of past cultural systems. Careful investigation of data, therefore, is undertaken in order to recognise all elements leading to the manifestation of sedentism, particularly incipiently. Chapa (1996:50), for example, referring to the Joyce and Winter (1996) perspective on the use of ideology to justify and expand social inequalities, noted that the circumstances favouring this would have emerged early because elites were well established in pre-urban times. Similarly, interpretation of prehistoric group action in terms of contemporary values must be undertaken with extreme care. The activity of past societies was relative to their particular cultural contexts: what may now be considered unimportant or irrational may have been otherwise to those peoples. White (1995:112) noted significant differences in cultural practice among early Southeast Asian states; while Wolters (1982:52) pointed to the divergent ways of expressing value.

Brück (1999) has discussed the issue of rationality with respect to the conception of ritual in both archaeology and anthropology which she saw identifying it as something fundamentally different from (or even opposed to) other kinds of activities, and frequently described as a sphere of practice distinct temporally and conceptually from more day-to-day activities. She viewed continued application of such an interpretative framework as having resulted in a fundamental misapprehension of the nature of prehistoric rationality; and questioned the frequent evaluation of ritual as being non-functional/symbolic and irrational in not being seen to meet modern criteria for practical action. It was noted that ritual was generally considered practical and effective action by its practitioners; for archaeologists, there was serious misapprehension of prehistoric rationality such that secular activities (e.g., subsistence practices) were assumed to be governed by a universally-applicable functionalist logic. Similarly, artefacts that could not be interpreted functionally were generally ascribed a ritual role, with the latter defined as a “catch-all designation for anything that defied a crudely utilitarian examination” (Richards and Thomas 1984:189).

Activities often labelled as ‘functional’ or ‘practical’ were considered by Brück (1999) likely to have been based on a logic for action and a worldview very different from that of our own. It seemed likely, therefore, that ritual actions were perfectly logical given a particular worldview. Causation was not conceptualised in the same way in other cultures as in modern western society; rather, such powers may be considered to reside in spirits, gods and even inanimate objects. Clearly, such ideas would influence what is judged to be effective action; and in the past, as in the present, there were many different ways of understanding how the world functioned and of conceptualising the place of humans in that world. Brück, in noting the Barrett (1994:77) position that “ritual and religious knowledges are ... built out of the same material conditions of everyday life because people speak metaphorically about their conditions”, commented that the continued disjunction of ritual from

secular action may be resolved through realisation that human action is always both practical and symbolic.

In terms of data, the 2004 Huffman paper: *Beyond Data: The Aim and Practice of Archaeology*. Huffman engendered a positive approach to shamanism issue and, indeed, any other in stating that with archaeology, “if we can be wrong about something, we can also be right or at least more right than wrong”. He saw criticism of arguments/models considered to “go beyond the data” (i.e., presenting answers that have to be inferred and not able to be directly tested) as missing an important point about determination. Furthermore, because data tends to be fragmentary, archaeological remains woefully under-represent what happened in the past; realistic models must necessarily have more content and be “underdetermined”. Accordingly, where behaviour represents belief and actions that have not survived in the archaeological record, if the models are correct, the beliefs must have been present and the actions must have occurred. “Good models will go beyond the data ... those that only cover archaeological traces will be inadequate, inaccurate and probably trivial”.

Huffman emphasised the non-random nature of human behaviour. He saw things being done for reasons, and there being good cause to believe that reasons result in behavioural regularities. People’s deliberations show that reasons include two components: a desire for an outcome; and a belief about how to realise it. Both can be subsumed under the following generalisation: agents act on their strongest or most valued desire relative to their belief about how to achieve the goal which will be culturally determined. This study is closely aligned with such thinking. Huffman would see its value being determined against rival theses; in his words, “by using ampliative criteria, such as number of data and variety of data and predictive potential, we can rationally determine which hypothesis best fits the data today”.

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PART A

THE STUDY AND KEY ELEMENTS

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Chapter 1 FOCUS AND SCOPE OF THE STUDY

The study focuses on ideology and its association with shamanistic ideas and practices, an issue considered to have been a particularly significant, if not pivotal, element in the emergence of sedentism — but one which appears to have been understated. It is considered that the institutionalisation of changed ideology involved a complex set of mutual interrelations constituting social practice during the transitional period. Recent work has drawn attention to the importance of mind, meaning, symbol, ritual and ideology at this time, and the appearance of complex human systems implying emergence of powerful concepts of value and the sacred — the development and fixing of symbolic relationships and representations (Hodder 2010a:2; Jordan 2001; Renfrew 2008; Shults 2010; van Huyssteen 2010).

The ideopolitical nature of cultural processes integral to the transition is explored. It is a nexus of new and interrelated traits — social, economic, political, and ideological — among societies undergoing profound changes, a period termed by Kuijt (2000:3-4) as being “complex, somewhat contentious, and very complicated ... an intellectual beast [with] inherent difficulties”. Multiple lines of archaeological evidence point to significant change in ideology-at the time and during the subsequent Neolithic, as indicated by the appearance of a combined set of attributes: durable dwellings, structures and other features; resource base intensification; extended site occupancy and population growth in semi- and fully sedentary settlements; increased community complexity; cemeteries and the institutionalisation of mortuary practice; particular lithic (e.g., groundstone) and bone industries; symbolism and visual imagery; and increased individualism reflected in personal adornment and achieved status (Bar-Yosef 1998; Grosman and Munro 2007:1; Grosman *et al.* 2008; Yeshuran *et al.* 2014).

Changes involved the elaboration of earlier traditions and conceptions which were expanded through innovation to become more mainstream and tools for manipulating people — their ideas, behaviour and decision-making. Sedentism represented a particularly significant development in related human behaviour, but not a ‘revolution’; the final step, however, could have occurred relatively quickly. The dynamics of singular and recurrent events making up the transitional process were initiated by human agency and interaction playing a key role in the transformation of mobile groups firstly to basic village communities, and subsequently into hierarchically and heterarchically

organised complex polities (Helwig 2003); and making the transition understandable to those involved. The influence of ideology and related symbolic behaviour in this is, therefore, of central interest because, as Hodder (1984:66) has emphasised, it is the means by which people cope with the world; and in doing so, many communities gave up a mobile way of life.

Ideology, particularly in the appearance of special ‘places’ predicated on a changed relationship with the environment as a result of newly perceived cosmological connotations, is considered to have been used manipulatively and strategically by ambitious individuals to aggregate dispersed communities in progressively settled contexts so as to facilitate achievement of social control, personal status and wealth.

1.1 CONTEXT

The principal concern of the study is the transitional process from hunter-gatherer mobility to settled village life. To date there is no single, accepted general theory to account for this in the various locations of primary occurrence. Whilst some researchers have pursued an overarching theory, others have promoted a multi-causal explanation and see operative factors peculiar to particular locations. These hypotheses, particularly those in relation to agriculture, have helped define some important variables in the transition, but none can account for adoption of this changed way of living regardless of wherever it occurred.

Many theories have focused on a particular causal factor (e.g., population pressure; warfare) but have not been successful. Societal stress, however, is a product of all factors put forward as being the cause of sedentism and experienced by people in all societies. It is argued that stress, readily exploited, was shamanistically employed to aggregate people.

1.2 OBJECTIVE

With respect to the Natufian period in Southwest Asia during which sedentism emerged, Goring-Morris and Belfer-Cohen (2003:77) pointed out that “current research should be viewed more in terms of a fluid and flexible mosaic evolution through time and space, with different paces in different places”; and that it should be borne in mind “such first steps were largely experimental and did not necessarily evolve in a simple unilinear manner, reflecting combinations of the social, economic and cosmological attitudes of the inhabitants at both the individual and group level”. Whittle (1997a:146-147),

similarly, has pointed to the diversity of elements to be embraced and the problem of fitting a general model to specific archaeological situations.

While recognising the role of cultural diversity, this study identifies significant common elements in behaviour to permit development of a general model for the transition to sedentism. In doing so, it is acknowledged that any universality would only be at a general level; and it is expected that developments need not have been contemporary and consistent between regions or, indeed, within them.

1.3 PHILOSOPHY

Tilley (1981:131-135) has criticised the palaeoeconomic approach to prehistory of Higgs and Jarman (1975) as having no detailed consideration of resources other than those of direct subsistence potential, or any reference to the exchange of commodities or intra- and intercommunity relations except in relation to transhumance systems. He was also concerned that their search for natural laws governing the relationship between human behaviour and the natural environment was flawed essentially because human characteristics — cognition; thought; intentional activity; and the ability to classify and categorise the world — were subsumed under a supposedly universal logic which demanded specific limited responses to biological exigencies. Such approaches were seen by him to result in a particular model of people whereby actors in social systems necessarily become reified, helpless spectators, always subject to external forces over which they have very little control.

Human intentions, motivations and meanings were viewed by Tilley as dependent variables, being functions of social, psychological or biological forces. The individual, or social group, could not be *causa sui* in the explanation of their actions, and social actions become the product of antecedent factors operating in a law-like way. He considered this to deny that man is in any way unique, and like determinism, asserted explanatory monism. In his opinion, if the primacy of sentience, intentionality, linguistic and symbolic communication is accepted, man is not a natural entity. Behaviour may have its causes, but actions have their reasons.

1.4 RATIONALE

Three lines of thought underlie this study. These relate to the timing of the emergence of sedentism and the nature of the behavioural change. Sedentism appeared relatively synchronously during the late Pleistocene/early Holocene in widely separated and environmentally different locations worldwide. Operation of common factors is strongly suggested, associated with a common set of perceptions about one's place in the world

and the vicissitudes created, both physical and social, for such understandings by environmental events.

Renfrew (1973b:249) stated that "... the [intellectual] hardware [directly dependent upon the genetic basis] ... changed little over this time span, and it is in the software [culture] that the radical transformations from the hunter-gatherer to the space age have to be understood ... all have their cognitive aspects". Variation in the same development in different parts of the worlds was seen to result from the different trajectories adopted. Renfrew advocated further research before accepting the validity of generalisations with regard to human cognitive behaviour.

Laughlin and Loubser (2010:138-140), on the other hand, rejected any form of mind-body dualism. They used the functioning of the human nervous system to develop biogenetic structural theory, 'neurogenesis', that refers to innate knowledge about the world and about being human. Implied is both the knowledge that informs acts of consciousness and the neurocognitive networks that mediate it. People are considered to have been born with the neurophysical structures to mediate innate knowledge, and "these structures impress themselves upon the way people experience, imagine, think about, feel about, and respond to the world". As there is a physiological foundation for all acts of consciousness, the structural limits of direct experiences had by long-dead peoples may be inferred, based upon some specified methodology in neurophenomenology. For this reason, the concept of neurognosis was seen to be of considerable value to archaeologists seeking to interpret the minds and symbolic actions of people in prehistory. Laughlin and Loubser considered it reasonable to infer that all knowledge is grounded upon "archetypal" structures inherited as members of the human species.

This study evaluates human cognitive behaviour in the emergence of settled life and that there may be many predispositions in modern humans which can be usefully discussed in cross-cultural terms. Lewis-Williams and Pearce (2005), for example, have argued for a number of specific psychological specialisations that are pan-human in their occurrence, in particular the ability to generate representations of the cosmos. Similarly, Flannery (1976:331) stated that all human societies act on the basis of schemes or "cognised models" of the way the world is put together.

The Lewis-Williams and Pearce hypothesis (2005:241) suggested that shamanism was the underlying social influence that sustained society and its understandings of the 'supernatural', and that those in control to have appropriated shamanism ideologically,

appreciating that whatever benefited the whole community (or was perceived to do so) also enhanced their personal status and authority. The transition to sedentism, therefore, may be seen to have been manipulated shamanistically by those endeavouring to extend their influence over a broader community.

To arrive at a decision of such significance as the adoption of sedentism strongly suggests the hunter-gatherers were confronted with situations in this context that were new or, if not, were perceived differently. Exogenous factor theories put forward to account for its emergence fail through a lack of supporting archaeological evidence in all cases, while endogenous models draw criticism in that the evidence is difficult to discern archaeologically. In the words of Higgs and Jarman (1975:1), “the soul leaves no skeleton”; while Flannery (1976:330) quoted Levi-Strauss having said it was “a code in their minds, and we can’t predict it or produce it again”.

1.5 FRAMEWORK

The fundamental issue is seen to be why people did what they did. This study considers that such decisions are made in the context of how the situation is perceived; and that within hunter-gatherer communities this was embedded in their understanding of the cosmos and people’s place within it — their religious ideology, the envelope within which the total spectrum of decision-making took place. Equally important are the ways in which situations and the consequences of particular actions can be presented and manipulated, and the outcome then played back upon communities. Inherent in this is the emergence of individualism among egalitarian hunter-gatherers, particularly with respect to the nature of effective leadership, variously in terms of the strongest warrior, the most successful hunter (or gatherer), or the wisest member of the community; and ability to concentrate social control and extend it over progressively larger numbers of people. This is seen to have graded rather seamlessly along alternative lines from egalitarian small-scale communities into eventual state societies, the new social formations having been built from and representing an amalgamation of parallel changes to existing economic, societal, political and ideological organisation. That directed toward production of surpluses and their management was particularly important. Research has indicated that the progressive development of such individualism also centred on the appropriation and exploitation of a shamanistic ideology.

1.5.1 Economies

Economies are open systems of production, distribution and consumption of material things and social services. Most human societies were sustained by traditional

economies, defined by Earle (2002:8-13) as those of marginal mercantile and capital integration, and containing two interrelated sectors: subsistence and political. The subsistence economy involved ways that households maintain themselves through everyday activities: hunting, gathering, fishing and agriculture; and manufacturing the tools needed. Each household could produce much of what it required; and exchange for some goods because of local deficiencies and local uncertainties at any time of need. The subsequent political economy, in contrast, involved the ways surpluses were mobilised and allocated to support political activities, lifestyles, and operations of social institutions and their leaders. This latter economy was inherently competitive and growth-oriented. Mobilisation of surpluses required a productive economy and control of production — land, labour and capital. Such control derived from command over quite specific activities involving production, distribution, and consumption.

DeMarrais and colleagues (1996) identified the important role played by ideology in the genesis and maintenance of sociocultural systems; and change and based on inequality — how ideology articulated with other aspects of the cultural system to generate or sustain particular political forms. They saw interplay between economy and ideology, and presented an hypothesis for elucidating ideological process.

1.5.2 Ideology

The DeMarrais *et al.* hypothesis has ideology central to the decision-making process as a source of power permitting control and management of group activity to access the benefits involved. It provides a synthesis of the role played by materialisation in institutionalising and reinforcing an ideology of domination. Four sources of such power are identified: economic, political, military and ideological. Materialisation of ideology makes possible the extension and consolidation of central authority power beyond the local group to a broader population, the process considered by DeMarrais *et al.* to provide an ongoing arena for competition, control of meaning, and the negotiation of power relationships. Ideological power is seen tied to economic and political processes, providing a basis for political power; and the focus being the material means by which ideologies are communicated to present a framework for elucidating ideological process. Various forms of materialisation are identified, each with distinctive costs and benefits, and appropriate to audiences of particular kinds.

Several commentators have provided cautionary statements with respect to the DeMarrais *et al.* framework and the complexity of the relationship proposed linking ideas to materialisation within a society (Appendix A). DeMarrais *et al.* (1996:68-69) in their response stated that they do not assume the strategies of dominant groups are

always successful; however, archaeologists “are best able to study the materialisation activities of dominant groups precisely because they often do alter power within a society”.

1.6 SPECIFIC FOCUS

The transition to sedentism is generally regarded as a process that is either environmentally, economically or demographically stimulated. It is very clear, however, that a cultural and cognitive approach has been largely overlooked and/or underplayed in these. This study proposes an hypothesis that these should be regarded as vital to understanding the transition and that the role of shamans and shamanism need to be carefully examined. Central to this is the Lewis-Williams and Pearce (2005:241) view, noted earlier, with regard the ideological appropriation shamanism.

It is contended that the context in which sedentism occurred was a range of new situations and experiences generating strong emotion — fear — by which communities could be manipulated. Depending on the context, this may have varied from gentle persuasion on the one hand to coercion on the other. In terms of the worldview consequences presented, however, not to go down that path would have represented the most dire of threats to their continued existence. Specific individuals appear to have adopted a more aggressive stance to achieve their desired objectives once constraints to personal dominance among hunter-gatherers had weakened. This is supported by the conjecture that all sedentary societies going on to form early states appear to evidence coercive processes (Carneiro 1992:198-199) and regime imposition (Flannery 1999a:4).

In focusing on the role played by shamanism in the transition, particular attention is paid to the following: worldview *per se* and the relationship between ideological and/or symbolic behaviour and cultural complexity; the emergence of ‘places’, ideologically charged sites both for extended periods of aggregation and permanently; and related societal change with respect to relationships, both interpersonal and group, as reflected in inequality, leadership, competition and social control.

1.7 ISSUES

While sedentism is an endogenous social phenomenon and a widely focused view is adopted in the study, certain questions need to be considered, particularly: how in an egalitarian society were social dominance and manipulation able to develop; and why would hunter-gatherers abandon their traditional mobility and way of life for, as Maryanski and Turner (1992:110) stated, “sociological cages that infringe on human needs for parity, freedom, mobility and individualism”? Furthermore, why did this occur

when it did and not before; and why was it happening relatively synchronously in widely separated and environmentally different locations worldwide? Another relevant question was posed by Fritz (1978:38): “why do human communities, the behaviour of which is seen to be governed by strategies in material domains of life, elaborate complex ideational and related systems?”

1.8 STUDY DEVELOPMENT

It is argued that the transition to sedentism was predicated on a radical change in ideology — a new collective worldview psychology. Cognitive development is seen to have enabled conceptualisation of a worldview very different from that previously pertaining — a change from people being at one with the environment to a situation in which people stood apart from it, and subsequently being able to manage it. The entities of the supernatural world were all-controlling with respect to what went on in the real world, including the lives of people. They were perceived manifest in a range of natural features considered special ‘places’. These spirits needed to be placated to encourage particular associations with them; however, in doing so, responsibilities were created that had to be met. This represented a new and very different relationship between people and their world, and recognition that there were forces present with power and agency. The new ideological understanding is fundamental to this study. Such an ideological relationship between place, the natural world and settlement is illustrated by the Lepenski Vir site (Appendix B).

There are three sections to the study:

- . PART A provides detailed consideration of the nature and archaeological signatures of the intimately related key elements — ideology, shamanism, and sedentism;
- . PART B develops a general model of the transition to sedentism based on evidence from selected sites in Southwest Asia; and
- . PART C is an analytical validation of the general model by case-study application. Originally two regions, the British Isles and the Mississippi Valley, were chosen to test the model, but for reasons of space only the former, where a sedentary way of life emerged initially focused on permanent ceremonial and burial locations, not domestic sites, has been included.

Chapter 2 IDEOLOGY TERMINOLOGY AND PERSPECTIVES

2.1 TERMINOLOGY

The literature reveals a somewhat confusing use of the terms ‘worldview’, ‘religion’ and ‘ideology’. The following provide a reasonable consensus of the context in which each is used:

- *worldview* people’s understanding of the nature of the cosmos and their place within it;
- *religion* belief in, worship of, or obedience to a supernatural power/powers considered to be divine or to have control over human destiny; and/or any formal or institutionalised expression of such belief; and
- *ideology* an idea/ideas reflecting people’s beliefs and interests, and believed with conviction to be irrefutable.

While confusion is compounded by concurrent, interchangeable use, one combination — ‘religious ideology’ — aligns with the thrust of the study in introducing the concept of ‘power’, an element inherent in social inequality. Demarest (1992:136) defined such ideology as being a set of interrelated ideas providing a rationale for existence, and embracing formal religion as well as the precise guidance of formalised religious institutions or dogmas. Ideology becomes the justification for unequal social relations experienced — the way reality is made acceptable; and far from being an independent factor, it is affected by social, economic, technical and ecological realities (Liverani 1990:294; Adams 1992:207).

Price (1984:241-242, 247) stated that power is not an institution or a structure, but rather a complex strategic situation in a given society. In his view, it does not necessarily reside primarily in politics, religion being just as much involved: both are ways of systematically constructing power. It follows that ideology is open to manipulation in a range of contexts — in line with the thrust of this study. Disagreement with Price, however, lies in his not seeing power as a given force with which certain people are endowed. Power can be inherited, cultivated or acquired; and be reflected in a range of personal attributes such as charisma, knowledge, ability, status, role and wealth.

Individuals with these attributes know the potential power involved and are motivated and able to realise it. In this study, ‘ideology’ is to be read in the broader sense of religious ideology in the context of such individuals appreciating the inherent ideopolitical power at their disposal, exploiting it to achieve political objectives — in particular, driving the transition to sedentism.

2.2 THEORETICAL PERSPECTIVES

The role played by ideology in the evolution of civilisations is strongly debated by archaeologists, as evidenced by papers arising from the Symposium convened following the Third Theoretical Archaeology Conference (STTAC), Reading, UK, 1981 (Miller and Tilley 1984ab); and the 1987 Advanced Seminar (AS) at the School of American Research (Demarest and Conrad 1992). The former examined theories of power and ideology and their incorporation within a better understanding and interpretation of archaeology and material culture. The latter considered, in pre-Columbian contexts, the role of ideology in culture change and its interaction with other factors involved. (The papers document the range of perspectives encompassed in each case. Unless otherwise referenced, the following discussion relates to these publications and references cited.)

2.2.1 Materialist and Ideationalist Paradigms

Archaeologists, generally, reflecting methodological developments related to chronology, subsistence remains and settlement patterns, have implicitly applied a materialistic paradigm by ignoring ideology in culture change. Ecological reconstruction of prehistoric economies was the major focus. It soon became apparent, however, that a purely ecological approach might not be enough; instead, social, political and ecological factors interacted to bring about complexity in societies (Demarest 1992). By the 1970s many archaeologists were concerned that the materialist paradigm, although essentially correct, was incomplete as indicated by the following views:

If thinking human beings are the generators, as well as the carriers, of culture it seems highly probable that, from early on, ideas provided controls for and gave distinctive forms to the materialist base and to culture, and that these ideas then took on a kind of existence of their own, influencing, as well as being influenced by, other cultural systems. If this is so, then it is of interest and importance to try to see how ideas were interrelated with other parts of culture and how they helped direct the trajectories of cultural and civilised growth (Willey 1976:205).

Archaeologists must cease to regard art, religion, and ideology as mere “epiphenomena” without causal significance ... [These] “epiphenomena” ... lie at the heart of society’s environmental and interpersonal regulation, and as such cannot be omitted from any comprehensive ecological analysis (Flannery 1972b:400).

This is clearly evident in the opinion of Miller and Tilley (1984a) that when ideology and power are taken into account, the nature of past societies cannot simply be “read off”

from material evidence. The archaeological record had to be understood as an actively mediated and manipulated element of the social strategies of individuals and groups constituting past societies.

Gilman (1989:68) noted the Marxist view of ideology that sees systems of ideas as means by which competing classes and interest groups present and justify their views so as to manipulate and control others. Some Marxists, however, see a more dynamic role for ideology, one involving belief in supernatural abilities shared by all, dominated and dominating alike. Systems theorists and cultural ecologists (e.g., Rappaport; Flannery; Orlove) consider ideology to be a dynamic element in culture change and view it as an information-regulating mechanism. They envision ideational systems as information processors relating possible adaptive responses of a group to its natural and social environment, with ideologies linking system variables via decision-making feedback processes. Demarest (1992:3-4) saw this position resolving the debate concerning supernatural dominance in cultural change and concluded that materialist and ideational approaches in anthropology find, in the words of Orlove (1980:262), “common ground through a more thorough interpretation of culture and ideology as systems which mediate between actors and environments through the construction of behavioural alternatives”. Demarest (1992) himself, however, took a somewhat eclectic approach to ideology, one more specifically concerned with religious belief, extending the concept beyond religion and ritual only in the sense of including less formalised and explicit symbolic systems and behaviours. In his view, the challenge for archaeological study of ideology has always been to reconstruct the nature and effects of prehistoric belief systems. He generally shared the Sharer and Ashmore (1987:406) conception:

Ideology encompasses the belief and value system of a society. Religious beliefs come most readily to mind as examples of ideological systems, but art styles and other symbolic records also provide information about the ways human groups have codified their outlook on existence.

Tilley (1984b) saw need to credit people and society in prehistory and material culture studies with “the same abilities as we credit ourselves, rather than reducing them to the passive recipients of external forces”. His paper, focusing on ideology and the legitimation of power in the Middle Neolithic of southern Sweden, endeavoured to operationalise this theoretical perspective to prehistoric data. It was argued that the need to legitimate authority of dominant individuals and groups played a major role in structuring material culture patterning, and that this was manipulated to play an active role in the maintenance of social reproduction. This reflected STTAC discussion of ideology in terms of ideas, beliefs and representations, all suggestive of cognitive and normative forms, ways in which people perceive their worldview. These might appear to

act at an autonomous and idealist level above the material world, legitimating and commenting, but do not act for themselves. The second major theme in Miller and Tilley's analysis of ideology is coherence. All beliefs and representations are partial in that they are seen to focus only on a limited number of the relations between the factors that bear upon people: "selected dimensions upon which we hang our understandings of the world" (Miller and Tilley 1984a:13). The tendency to coherence and formal organisation to be characteristic of the more explicit modes of representation has been shown (e.g., Bloch 1975). Religion, honour, kinship, and other normative models used to legitimate dominant groups will have these properties.

Throughout the STTAC papers there is emphasis on change as being predicated on consideration of social factors inextricably linked with the form and nature of social totalities postulated for the segment of the past under consideration. The focus is on long-term/diachronic social change. Leone (1984), for example, discussed the manner in which ideologically informed representations serve to naturalise the arbitrary nature of the social order. Construction of an eighteenth-century garden is shown to employ a number of means towards this aim. Through the use of classical quotations and the development of a concept of precedence with judicial associations, the garden is seen to represent a particular rationalisation of time which also denies its own transitional nature. Braithwaite (1984) and Tilley (1984b) emphasised the role of ideology-related strategies in the change from relatively closed social organisations based on kinship, alliance and genealogy with communal and egalitarian representations of interest regulated by specific ceremonial expressions, to development of more hierarchical societies and asymmetrical power relations

The STTAC papers also emphasise the manner in which social relations are represented as relationships between the individual and the supra-individual, whether this be in the form of lineage, society, institutions or the supernatural. Hodder (1984) and Tilley (1984b) noted a shift toward affirmation of the lineage represented in megalithic tombs, a development assisted by the perceived mediating properties of the supernatural expressed in such structures; this contrasting with the individuality stressed by Braithwaite (1984) as being represented by single inhumations. Central to the Tilley analysis is that megaliths serve to deny the individual in a naturalised form through collective representation and the precise manner in which this takes place, and how material culture manifests itself as part of the ideological process. Parker Pearson (1984) saw the supernatural world providing the medium for much of the reification of the supra-individual; and showed how it directly resulted in creating a debt relationship between

individuals. This can be compared with the implications of henge monumentality as communal representations analysed by Braithwaite. Miller (1984) illustrated how ideology could be used for the study of material objects by referencing the contemporary built environment. In this context he discussed the relationship between science, technology and ideological control; and noted that modernist architecture could not be understood in isolation, but only in relation to other major traditions to which it is opposed. He referred to the way in which noted institutions of contemporary industrial societies act in a similar fashion to the reification of communal form as the supernatural in prehistory — the modernist estate was its material representation. Miller considered that critical analysis of modern architecture worked in a manner not dissimilar from archaeological interpretation.

2.2.2 Specific Ideationalist Positions

Two positions are presented, both reflecting the theoretical perspective of this study.

2.2.2.1 Daniel Miller and Christopher Tilley (1984b)

Tilley and Miller identified the following characteristics of a critique based on the model of ideology:

- . society is analysed in terms of the different and often conflicting interests held by groups within it;
- . a given group in society attempts, in so far as it has the power to do so, firstly to understand, and secondly to represent its interests in its creation of the cultural world. This representation also constitutes a transformation of the world in the direction of those interests; and
- . such representations tend to exhibit certain properties: represent as universal that which may be partial; represent as coherent that which may be in conflict; represent as permanent that which may be in flux; represent as natural that which may be cultural; and tend to formalise, i.e., present as dependent upon its own formal order, that which might otherwise be subject to contradiction.

Ideology and power are seen by Miller and Tilley to be inextricably bound up with social practices — components of human praxis by which is to be understood the actions of agents on and in the world, serving as an integral element in the production, reproduction, and transformation of the social. Because of this they are manifested in its material products and are thus open to archaeological investigation.

As a form of power, Tilley and Miller saw ideology supplementing coercive means of maintaining social control which could never of themselves be completely effective. In their view, however, ideology was not to be equated with all social practice, only with that which is generated by, and tends to reproduce, conflicts of interest. In this they noted that while critical studies tend to focus on the ideology dominant groups, these are always opposed by subordinate groups which can overcome both coercive and ideological controls.

2.2.2.2 Alan Kolata (1992)

Kolata, an AS participant, followed the pragmatic meaning formulated by Friedrich (1989:301-302) that:

Ideology is a system, or at least an amalgam, of ideas, strategies, tactics and practical symbols for promoting, or changing a social order; in brief, it is a political idea in action ... Such sets of ideas for action arise from the creative engagement of individuals with practical problems and necessarily reflect or express the will and interests for control or change of some social group or class — notably its economic interests.

This was extended by Friedrich, in terms of political economy, to see it:

as a set or at least an amalgam of ideas, rationalisations, and interpretations that mask or gloss over a struggle to hold onto or get power, particularly economic power, with the result that the actors and ideologues are themselves unaware of what is going on. In this second, critical meaning, ideology arises from the interests of a class, usually an economic class or an economically defined class, and is thus historically embedded.

Kolata (1992:70) observed that from this frame of reference, ideology is the projection of group interest, and saw again in the analytical definition of ideology “an ineluctable intermingling of ideas, political strategies, shrewdly constructed belief systems, and the promotion of group economic and social interest”.

2.3 STUDY PERSPECTIVE

2.3.1 General

The pragmatic Kolata/Friedrich formulation of ideology relates to the thrust of the study not only with respect to the latter part of the transition to sedentism where social differentiation at group/community level comes into play with the appearance of elites and heterarchy, but also at the beginning with emergence of charismatic individuals seen to be at the helm of developments and in control of the social groups involved, either directly or indirectly. Similarly aligned is Tilley’s argument that past people should be viewed in that same light as ourselves; and of the need in dealing with cultural development to take account of ideology and its reflection in the actions of individuals and groups in cultural development.

Throughout time, attempts have been made to dominate economically valuable resources, principally labour and territory. In this, ideology has functioned as a kind of production technology, motivating and regulating the mobilisation of labour, and providing the rationale and rules for distribution and redistribution of surplus produce. Assessment of its effect on a social system, as political ideas in action in terms of on-the-ground economic effects, is considered possible (Price 1982:725). From this perspective, ideology, in the channeling of knowledge and information into directions by dominant individuals, furnishes a practical armature for the organisation of the political economy; and justification for, or legitimisation of, the status quo (Kolata 1992:71). This study identifies archaeological evidence of shamanistic strategising evident in such activities.

2.3.2 Specific

The AS papers present a number of perspectives on the role played by ideology in cultural evolution. These (underlined) and the study responses (in red) are set out below.

The AS rejected ideology as the prime mover or even a major factor in cultural evolution. The study, **to the contrary**, sees religious views embedded psychologically within the process of social, economic and political factor interaction. They are of causal significance and can be used to influence all aspects of human behaviour which ideology can be used to exploit. There was AS concern that few large-scale archaeological studies have tried to explore the role of ideology in cultural change, most addressing this in terms of ethnohistorically and historically known societies rather than those prehistoric; similarly, that the most conceptually elegant studies of symbolic systems and ideology in the material record have been ethnographic and ethnoarchaeological studies. As stated earlier, **value is seen in the research leads such studies provide.**

Ideology is a means by which competing classes and interest groups present their views and justify them so as to manipulate and control others. **Agreed**, but the study begins its consideration of egalitarian groups within which accepted individuality would have been restricted to kin/family elders and not generally tolerated. While such interest groups are seen to have emerged during the transitional process leading to sedentism, manipulation and control is seen to have been achieved initially by particular individuals. The AS saw a dynamic role for ideology involving belief in supernatural abilities shared by all, dominated and dominating alike. **Yes, ideology is considered a dynamic element in culture change, encompassing societal belief and value systems.** It is viewed as an effective mechanism for manipulative regulation of information (i.e., structuring, presentation and dissemination) and for influencing decision-making processes with

respect to behavioural alternatives. Ideology includes less formalised and explicit symbolic systems and behaviours (e.g., art styles and iconography) recording and providing information about the ways people have codified their worldview and behaved.

There is also **concurrency** with the view that theoretical and interpretative frameworks centring around the concept of political legitimisation emphasise the role of ideology in legitimisation of political power and exploitive economic arrangements. Ideology as a powerful agent in culture change is central to the study. Similarly, **it is agreed** that interpretation of prehistoric evidence of ideology must be considered beyond narrowly focussed studies of patterning in iconography or artefacts, and in terms of critical cultural transformations. The study does so in relation to sedentism by examining its interplay with ecological, economic, social and political forces and institutions.

With regard to the AS view that ideology merely legitimates the status quo, and dupes the masses into accepting the dominance of their masters, and treats humans as automatons bereft of creativity and incapable of independent thought, the study response is **yes and no** — behaviour can run counter to overarching ideopolitical control of communities. The approach taken in this study strongly reflects the view of a number of prominent researchers (e.g., Drennan 1976:347; Sahlins 1985:138; Hodder 1986:13) that the relationship between perception and behaviour provides a way of understanding culture change. Ideological systems are not merely derivative of other aspects of culture, nor are they static: they are constantly redefined and transformed by the dialectical processes involved in fitting the constructed order of existence to actual historical events. When processes of culture change are being examined, the role of ideology cannot be ignored simply because causes will not have social effects “except via human perception and evaluation of them” (Hodder 1986:13). This understanding, that behaviour is perception related, sits well with the proposition that people could be ideologically manipulated into adopting sedentism despite its inherent disadvantages.

2.4 STUDY CONSIDERATIONS AND UNDERSTANDINGS

Ideology provides the framework within which the general model presented in the study for the transition to sedentism is developed. The model is predicated on cultural development, a new collective psychology/ideology reflected in progress toward a more sedentary way of life; and a direct relationship between that ideology and the changes constituting the transition. Modelling has proceeded on the basis of the considerations and understandings detailed below.

2.4.1 Community Manipulation

Particular individuals are seen to have appreciated the potential for ideology to be shamanistically manipulated to advantage in terms of social control, status and wealth, and employed it to that end. This took the form of innovative strategies capitalising on contemporary conditions and influences impacting on communities. For strategy effectiveness, people had to be aggregated. Depending on the nature of the situation, pressuring of them to this end through ritual and ceremony would have varied from gentle persuasion to coercion. Situations which, to the people concerned in terms of their understanding represented dire threats to their continued existence, would have required little of the former. Taking this line, those shamanistically manipulating society (shamans), and subsequently other agents of influence similarly appropriating ideology, were able to play on community tension *vis-a-vis* their worldview through prescriptive practice and numinous classification; and, as necessary, exacerbating it to bring about particular decisions and action. In short, manipulation was effected through ideology, and maintained through ritual.

2.4.2 Social Control

The transitional process is considered to represent amalgamation of all aspects of life strategically exploited ideologically in pursuit of social control — control viewed in terms of the generally accepted notion of ‘social power’ defined as the control of energy in its various forms and flows (Mehrer 1995:27). Individuals and groups with this power have, in one way or another, control of energy production, storage, transfer or expenditure in the societal environment (Adams 1977:388). Barker and Pauketat (1992) considered this to be the case particularly with subsistence resources, tribute of commodities or labour, local and regional trade, and ideology. Such a view fits well with the perceived behaviour of high-status individuals with privileged access to basic subsistence resources. Surplus production, in making significant addition to energy available, would play into their hands by establishing the need for more complex organisation to ensure its control, as well as providing the opportunity to capitalise on the potential additional power, status and wealth that came with it. (To be noted is that ‘surplus’ can also equate with the portion of normal production communities are prepared/can be convinced to give up for particular purposes.)

2.4.2.1 Individuals

Recent studies into social inequality emphasise that individual self-aggrandisement and self-interest on the part of some community members was a major force behind the

emergence of socioeconomic inequalities (Hayden 2001a:246). If aggrandisers could not initially gain advantage coercively, their undertakings would be tolerated only if everyone in a community felt secure in terms of access to adequate food (locally produced or otherwise). Aggrandisers would have to achieve acceptance and some support of aggrandizing activities. A critical point is that these usually involve the use of surpluses, whether for feasts, gifts, creation of alliances, trade, commissioning of prestige items, rituals or other activities. Early aggrandisers must have realised very quickly that achieving wealth or power by force alone not only could have the wrong outcome, but was not nearly as effective as devising schemes that promised to benefit other community members. This might be combined with judicious use of force when it could be used with impunity. Advantages that aggrandisers proffered to early transegalitarian community members probably included the establishment of defence alliances with other strong communities, sponsorship of major social events such as feasts with nominal gifts of food or exotic items, wealth acquisition and investment opportunities, acquiring more suitable mates, intensified development of productive resources (usable by non-owners after peak seasons), and the storage of surpluses or wealth accessible through begging or debt by non-owners in times of critical need. Once the gambit of aggrandisers is tolerated, refusal to co-operate leads to marginalization, and difficulties are created for those people to live within their community (Hayden 2001a:247-248, 262-263).

While control over trade or food resources may make it appear as though the acquisition of material goods was an end in itself, this is not necessarily the case. Underlying such proximate values was the ultimate purpose of displaying and using success and power in whatever way this is given material expression by a particular culture. Strategies used in any given situation would depend on the opportunities for creating control that emerged from the cultural and natural settings. None, however, would appear to have been sustainable without the appropriate economic underpinnings of a secure and surplus-oriented economy (Hayden 2001a:250-251).

One of the most common, if not universal, strategies that aggrandisers use to consolidate and justify their political power is to claim and orchestrate privileged access to supernatural messages and powers — that is, privileged supernatural superiority. In agricultural communities this takes the form of direct communication with the most powerful ancestors through claims of descent, ritual knowledge, and the ability to offer expensive sacrifices. Among complex hunter-gatherers only the wealthiest obtain the most potent guardian spirits, enter into the most powerful secret lodges, and participate in rituals held in particularly remote locations. In societies that develop more complex organisations, only the most supernaturally powerful elites endure the pain of elaborate

scarification, tattooing, or bloodletting by which powerful ancestors may be accessed. Typically, effective communication with ancestors or other spirits, and the extent of ancestor power, is ultimately associated with the consumption of wealth, often in the form of domestic animals such as pigs and cattle, or the killing of dangerous wild animals such as aurochs and leopards, and possibly in cave rituals. They may also take advantage of catastrophes in order to increase their grip on surplus production, the surrender of surpluses, and indebtedness. Aggrandisers also try to isolate themselves from other people to consolidate claims to privileged supernatural and worldly power. They have idiosyncratic practices: consumption rituals employing the most valuable prestige items; manners and dress; linguistic forms; and display feasts, and distinctions in most other aspects of life (Dietler 1996:98; Hayden 2001a:261-262; Leach 1954:47; Owens and Hayden 1997; Schulting 1995).

Aggrandiser success results in a positive feedback situation in which power is predicated largely on the production and control of surpluses; and this is used to establish control over further surpluses, creating even more power and wealth. In non-industrial societies, human labour is often the limiting factor in surplus production, so human reproduction also is increased wherever possible. The only factors to have generally limited these increases have been the environment, technological skill to produce and transform surpluses, and ability to arrive at new solutions to productivity constraints (Hayden 2004:263-264).

2.4.2.2 Groups of Individuals

Hayden (2001, 2004, 2017; Owens and Hayden 1997) noted that ethnographers refer to particular associations — ‘secret societies’ — being common in transegalitarian communities, emerging as a means for high status, dominating and ambitious individuals with aggrandisive and competitive tendencies to control, among other things, access to the supernatural and to shamanistic rituals and playing important related roles. The Owens and Hayden data show strong association between secret societies and the most complex hunter-gatherer communities.

As well as concentrating political and economic power in the hands of members, these societies generate and maintain hierarchical esoteric knowledge available only to them. They are seen as a key strategy of particular individuals to acquire power for themselves or their corporate groups, and restricting access of others to it. The meeting places of these groups are sometimes in special structures in the middle of the communities concerned, as in the case of the Hopi great kivas; often, however, they are on the periphery or in more remote places, such as deep caves. The location of ritual and art

(pictographs, petroglyphs, and incised and painted designs on utilitarian objects) in such places is seen to reflect their esoteric nature. Owens and Hayden (1997:154) stated that their analysis shows the existence of secret societies to be consistent with indicators such as the appearance of abstract symbols, the occurrence of mythical animals, ‘ghosts’, and therianthropes; and an emphasis on dangerous prey animals rather than those killed for food. Activities involve ritual and ecstatic altered state of consciousness (ASC), and elaborate costuming. Other evidence considered to indicate the existence of such societies prehistorically is the perceived restricted distribution of non-utilitarian objects as seen, for example, in the burial of elaborately carved antler spoons with selected Chumash individuals (Owens and Hayden 1997:156).

2.4.3 Concept of ‘Place’

A ‘place’ could come into being because of its perceived association with a natural landscape feature that had ideological, supernatural world (sacred) connotation, such as a mountain, volcano, or monolith; cave/cave with figurative stalactites and stalagmites; or water contexts, such as a river, spring and emerging underground stream (Figs 2.1, 2.2, 2.3). One might also be created by structures, such as mounds, earthworks and effigies (Figs 2.4, 2.5, 2.6). A site’s specialness might be enhanced by incorporation of items of ‘sacred’ value, such as visual imagery (Fig. 2.7); geoglyphs and smaller stone arrangements (Figs 2.8, 2.9); and exotics from ‘out there’ with ‘dangerous’ liminal qualities (Fig. 2.10). Similarly, sacred quality might be imported with objects from other places and retained through subsequent occupation sequences. Burials, in particular, provided this liminality, initiating a site and establishing it as the place of ancestors. Intimately integrated with sacredness was ritual activity, implying shamanistic behaviour. The embodied accumulation of sensory and purposive experiences in space over time builds an accretion of memories into a sense of place. These small-scale visual, haptic, and kinaesthetic spatial experiences construct a ‘topophilic’ sensibility of and for a familiar locality — strong bonding mixed with the sense of cultural identity and close association with certain of its aspects (Johnson 1999:114; Tuan 1977). A ‘place’ is seen by the study to embrace a site, a locale or a lived-in territory, considered in the context of degrees of sedentism.

2.4.4 Leadership

Emerson (2000:235) considered a number of ideology-related factors seen to be critical to promotion of stability and change in situations of leadership need to be taken into account when dealing with sociopolitical development. These include strength of

ideologies sanctifying authority; effectiveness of social mechanisms for dealing with successions, population growth, and territorial maintenance and expansion; ability of organisational structures to maintain stability in the face of stress; and degree of control over status goods and the position of individual polities in elite goods exchange networks.

The study agrees. In the context of the transition to sedentism, it is concerned with the nature, role, effect, and application of ideology. All have been found to be issues central to the transitional process, particularly the latter — why, how, and by whom. Ideology, viewed against a politico-religious continuum, is seen initially as worldview having been strategically conceptualised and materialised by shamans for social control and manipulation in small hunter-gatherer communities; and subsequently appropriated by influential/powerful individuals — aggrandisers; big men; priest-chiefs; elites — shamanistically employing it for the same purpose in larger, more complex societies, and doing so in association with sanctification and assumed divinity.

Leadership is viewed in two dimensions, each of which might be considered in terms of a continuum: its *nature*, ranging from being situational and coming into play only when required, to permanent; and its *basis*, ranging from charismatic to imposed. With regard to the latter, while social control can be absolute throughout, there is the matter of acceptance of that imposed. Here, shamanistically contrived practice, particularly sanctification, is seen to have been an effective strategy.

2.4.5 Task Specialisation

Development of full-time professionalism marks an important change in economic systems. It represents new relationships between people and the elements of production, as well as changes in the power of individuals to control resources, distribute products and generate surplus goods. Much of this has been driven and maintained by ideology. Service (1963: xxvii) stated that one of the characteristics of cultural complexity in early states is that those in control, as well as being bureaucratic and military leaders, include the upper priesthoods. Arnold (1987:30) believed that craft specialisation is a key factor in such complexity and concluded that it can be recognised prehistorically when there is evidence of very high product volume; identifiable workshops separated from domestic areas; distinct patterning in regional artefact distribution reflecting organised and controlled production and exportation activities; control of critical resources; and presence of distinctive arrays of specialist tools with burials.

2.4.6 Construction

Large scale construction has a number of ideological implications. Repeated return to such sites is suggestive of group cohesiveness through shared worldview beliefs and practices, while building in stages indicates both co-operation and a continuing association with the site in the same context. There would also be identification with the site: first, in group context, of the general area; and second, private space with respect to associated dwelling structures. This association can be strategically manipulated in that encouragement of and success in achieving such identification within aggregations would have engendered both individual and group ties to sites and territory, community cohesion and identity, and decreased mobility.

2.4.7 Material Assemblage

The transitional period saw effort/need to make foraging more productive with new types of equipment and improvement in that existing. Influence of ideology is also apparent in the selection of raw materials: those with perceived liminality/sacredness (e.g., quartz and mica); special/attractive features (e.g., banding in stone); desirable qualities (e.g., the sharp edges of obsidian); and exotics (e.g., basalt in some contexts), any one of which would give objects and equipment made from them particular value. Acquisition of a number of such items would have been within the restricted domains of powerful individuals only; this in terms of ability to procure, management, condoned use, and knowledge of/access to sources and trade networks.

REDACTIONS

- Figure 2.1** Natural landscape features with sacred connotation:
(a) Uluru monolith (NT, Australia) ref: Escape.com.au, 2015
(b) Misti volcano (Arequipa, Peru) ref: Encyclopedia Britannica, 2012
(c) Devils Tower laccolith (Wyoming, USA) ref: Hoosier Tim's Travel, 201
- Figure 2.2** Natural landscape features with sacred connotation: Dunmore Cave (Kilkenny, Ireland) with figurative stalactites and stalagmites
ref: Kilkenny-tour.com, 2018
- Figure 2.3** Natural landscape features with sacred connotation
(a) Mississippi River/Cahokia (USA) ref: Chappell 2002:63
(b)&(c) Urubamba River/Machu Picchu (Peru) ref: Outside Go & Peru Explorer, 2018
- Figure 2.4** Created sacredness: Mound
(a) Monks Mound (Cahokia, Illinois, USA) ref: <http://charismaticplanet.com>, 2016
(b) Krakus Mound (Krakow, Poland) ref: Trip Advisor, 2016
(c) Chinese Mound (Shaanxi, China) ref: <http://fenomeni.eu>, 2013
- Figure 2.5** Created sacredness: Earthworks
(a) Thornborough Henges (North Yorkshire, UK) ref: Craig Wilson Photography, 2014
(b)&(c) Poverty Point (Louisiana, USA) ref: Monumental Earthworks of Poverty Point, Jan 2013
- Figure 2.6** Site enhancement: Small Stone and Earthen Effigy Mounds
(a) Small stone mound (NSW, Australia) ref: Author (Ross Wickham)
(b) Serpent Mound (Ohio, USA) ref: gnosticwarrior.com, 2018
(c) Effigy Mound (Kazakstan) ref: Livescience.com, 2014
- Figure 2.7** Site enhancement: Visual Imagery
(a) Tassili Fresco (Central Sahara) ref: Lhote 1959
(b) Engravings (NSW, Australia) ref: Gerritsen 1976:5
(c) Engravings (Hawaii)
ref: <https://hawaiianprophecies.com/wpcontent/uploads/2009/07/Pualo-Petro10.jpg>
- Figure 2.8** Site enhancement: Geoglyphs and Stone Arrangements
(a) Stone arrangement (NSW, Australia) ref: Black 1950:16
(b) Geoglyph (Peru) ref: <http://top5official.com>, 2018
(c) Stone arrangement (Kazakstan) ref: <https://www.messagetoeagle.com>, 2017
- Figure 2.9** Site enhancement: Small Stone Arrangements and Circles
(a) Nanakado Sundial (Akita, Japan) ref: The Heritage Trust–Word Press.com
(b) Small circular arrangement (NSW, Australia) ref: author
(c) Bryn Cader stone circle (Wales, UK) ref: John Cropper, www.Flickr.com
- Figure 2.10** Created sacredness at the Stoney Littleton long barrow (Somerset, UK) through importation of material from another place: (a) the barrow ref: www.english-heritage.org.uk, 2018; and
(b) exotic fossilised ammonite incorporated barrow entrance ref: www.wikivisually.com, 2018

Chapter 3 RELIGION

3.1 EXPLANATIONS

Of particular relevance is Boyer's (2000) concept of *ontological principles* which relates to and supports the ideological context of the study — that people had worldview understandings which could be exploited by individuals in a position to do so.

Interpretations of developments among mobile hunter-gatherers during the early stage of the transition to sedentism are confirmed. Similarly, Rappaport's (1968; 1971a; 1971b) concept of *ultimate sacred propositions* and their relationship to ritual and religious experience are seen to relate equally well to the transitional process.

3.1.1 Ontological Principles

Boyer viewed culturally successful religious concepts as the outcome of selective processes that make some concepts more likely than others to be easily acquired, stored and transmitted. He saw some constructs of human imagination being connected to intuitive ontological principles (i.e., a set of expectations about the kinds of things to be found in the world) in such a way as to constitute a small catalogue of culturally successful supernatural concepts. Experimental and anthropological evidence confirms the salience and transmission potential of these. Among the concepts individuals can imagine and combine, some connect with this ontology in a particular way and stand a better chance of spreading in a relatively preserved form. Boyer noted, however, that not all supernatural concepts are of equal social importance and suitable for transmission: some are connected to representations of group identity, ritual, morality and social interaction, corresponding to what is usually termed 'religion', while others are not. Those typically 'religious', however, are tacitly presumed to have access to information crucial to social interaction, boosting their spread in human groups. As a result, they were more likely to generate high commitment and other psychological and social effects typical of religion.

In addition to the concept of supernatural beings, Boyer noted three other recurrent features of religious ideologies — the assumptions that:

- a non-physical component of a person can survive after death and remain a being with beliefs and desires;

- certain people within a society are especially likely to receive direct inspiration or messages from supernatural agencies, such as gods or spirits; and
- performing certain rituals in an exact way can bring about change in the natural world.

Boyer stated that a typical feature of supernatural beings is that they have characteristics which violate intuitive knowledge (i.e., ontological expectations): they may have bodies but do not undergo the normal cycle of birth, maturation, reproduction, death and decay; being able to pass through solid objects or simply be invisible; and have weird characteristics, such as existing in both the past and the present. Nevertheless, they also tend to conform to some intuitive knowledge in having normal human beliefs and desires. On the other hand, in many stories they play tricks and engage in deception in a manner which is very human. Boyer argued that it is this combination of violation of, and conformity to, intuitive knowledge that characterises supernatural beings in religious ideologies. Violations make them different, but by conforming to some aspects of intuitive knowledge people are able to learn something of them. He added that imagined agents are made more relevant by the tacit assumption that they have full access to strategic information.

Boyer considered that knowledge of different types of entities explains another recurrent feature of religious ideologies — that some individuals are believed to have special powers of communication with supernatural beings. At the heart of this notion is the belief that they have a different ‘essence’ from others in their group. He explained the differentiation of people into social roles, exemplified by that of shamans, as an introduction of the notion of essence into thought about the social world.

3.1.2 Ultimate Sacred Propositions

In Rappaport’s scheme, operation of religion is divided into three categories: ultimate sacred propositions, ritual and religious experience. Ultimate sacred propositions are the highest-level doctrines or dogma of a religious system (e.g., primeval origin myths), described by Drennan (1976) as being completely unverifiable beliefs that are held as unquestionable truths by the faithful. They are interpreted on a substantially less sacred level in a body of theology which, among other things, directs the faithful to perform certain types of religious acts (i.e., rituals) in particular ways. Rappaport argued that the sacred plays an important role in human organisation; and, more strongly, that human organisation could not have come into existence, or persisted, in the absence of ultimate sacred propositions and the sanctification of discourse. Flannery (1976:332) was of the

view that given the iconography of prehistoric societies, something in the context of ultimate sacred propositions must have been believed strongly enough to have communicated them.

Drennan saw such propositions accepted because of the intense feeling of reality engendered by religious experience. Things felt in religious experience are considered intensely real, in a sense even more real than those apprehended in an ordinary discursive, rational manner. He noted Geertz (1957:421): “The holy ... not only induces intellectual assent, it enforces emotional commitment”. There is a circular sequence of the three aspects of religion: ultimate sacred propositions direct ritual, inducing religious experience that in turn supports the ultimate sacred propositions, with ritual serving as the point of articulation between religion and social processes.

3.2 ARTICULATION OF RELIGION: RITUAL

Rituals are relatively standardised religious acts which, if performed sufficiently often during occupation of a site, will appear in the archaeological record as a patterned behaviour. Some rituals are *ad hoc*, occurring at the birth or death of an individual; or at times of unpredictable abundances of food (Yengoyan 1972). Characteristic of agricultural village societies are calendric rituals, ceremonies that occur on roughly the same date each year. These often coincide with the planting or harvesting of crops and may be accompanied by ceremonial redistribution of crop surpluses which even out the difference in yield between various parts of a village’s landholdings (Ford 1971). *Ad hoc* rituals in some early societies included infant sacrifice, and cannibalism accompanying the construction of public/ceremonial buildings (Flannery 1976:332). One of the simplest and most direct ways in which this articulation may manifest itself is the aspect of religion noted by Durkheim (1912:474-475) upholding and reaffirming at regular intervals the collective sentiments and the collective ideas which make up its [the social group’s] unity and its personality”. Thus religion, through ritual, strengthens the bonds uniting members of a single local social group, integrating communities, reducing anxiety, negotiating relationships, and transmitting important social information related to power and prestige (Bell 1997; Drennan 1976:347-348).

Ritual practice plays crucial social roles in human societies by communicating information about social status, calming tensions, and integrating communities (Grosman and Munro 2016:311). It involves specific words, movements, or objects (Turner 1977), and often emerges from the routines of day-to-day life. It is inherently symbolic and coded in myth (Bell 1997; Lavenda and Schultz 2013), and used by cultural groups to remember, forget, or recreate elements of their religion and to link the present to the past

(Connerton 1989; Hobsbawm and Ranger 1983). Rituals are often performed in settings that evoke important collective memories and integrate valued objects to define social identities and lineages (Hastorf 2003). They reinforce the network of relationships between humans, animals, and things (Watts 2013:15).

Ritual would have been a dynamic and active process within which human actors performed culturally ascribed actions (Bell 1997; Insoll 2009), as it is through active sensorial engagement in the performance that social communication takes place within communities (Bell 1992; Kus 1992). Funerary rituals, for example, are performances undertaken by the living using objects and distinct actions that convey social knowledge through participants' social relations with the dead (Watts 2013). These performances have special significance because they employ ritual actions to reinforce and recognise the community identity of the living (Bloch and Parry 1982; Laneri 2007). They do so by recalling a group's mythical past and reinforcing ritual symbols and ideologies in the collective memory of the participants (Rowlands 1993). The rituals also provide community members with control over uncertainties raised by the disruption of death by restoring the social order of the community (Laneri 2007).

A major function of many rituals is to induce religious experience, a feeling as opposed to thought. It is non-discursive and involves an immediate grasp of things emotionally, rather than a rational, discursive form of knowledge. Drennan (1976:347) commented that in some ways religious experience is like aesthetic experience; and noted that Otto (1914) spoke of it in terms of a contact with the numinous or supernatural, numinous being described as awe-inspiring, overpowering, urgent, "wholly other", and fascinating. This awe-inspiring experience verifies for believers the ultimate sacred propositions; by experiencing the numinous, they know it is true. Furst (1968) believed that the impact of ancient religious experiences was heightened by the use of hallucinogens.

3.2.2 Application/Manipulation of Ritual

Emerging leaders may replicate and expand traditional rituals to increasingly aggregate and integrate larger number of people, advance political agendas, and situate political change within known cultural constructs. As habitual, ceremonial, and physical manifestations of a worldview, rituals draw people together; and through them, beliefs about the universe come to be acquired, reinforced and eventually changed. No matter what the route to political complexity, a material basis is required to support it and ritual is key to explaining it (Lucerno 2003:523-524).

Lucerno noted the argument that ritual pervades all aspects of human existence, and that it was not surprising ambitious people transform ritual action into political fortune. He commented that ritual can integrate religious, social, economic and political life (e.g., creating and maintaining alliances through marriage and long-distance trade; warfare; and such integrative events as construction of public works, religious ceremonies, political rallies, and feasts). Lucerno noted that it was through replication and expansion of domestic rituals that Mayan rulers acquired and maintained political power — the ability to exact tribute in the form of surplus goods and labour from subjects.

Ritual permits political actors to involve people actively in political change. Leaders often promote such change because through ritual they can claim their actions benefit all members of society. They organise, for example, the building and maintenance of religious structures; subsistence technology including irrigation schemes; craft production; and trade facilities, all typically involving ritual. Their actions presuppose their ability to lead and to offer the potential for expanding influence outside their particular groups (Lucerno 2003:524; Godelier 1977:111-119; Kertzer 1988:30).

3.2.3 Ritual and Political Power

Individuals considered important within their communities attract followers and wield influence because, in the first instance, they possess admired qualities; but while there are various ways in which such personal ‘strength’ (political power) might be acquired, and whatever the reason for political change, an economic foundation in the form of surplus goods and labour is required. These become critical for supporting leaders, permitting the sponsoring of integrative events such as feasting and other ritual behaviour that expresses and explains changes occurring.

The classic Melanesian ‘big-man’ system epitomises this strategy, a political organisation that, as defined by Sahlins (1972:117), typically polarises people’s relations to the productive process, “grouping on one side the big-men or would-be big-men and their followers, whose production they are able to galvanise; and on the other, those content to praise and live off the ambitions of others”. Deploying resources available to him, the leader uses wealth to place others in his debt; and constructs a following whose production may be appropriated/exploited. Drawing from wealth so accumulated, the pivotal local leader comes to prominence and emerges as a big-man contributing heavily to great public feasts and resource distribution (demonstrating ability to acquire goods/resources) that extends beyond his immediate circle to establish his status/prestige in society at large. Perceived generosity is central to such a position being attained.

Chiefs of the North-West Pacific Coast Indian villages achieve the same sort of articulation in their potlatches by external feasting, though as lineage heads necessarily accorded a certain right to group resources they are not obliged to establish a personal claim to them. The political significance of big-men careers is that segmentary society, acephalous and fragmented into small autonomous communities, is aggregated into larger fields of relation and higher levels of co-operation (Fried 1967:131; Sahlins 1972:136-137; Service 1975:72-73).

Ritual is not a source of political power in the same manner as the military, the economy and ideology, but rather advances political agendas through these intersecting sources of power. It allows ambitious people to modify worldviews and codes of social behaviour explaining why specific rights and obligations exist (Lucerno 2003:524; Earle 1997:143-158). Because of their conservative properties, traditional rituals are an ideal way for emerging leaders to insert and justify political agendas. New political systems borrow legitimacy from the old by nurturing the old ritual forms redirected to new purposes. Strategic rituals are thus successful because familiar, traditional beliefs and practices are incorporated into more elaborate forms that support the growing political power of particular individuals and interest groups. Abrupt or extreme change is much less likely to succeed because new ideas, beliefs, and practices can be foreign and unacceptable. Successful application of acceptable, albeit reinterpreted, ritual increases the prestige of leaders and legitimises their political authority, control of critical resources and acquisition of surplus from others. Such rituals integrate larger numbers of people than the small-scale household or community rites from which they derive (Lucerno 2003:525; Kertzer 1988:42; Bourdieu 1977:183-184, 1990:109-110; Cohen 1974:82; Giddens 1979:188-195; 1984:257-261).

Political individuals, however, require strategies of long-term benefit. In sponsoring public events such as feasts, therefore, the particular focus is on rituals/ceremonies that relate to vital elements (e.g., rain, agricultural fertility, and ancestor veneration) conducted according to set schedules in special places. Association with traditional conventions leads to sanctification or uncritical acceptance of perceived special powers because holders of exclusive knowledge and skill are believed to be closer to the supernatural realm. In time, these individuals become directly involved in the continuity of natural forces. Public ceremony, with all the community performing the same rites, promotes solidarity and a sense of belonging, not to mention political agendas. Domestic rituals are replicated, not replaced or restricted; and while people participate in expanded ceremonies, the rituals from which they are derived are still performed. Once in power, leaders can create new rituals for public as well as private/restricted consumption

(Lucerno 2003:525-526; Cohen 1974:135; Kertzer 1988:19; Rappaport 1999:49, 226; Geertz 1980:129-13).

Aspiring political agents have special ties to aspects of the supernatural world that can be appropriated, particularly ancestors. Promoting themselves as descendants of founding ancestors, they can reach out to more people; and, as intermediaries, receive offerings that once were made directly to ancestors and other supernatural forces. Transformation to ranked hierarchy can be explained without any external references. Nothing new has been added, but certain relations have emerged on the social level which were previously only latent in the supernatural realm. A headman becomes a chief by taking on some of the properties formerly possessed only by deities — the assumption of divinity (Lucerno 2003:524; Bloch 1986:86; Friedman 1998:129).

3.2.4 Rituals of Sanctification

Belief systems can ensure the acceptance of social conventions, and thus the requisite degree of predictability in the operation of a social system. Rappaport (1971a, b) suggested this can be effected through rituals of sanctification. These ensure the acceptance of important messages or conventions by imparting to them some of the unquestionable nature of the ultimate sacred propositions: to the extent that a message is sanctified, it will be accepted unquestionably as true. As Rappaport has noted, when people accept messages as true “their responses ... tend to be predictable”. It follows, therefore, that messages likely to be sanctified are those which function to elicit responses that must be predictable so as to permit the orderly operation of society. These messages include both directives and several kinds of more general propositions. The importance of acceptance of directives emanating from some kind of authority is obvious, especially in societies where actual political power is weakly developed. It follows that ritual can be expected to have been well to the forefront in early endeavours to aggregate dispersed groups and keep them so.

Propositions likely to be sanctified concern general attitudes. These, serving as a general guide to behaviour, are often termed ‘values’. Sanctification of this kind of proposition has long been recognised by anthropologists and sociologists studying religion. Drennan noted that it is precisely this which Geertz (1957:426-427) is discussing when he said:

Religion, by fusing ethos and worldview, gives a set of social values what they perhaps most need to be coercive: an appearance of objectivity. In sacred rituals and myths, values are portrayed not as subjective human preferences but as the imposed conditions for life implicit in a world with a particular structure.

Closely related to the sanctification of values is the sanctification of persons and institutions. Drennan (1976) provided the example of this when a chief is said to be

descended from a god he is associated with ultimate sacred propositions, and some of the unquestionable nature of their legitimacy is imparted to his person; thereafter, whatever statements he may issue partake of this legitimacy. Also likely to be legitimised are 'messages' containing information that is either unverifiable or requires special competence for verification. Statements of fact, therefore, that the receiver cannot verify at all (or cannot verify until after he has made his response) are likely to be sanctified. One of the most important types of message likely to receive sanctification concerns social conventions dealing with economic matters (e.g., the ways in which goods are distributed among members of a social group). As these may seem highly arbitrary, they are likely to be sanctified to "transform the arbitrary into the necessary" (Rappaport 1971b:35). Such messages may be either propositions concerning the social conventions or directives involved in execution, their nature varying on the level of control from which they are emanating.

For the social system to operate, Drennan saw it is necessary that those participating in ritual accept conventions and pattern their activities accordingly. He asked what it is that motivated them to do so, noting, for example, that even if an economic explanation is accepted to explain the emergence of administered society, it fails to explain the emergence of the cognised models that enable such a system to operate. (In this context, and referring to the highlands of Mesoamerica, he said it seemed highly unlikely the people accepted that social conventions granting higher status to a restricted set of individuals and requiring that their directives be obeyed, because of realisation that it was necessary in order to maintain a system of economic symbiosis.) Conventions maintaining a social system include many relatively specific directives for behaviour, the relation of which to the overall maintenance of the social system is not intuitively obvious to the participants; neither are the large-scale social, economic or ecological advantages of the particular form of social organisation.

Since there is a large number of possible alternative social conventions, the advantages of which are not apt to be perceived by members of a group, those that seem arbitrary are not likely to be universally accepted. Furthermore, unless there is a high degree of acceptance of conventions and the specific messages concerned, group responses are unpredictable. Successful group operation depends on some minimum degree of orderliness or predictability; hence, to the extent that conventions seem arbitrary but orderliness is necessary, some mechanism for assuring the acceptance of the social conventions and the messages concerned with them is required (Rappaport 1971a:68; 1971b:32). Drennan maintained that where physical coercion is required to ensure this,

existence of an administrative structure capable of wielding a certain amount of power is implied arbitrary.

Rappaport (1971b:31) contended that messages emanating from higher levels of control are more abstract, and therefore likely to seem more arbitrary to those who receive them than those emanating from lower levels of control. This comes about because “the range of differences possible in the regulation of the components of a low-order system, such as a production system, is probably narrower than in higher-order systems”. It was noted earlier that a major source of the seeming arbitrariness of social conventions is the recognition of apparently equally feasible alternatives.

3.2.5 Operational Models

In terms of cognised models, the effect of emergence of administrative authorities is to create a new set of social conventions: broad principles of social organisation as well as principles of communication concerning the regulation of social, economic and ecological variables. The latter are important since one of the major changes involves communication within the social group (Drennan 1976:346). Anthropologists, in endeavouring to explain sociocultural phenomena, employ what Rappaport has called ‘operational models’. In terms of human motivation and understanding, these contrast with cognised models in that they are concerned not only with the selective pressures for new forms of social organisation but also the development of cognised models necessary for their successful operation. Both have been embraced in the model for the transition to sedentism presented in this study.

Flannery (1976:331-333) considered Rappaport to provide a useful theoretical framework by which ritual or religious data can be analysed and interpreted in that it ties religion to social organisation, politics and subsistence rather than leave it on the ephemeral plane of mental activity. Moreover, he saw the framework making possible deductive models in which the presence or absence of certain ritual or religious features in archaeological contexts can be predicted; presumably, it follows that these features might be inferred. Flannery noted that in the framework, religion and ritual cycles are seen as also having adaptive functions far beyond increasing group solidarity.

3.2.6 Rappaport: Positions

As used by Rappaport, ‘religion’ refers to the sets of sacred beliefs held in common by groups of people and to the more or less standard actions (rituals) undertaken with respect to these beliefs. He noted that Tyler (1871), endeavouring to account for the universality of religion, spoke of a “psychic unity” derived from a primordial belief in

the soul that subsequently evolved into its manifold forms; but that Durkheim (1961) could not accept “vain fantasy” being able to “fashion the human consciousness so strongly and so durably”, and that throughout time the source of energy people relied on to live should be based on “a tissue of illusions”. Rappaport (1971b:23) considered it “both plausible and prudent to assume, at least initially, that anything which is universal to human culture is likely to contribute to human survival. It was hard to imagine that religion, “as bizarre and irrational as it may seem or even be, has not contributed positively to human evolution and adaptation”. In his view, the sacred played an indispensable part in the emergence of man, and a crucial role in his continuing survival.

Rappaport was firmly of the view that an enterprise so expensive as religion would have been beaten by selective pressures if it were merely frivolous or illusory: it would have succumbed if its importance were not comparable to its cost, and not crucial to human adaptation (i.e., maintenance of homeostasis in the face of system-endangering change and difficulties). His paper is prefaced with the statement that neither history nor anthropology knows of societies from which religion has been totally absent, and even modern states attempting to abolish religion have replaced it with practices which themselves seem religious. He argued that the sacred plays an important role in human organisation; and, more strongly, that human organisation could not have come into existence, or persisted, in the absence of ultimate sacred propositions and the sanctification of discourse.

3.3 RAPPAPORT AND STUDY MODEL

Rappaport spoke in terms of ‘top’ power being held by society at large and exercised ‘down’ to bring individuals and small groups into line with respect to maintenance of homeostasis. The general model presented in the study, however, while also predicated on ‘top-down’ power, sees it being in the hands of charismatic individuals and employed by them for social control and manipulation of societal behaviour. Homeostasis is the shamanistic objective also, but community adaptation in this scenario is in terms of what influential agents consider to relate to successful achievement of their personal objectives. Rappaport is no less relevant because of these differences. The parallel recognised is the exercise of power. Set out in Appendix C are Rappaport’s views (R1-35) summarised from his paper (1971b). Appendix D repeats these but couched in terms of power being wielded in a community by an individual. Clearly, as the following discussion explains, he would support the thrust of the study with respect to the appropriation and exploitation of ideological power during the transition to sedentism.

The extent of Rappaport's concurrence with this study in regards to the importance and potential of ideology in cultural development (and with respect to shamanism) lies particularly in the sense of the numinous involved in ideology which provided the springboard for shamans to emerge within traditional hunter-gatherer society and assume the role of conduit to the controlling supernatural entities. It permitted not only alteration of traditional behaviour, such as that relating to mobility and subsistence, but to do so in terms of a strategically planned program of change. Binding emotional co-operation of aggregating communities was engendered. Shamans and subsequently other powerful individuals assumed positions of status and influence within an egalitarian context, free to exploit their believed capacity not only to physically contact the controlling supernatural beings but also to argue and mediate, and eventually to assume perceived divinity. In doing so, they were able to legitimise control over the social, political and religious arenas. This also permitted the countering of competition from other contemporary individuals or social groups, thus keeping subsystems in their place.

Ideology was employed as an unassailable strategic platform for the transmission of information and enhancing communication by reducing ambiguity in the 'message' concerned. It aided transduction of information between the perceived cosmos and the real world. Ideology was also used to encourage surplus production and its storage for their personal appropriation, tailoring resource/wealth production to ideopolitical objectives and needs such as prestige-earning redistribution; alliance creation and maintenance; gifting to incur indebtedness; and exotica acquisition. Employing sanctification of directives (ultimate sacred propositions) and their certification not only ensured maintenance of position and authority but also provided a firm basis for community manipulation. Being sacred, directives escaped any apparent arbitrariness or obvious exploitation, having been given the justification necessary to ensure co-operative compliance. Ideologically incorporated sanctity released directives and desired outcomes from traditional constraints and justified as well as authorised new and different approaches to the way of life. Regulatory prerogatives, presented as sanctified social conventions and taken by those subject to them as 'natural', as if genetically determined, included internal spatial arrangements of dwellings and related people protocols, 'place', and the inclusiveness/exclusiveness of sacred locations. Any arbitrariness involved was overcome and compliance enforced.

Within an ideological context, technological development provided increasingly powerful means of coercion in the hands of particular individuals, especially foreigners. Alchemy/metalworking and the ability to create megalithic structures never before seen,

for example, would have confirmed in the minds of the general populace both the capability of those concerned and their considerable power and authority.

Ideology not only facilitated change initiating the transition to sedentism but also that consequent within the process itself, as reflected in moving from the general exclusiveness of passage tombs as ceremonial loci to the more inclusive nature of henges; and in new developments such as megalithic ceremonial complexes resulting from ideas acquired externally through long-distance contact. Ambitious, influential individuals could effect such ideopolitical change by withdrawing sanctified support for an existing framework of authorities and use it to ratify and introduce their own. By this means, social systems could be manipulated.

Chapter 4 IDEOLOGY ARCHAEOLOGICAL MANIFESTATION

4.1 THE ISSUE

There is certainly a range of expressed position concerning the manifestation of ideology. Grove and Gillespie (1992:18) do not consider it possible for ideological behaviour in the past to be identified archaeologically. Simmons (2007:74), while considering that determination of ideology archaeologically not to be easy, has identified “somewhat ambiguous ... tantalizing hints”. Very definite, however, is McAdams (1992:207) who sees ideology far from being an independent factor in behaviour but one significantly affected by social, economic, political, and even technological and ecological realities; and which could be studied against those realities. The study concurs.

McAdams (1992:206) is of the view that material culture expresses and also influences, often in complicated idealised and by no means exact ways, social activity and perception. It is assumed that the way people act influences the way they think, and that habits of thought manifest in one area of life encourage similar processes in others. In particular, he sees a relationship between the technology of a people and their conception of the world and man himself — that artefacts are the products of human categorisation processes; and style and social processes are linked. This assumed linkage encouraged Adams to think in terms of mentality, the manifestations of which are to be seen in systematic activity such as ideological behaviour. The archaeological record is examined for signs of enhanced differentiation, increasing order in both the material and mental realms, and what he says has been termed ‘domination of the conscious over emotion and unconsciousness’.

More recently, this view has been further developed by a number of scholars. Renfrew (2008:2041-2046) has written in the context of post-Pleistocene emergence of symbolic concepts and materialisation, particularly with regard the sacred and forbidden such as response to death, veneration of the dead, and ritual. He saw construction of culture and society having developed rapidly on the basis of new forms of material engagement leading to new and transformed relationships, these not regarded as being a direct and immediate consequence of the human genome but the result of material and social contexts experienced which made possible their emergence. Watkins (2015:91-92), echoing Renfrew, argued that symbolisation evolved to sustain the coherence of the larger human communities through enculturalisation

within a cognitively powerful cultural niche by people adept with new media, particularly ceremonies and rituals, the making of memory in monuments, artistic representations, and signs and systems of symbols. Donald (1991, 2001) has also linked the process of human social evolution with developments in human cognition and changes in the way that humans have communicated and grown in scale and complexity, the key feature being facility with material systems of symbolic representation. Donald called it “theoretic culture”, characterized by “external symbolic storage” constructed through art, sculpture and architecture. These repositories were seen to have come from an intense enculturation process involving new, large and permanent communities needing symbols of collective identity and shared cultural memory, materiality having played an extended major role.

Within this recent development Henrich (2009) has focused on one particular element in the suite of cognitive adaptations that constitute the capacity for cultural learning. He has proposed that people (“cultural learners”) are potentially exploitable by manipulators (“models”, i.e., those individuals from whom people learn) in that alongside verbal expressions of their models they have evolved to respond to “credibility enhancing displays” presented by the latter that are wide ranging, impressive costly and extravagant, and can include expensive conspicuous consumption and costly rituals and sacrifices. (Shamanic ‘suffering’ during ASC would no doubt fall into this category.) Learners as seen by Henrich as having come to look for displays that indicate a model’s degree of commitment to, or belief in, verbally expressed representations. Such displays are considered able to create stable states involving commitment to particular beliefs and practice, especially when there are perceived benefits to the social group.

4.2 PARAMETERS

The task of the study has been to generate context-specific data that define causal parameters affecting given populations; and in terms of ideology this involved separating parts from the whole — specifying the role of a particular religious or political ideology, or of special individual/group interests, in structuring such behaviour. In doing so, two points have been kept in mind: agreeing with Adams and Liverani above, that ideology is significantly affected by social, economic, political, and even technological and ecological realities; and that it was so intimately integrated in the mindset and way of life of Neolithic people as there to be no perceived boundary between sacred and secular. Seen to follow is that ideology can be expected to have influenced every aspect of

behaviour; and if so, might well be reflected archaeologically in some way, either directly or through well-grounded inference.

4.3 FRAME OF REFERENCE

With the above very much in mind, behavioural contexts were developed for the frame of reference set out at Appendix E with which to identify ideology both directly and inferentially in the archaeological records of the sites selected. It was taken into account by the study in determining expectations of the general model presented for the transition to sedentism.

Chapter 5 SHAMANISM

UNDERSTANDING THE CONCEPT

5.1 PERSPECTIVE

Shamanism first came to notice in the early 1650s when a dissident Russian priest exiled to central Siberia met with the Evenki, a nomadic reindeer-herding group whose way of life presented a picture of an ‘ensouled world’, one in which all things, both animate and inanimate, were spirited; and to which almost every aspect of material life — sickness and health, access to food and shelter, success in hunting, and community well-being — were related. Of crucial importance to these people was the maintenance of good relations with the spiritual beings, responsibility for which resided with special individuals who had attained states of trance and ecstasy to enable their souls to travel and communicate directly with them. These individuals were called ‘šaman’ by the Evenki (Price 2001:3-4). Taksami (1998:14) stated that shamanism is an historical phenomenon within a system of traditional faiths distinctive of nearly all Siberian peoples. Interpretation of exactly what it is has been central to shamanic studies.

The extent to which this Siberian phenomenon and behaviour can be transferred to other cultures is subject to discussion. Some strongly resist evidence that shamanism was not unique to Siberia and appeared elsewhere in the Americas; Central, North and Southeast Asia; Africa; Oceania; and Australia (Doniger 2004: xiv; Eliade 1964: xvii, 5, 82; Price 2001:6-7; Siikala 1978:22; Staller and Currie 2001). Halifax (1982) suggested that shamanism must be as old as human consciousness itself, predating the earliest known civilisations by many millennia. Others believe it to date to the Palaeolithic (Eliade 1964; Furst 1977; Kirchner 1952; Lommel 1967; Wilbert 1972). Regardless of time depth, its antiquity can be inferred from the fact that it is a near-universal phenomenon present among hunter-gatherer groups throughout the world (Pearson 2002:66).

A shaman is a ritual specialist with powers centred on curing, sorcery and prophecy. In many cases, these individuals are seen to exert control over weather, animals and enemies, and are routinely sought as an intercessor between the lay-person and the supernatural, especially during life crises such as puberty, sickness and death. Harner (1973:xi) defined such an individual as “a man or a woman who is in direct contact with the spirit world through a trance state and has one or more spirits at his command to carry out his bidding for good or evil”. Detailed cross-cultural studies clearly show their complex of ritual behaviours, actions and beliefs (Staller and Currie 2001:387-388).

Modern scholars have considered various approaches. Siikala (1978:11), for example, stated that:

In outlining the limits confining the definitions of the term 'shamanism' we may proceed from the concepts 'occupant of a religious role', 'magician' or 'native healer'. Differences of opinion nevertheless arise over the question of how the shaman differs from other occupants of a religious role, 'magicians' or specialists in folk healing, and the characteristic features of the shaman and shamanism

Lewis-Williams (2004:29-30) affirmed that:

The notion of 'shamanism' ... is today contentious ... Since the first French publication in 1951 of Eliade's *Shamanism: Archaic Techniques of Ecstasy* (1972) there has, it is true, been a tendency to dehistoricise shamanism and so to mask social and cognitive differences. Some writers today therefore tend to emphasise dissimilarities rather than the more puzzling similarities between geographically distant 'shamanisms'. Yet, even those who recognise all the problems with the word nevertheless find it useful.

Furst (1972: ix) is more definitive:

Wherever shamanism is still encountered today, whether in Asia, Australia, Africa, or North and South America, the shaman functions fundamentally in much the same way and with similar techniques – a guardian of the psychic and ecological equilibrium of his group and its members, as intermediary between the seen and unseen worlds, as master of spirits, as supernatural curer etc.

This complex of related beliefs and practices has been shown not to be the result of diffusion but the consequences of independent inventions from a common neuropsychology (Winkelman 2002:72). Studies have confirmed as universals many of the characteristics attributed to shamans: visionary experience; soul journey; guardian spirit quest; healing practices; and self-transformation experiences, such as death and rebirth. Shamans were found to be charismatic social and religious leaders in societies where political integration and leadership were limited to local community level. They led activities in which the entire community participated, as well as directing hunting, warfare, and group movement. Their ritual activity most frequently involved healing and divination, but they were also capable of sorcery — malevolent magical acts designed to harm others. Ritual was typically an all-night ceremony attended by the whole community. The shaman chanted, sang, shouted and danced vigorously to enact a dramatic encounter with the spirit world while the audience chanted in supportive unison. Through imitation and mimicry, shamans enacted a dramatic emotional struggle with the supernatural spirits and used a variety of induction procedures to enter ASC including auditory driving such as drumming and chanting; hallucinogens; alcohol; fasting and nutritional deficits; physical and sensory deprivation; mediation; strong flickering light; hypnotism; excessive movement or dance; austerities such as wounds and feats of endurance; and intensive temperature conditions. ASCs are generally labelled as involving soul flight and swimming in journeying to other realms, and/or transformation into animals, but not possession (Eliade 1964:4-5; van Pool 2009:180). In the words of Eliade:

the shaman specialises in a trance during which his soul is believed to leave his body and ascend to the sky or descend to the underworld.

Other typical traits of shamans are the provision of hunting magic and identity relationships with control spirits, particularly animal ones as their guardians and helpers (Lewis-Williams and Pearce 2005; Reynolds 2013:23; Winkelman 2002:72). Whitley (1994:25) has termed these “liminal creatures ... which can move between one kind of environment and another: earth-water; earth-sky; earth-surface-underground”.

These practices indicate that shamanism has a psychological basis. Such universality is considered to reflect underlying biologically structured foundations or modes of consciousness (Lewis-Williams and Pearce 2005; Winkelman 2002). The shamanic ecstasy or ASC reflects the integrative mode of consciousness, based on fundamental aspects of systematic organic functioning and balance that produce neuropsychological integration. Such uniformities reflect the fundamental homeostatic dynamic of the human nervous system and consciousness with integration across structural and functional units of the brain. They involve a range of sensory experiences, including seeing entoptic shapes; breathlessness; weightlessness; rising up from the body; taking on a new material form; oscillating noise; paraesthesia (e.g., numbness, tingling, itching, prickling and burning sensations in various parts of the body, like electricity or the movement of small animals under the skin); muscular pains; and feelings of being stretched and disarticulated (Lewis-Williams 1997:813-815; Reynolds 2013:24-25; Winkelman 2002:71-73).

Shamanism constitutes an ecological and psychobiological adaptation reflecting the ritual and cosmology of modern humans. It played a role in cognitive and social evolution through the production of analogical thought processes, visual symbolism, and group-bonding rituals. Its universals are derived from innate modules, particularly the ‘mimetic controller’, music and dance. Induced ASCs produce physiological, cognitive, personal and social integration through integrative brain-processing. They have cross-modal integration characteristic of emerging features of thought and facilitated adaptations to the ecological and social changes of the Upper Palaeolithic. They also explain animism, totemism, and guardian spirit relations (Winkelman 2002:71).

The Bourguignon and Evascu study (1977) of societies ranging from foragers to those complex found that as many as 437 of the 488 surveyed had some form of ASC (Carr 1995).

5.2 NEUROGNOSTIC STRUCTURES: INNATE MODULE FOR RELIGION

Universals of shamanism are manifestations of neurognostic structures, basic forms of perception, awareness and cognition provided by the biological nature and functions of the organism. Those for religious cognition are specific types of brain programs or modules, hard-wired input systems that provide for automatic information processing (Laughlin 1997; Laughlin *et al.* 1992; Winkelman 2002:72-73). Their role as a basis for religious thought has been proposed by a number of anthropologists (e.g., Boyer 2000, 2002; Mithen 1996).

One shamanic characteristic, soul flight out-of-body experience or astral projection, is a universal feature, the psychological basis of which is indicated by cross-cultural distribution, reflecting innate psychophysical structures. This process involves homologies across somatic, physiological and symbolic systems, extending Mithen's (1996) view in showing shamanic universals to be the product of the cross-modal integration of these different systems (Winkelman 2002:73-74). Its basic forms are manifest in shamanic and religious universals: animism; guardian spirits and totemism.

Evolution of the brain and its modular structures produced a fragmentation of consciousness, reflecting both its increasing modularity and diversification of self (Laughlin *et al.* 1992). Shamanic traditions institutionalised procedures to overcome this by synchronising divergent aspects of human cognition through ritual ASCs to facilitate integrative processes. Metaphors produced by cross-modular predication provided a basis for various forms of abstraction. The role of shamans in this process is indicated by their skills in modular-based domains: as the master of game animals; mind/self-developed through animal identities and guardian spirits; and social intelligence as group leader (Winkelman 2002:74).

5.3 THE CONCEPT

Shamanism is a worldview incorporating a range of traditional beliefs and practices concerned with communication with the spirit world. Jordan (2001:40) considered it to represent "a broad scale tapestry of the complex interweavings of the social, practical and ritual landscapes". Many variations exist, but some beliefs are common, in particular that spirits can play important roles in human lives; they can be good and bad; and shamans mediate with the spirit world for community benefit (Stutley 2003).

Its adaptive functions are derived from the roles of animism, totemism, and guardian spirits in self and social development and in abstract representations, as well as ASC,

visionary perceptions, and death and rebirth experiences. Adaptive potentials are derived from the visionary state, a presentational mode of symbolic expression. This imagery provides the basis for shamanic diagnosis, journeying, healing, and the objectification of self. Shamanic processes construct social and personal consciousness through conceptualisations of 'others' as embodied in the spirit world; the socialisation of self through internalising 'sacred others'; and the construction and diversification of self, as exemplified by the guardian-spirit complex. Those derived from the integration of innate processing modules produce cognitive evolution by creating systems of metaphoric expression in animism and totemism. The shaman role in this is illustrated by the ubiquity of principles in foundational tropes, and the production of universals by these through integration of innate representational modules (Winkelman 2002:74).

5.4 STUDY CONTEXT: DEVELOPMENTAL SEQUENCE

Shamans and Priests; Religious Authority, Routinisation and Complexes

This developmental sequence relates Bourdieu's (1972) model designed to explain historical change through individuals interacting with the realities of their environment. More recent modelling (e.g., Hayden 1998, 2001a; Stein 1998; Flannery 1999a, b) based on the idea of a dynamic interaction between ambitious personalities and cultural institutions, concern mechanisms of prestige accumulation the role of individual aggrandisers in the transformation of society and acknowledge the role of individuals within complex communities (Helwig 2003:64).

The *shaman* transforms the numinous to the sacred; and is viewed by Weber (1993:46) as a prophet, "a purely individual bearer of charisma, who by virtue of his mission proclaims a religious doctrine or divine commandment. ... The personal call is the decisive element distinguishing the prophet from the *priest*. The latter lays claim to *authority* by virtue of his service in a sacred tradition, while the prophet's claim is based on personal revelation and charisma". For Sullivan (1988:387) the bases of the shaman's religious authority are "essentially possession, canon and ecstasy. Of these, it is ecstasy which accounts for most religious authority ...". He agrees with La Barre (1972:269-270) in that "(the) secular fact remains that all religions begin with either a paranoid shamanistic self-impresario or shaman-priest impresario of his supernatural spirit-helper or animal familiar. All gods are at least as real as shaman's visions, although perhaps not anymore so".

It is in periods of crisis — political, social, economic or environmental — that the shaman can rise as a prophet. This can occur only in a very particular condition, one

intimately related to continued well-being with a proposed associated religious system to address it encompassing a new set of principles embedded in that objective. The shaman's eschatological views, a product of revelations and personal ecstasies, become important alternatives to the crisis; and when it is confronted with these a permanent congregation of followers and disciples sharing the same eschatological view can be achieved. Maintenance of these congregations is sustained by sacrifices and other offerings. Expansion of movements is influenced by multiple factors and depends heavily on the success of the discourse presented by shaman and the form it takes in relation to pre-existing political structures. Such developments are visible archaeologically in terms of repetitive iconography, artefactual remains and changes in the settlement (Oyuela-Caycedo 2001:5-6).

Weber (1993:60) defined *routinisation of religion* as the threshold change from shamanism to priesthood. He termed the process involved as being where the shaman or disciples secure permanence of his/her preaching and the congregation's distribution of grace. This ensures the economic existence of the enterprise and all concerned, thereby monopolising as well the privileges deserved for those charged with religious functions. The transition toward routinisation is characterised by the creation of fixed cultic centres, such as temples and shrines, which reinforces the message of shamanic ecstatic experience. Success of the priesthood elite does not mean disappearance of shamanistic practice; shamanism will always be present as an alternative form to the establishment and may even coexist in the religious sphere (Oyuela-Caycedo 2001:6).

Religious routinisation by a priestly elite takes advantage of the material culture to reproduce and maintain the new belief system, this achieved effectively by transforming iconography and artefacts to reflect it. The illustration of events and new cultic artefacts become archaeologically important as means of depicting shamanic revelations and transformations into other being such as jaguars, serpents and birds. The extent to which routinisation has been achieved is shown by the new religious system's relationship to political organisation, the rise of priestly horizons recognisable in the iconography, and the symbolic context of the new paradigm (Oyuela-Caycedo 2001:6-7).

A *religious complex* is a system of shared cosmological views expressed in low statistical variation of religious material artefacts and religious architecture, usually operating above the level of political units, languages and economic units. Its foundation is shamanistic in origin and proposed as an alternative to a crisis with an eschatological agenda. During development of a complex and its expansion in time and space, the routinisation of the rituals takes place in temples and shrines as well as in the artefacts

associated with these activities. The complex can expand and contract depending on the rise of new crises and the success of routinisation. It can be identified archaeologically and may demonstrate dynamic movement in space and time independent of local variations in political and economic complexity (Oyuela-Caycedo 2001:6-7).

Chapter 6 SHAMANISM NATURE AND CHARACTERISTICS

6.1 COSMOLOGY

Throughout the world, shamanistic peoples believe in a tiered cosmos with an *axis mundi*, a ‘sacred tree’, as the linking route through the layers (Figs 6.1, 6.2), the ubiquity of which suggests a neuropsychological origin.

At its simplest the cosmos comprises three levels: an upper realm, the sky; the middle world in which people reside, that is surrounded by water; and a lower one, subterranean, accessed through caves. Some shamanic communities also define multiple divisions of these. The Hawaiians, for example, describe a multilayered universe with nine sky levels (Fig. 6.3), while the earth, Hawaii, is surrounded by at least eight sea belts and four subterranean floors (Krupp 1997:35, 169-170). Islands were viewed as floating mountains not attached to the deep, silty and gelatinous bed of creation at the bottom of the ocean and the cosmos.

Eliade (1959:32-33) considered this both primordial and universal. He referred particularly to the symbolism of the centre, the cyclical renewal of life, and the sacred dimension of space and time of shamanistic peoples. He remarked:

According to the traditions of an Australian Arunta tribe, the Achilpa, in mythical times the divine being Numbakula cosmicized their future territory, created their Ancestor, and established their institutions. From the trunk of a gum tree Numbakula fashioned the sacred pole (*kauwa-auwa*) and, after anointing it with blood, climbed it and disappeared into the sky. This pole represents the cosmic axis, for it is around the sacred pole that territory becomes habitable, hence is transformed into a world. The sacred pole consequently plays an important role ritually. During their wanderings the Achilpa always carry it with them and choose the direction they are able to take by the direction toward which it bends. This allows them, while being continually on the move, to be always in “their world” and, at the same time, in communication with the sky into which Numbakula vanished. For the pole to be broken denotes catastrophe; it is “like the end of the world,” reversion to chaos.

This principle identifies a centre of the world mirrored in the sky. For the Tungus of eastern Siberia, the centre is the North Star about which the heavens rotate (Fig. 6.4). Its given name means the ‘middle of the universe’ or ‘pillar’ that relates to the cosmic axis perceived to connect sky with earth and underworld. Similarly, the Pole Star was the ‘golden nail’ of the Mongols, that held the sky in place; and the ‘iron pillar’ of the Kirghiz (Drury 1989:24; Krupp 1997:36-37, 188).

Such a worldview conceives of all three realms animated by spirits and mythical creatures that impinge on the concerns of people in various ways. These include beings

with exceptional powers made up of body parts from different species, such as the dragon and feathered serpent. Mountains, caves, rivers, rocks, trees, wind, clouds, and thunder of the middle world are places perceived to be associated with spirits. Their presence is revealed by departures from routine events and their power evidenced by natural phenomena they are able to activate. Recursive links bind ideology, material culture and the structuring of landscapes through ritual and routine (Krupp 1997:35-36).

6.2 SHAMANS

6.2.1 Nature

Shamans are considered to be the intellectuals and philosophers of their societies, individuals who have assumed functions dictated by the norms of their cultures (Basilov 1990:5; Furst 1994:8-10). They have roles in magical practice and healing, using exclusive techniques because they have access to those forces identified by divination and dreams as the ultimate source of an illness. Shamans are distinguished from other mystics by ecstatic trance (ASC) through which experiences are expressed as their soul leaves the body and ascends to the sky or descends to the underworld to consult with the powers of those realms (Eliade 1964:4-5, 1987:202; Furst 1994:5). They can control ecstatic movement; have more mental and physical energy and endurance than others; guard traditions and esoteric knowledge; and perform sacred and magical songs, invocations and rituals.

A range of physical features are influential in particular individuals being accepted as shamans. These can relate to a physical abnormality (e.g., a limp, a hairlip, crossed eyes); involuntary movement of a body part (e.g., stuttering, shaking) and extreme response to particular stimulants (e.g., dizziness, vomiting or confusion associated with voluntary ingestion of particular substances); being significantly above or below average height or size; having particularly bad breath or bodily odour; having experienced and survived the supernatural (e.g., by being struck by lightning); having had a breech birth; or being albino.

6.2.2 Mediation and Multiple Realities

All cultures experience crises that are perceived to be caused by spirits, supernatural beings and demons. One role of shamans is to mediate with these forces to maintain community status quo (Siikala 1978:15). This can be achieved through offering and sacrifice, and is negotiated via ecstatic trance during which the shaman engages directly with the supernatural entities on behalf of those he represents. At this time the shaman claims to die, becomes disarticulated (Fig. 6.5) and reassembled; and merges with spirits

such as jaguars, bears and especially birds, that guide and aid him and which can move between the earth-water, earth-sky, earth surface-underground environments (Fig 6.6). The *axis mundi* is his mediatory route through the cosmos the during the course of which he has tunnel-like experiences associated with ASC practices at the interface between reality and consciousness described in myths and beliefs (Dronfield 1996a:37-40; Krupp 1997:35; Lewis-Williams 2004:30; van Pool 2009). These suggest that harnessing, or socialising, ASCs for ritual purposes has great antiquity (Lewis-Williams 2004:31). The mystical experience of moving from one reality to another, termed *portalling*, may also be via a door or aperture and across a threshold (MacDonald *et al.* 1989). It may be evoked in shamanistic and mediative practice by concentration on a portalling device such as a mirror, skrying bowl, or a pool of water. This experience is fundamental to the phenomenology underlying multiple reality cosmologies in traditional cultures, and has been explained in terms of radical re-entrainment of the neurological systems that mediate experiences in the brain (MacDonald *et al.* 1989). Implied barriers present a distinction between 'inside' and 'outside' which has a number of cross-cultural connotations: known/unknown; safety/danger; sacred/profane. Portals define thresholds and liminality presenting new possibilities for being, as well as demarcating the qualities of transition.

In contrast to the more obvious notion of a portal, mirrors present realities 'inside' themselves which reflect what is 'outside'. Relations between those images and referents are ambiguous. Mirror-images are two-dimensional representations of three-dimensional space which reverse what they portray. They may be relatively reflective or opaque, reveal or hide. They may be reflective of what is presently in front of them, or they may invite projection of that which is sought. Although giving only a partial picture of the outside, what is seen can be altered by shifting mirrors or one's orientation to them. They also allow looking at things which are otherwise inaccessible. Similar to locked glass doors, mirrors give a vision of realities which are beyond reach, yet the reflections speak to what is there. Accordingly, mirrors are seen in the same context as rituals, being able to remove barriers between mythological and everyday worlds. Siberian shamans had many mirrors of polished copper on their costume (MacDonald *et al.* 1989:40-41, 44).

A house interior may also represent different conceptual spaces, possibly incorporating notions of portals between the profane and sacred. Major themes of North American Indians have been the lodge fire, as the portal to the underworld and the smoke hole that to the upper world. Among some groups, healing was done around the fire because it was considered a propitious place to draw the curative power. The use of house features

as cosmological portals may derive from use of caves. In many cultures the vagina is seen as the ultimate portal between worlds: the connection between caves and female genitalia is obvious. The womb is often seen as the doorway or source, usually associated with earth, from which all the bounty of nature derives (MacDonald *et al.* 1989:40-41). This resonates with the penis-like pestles and mortars analogous to the vagina and uterus often paired in matching scale, decoration and being made from the same valued exotic raw material. It also resonates with the sexual tenor permeating all aspects of shamanic behaviour as evidenced by the use of aphrodisiacs in the ASC and in the erotic elements of rites, and with incorporation of drawings of human sexual organs on costumes (Eliade 1964:79, 153; Ellens 2014:27; Pearson 2002:134-140).

The range of portalling is extensive and includes forms of containers for shiny-surfaced liquids (pottery; tightly woven baskets; rocks with natural or hand-ground depressions); objects with shiny surfaces produced by polishing, adding oils, mica or shell; and decorated objects depicting portals. It appears that any shiny surface, regardless of size, might have served as a portalling device. Crystals, another portalling device, are cross-culturally found in shamanic contexts, many associated with burials. Smoking pipes used among a number of Amerindian groups have been interpreted as a 'mental device' used to concentrate the mind; and seen by many as a passage through which spirit and breath are merged as they enter the body and then released to ascend upwards, a ritual procedure for purification and transformation. Rugs and conjuring mats are used by shamans as portable portals among many hunting peoples for divination. Similarly, sand paintings are considered requisite for healing ceremonies. Perhaps the oldest and simplest of portals is the incised pebble or stone palette, some with multiple incisions animals and shamanic figures that may have been used for enticing game animals from the other world (MacDonald *et al.* 1989:42-43).

6.3 COSMOLOGICAL RELATIONSHIPS: THE HUMAN SENSES

Shamanistic societies understand the environment through their worldview and senses. Gell (1998) saw this in terms of 'technologies of enchantment' and 'material entrapment' with regard to things attracting attention through brightness and lustre; 'difference', such as with complex geometric patterns; visual effects of refraction and reflection; colour; composition; source; shape; special functional qualities; and representation. Houston and Taube (2000:261-262, 290) defined these as cultural meta-senses, comprising a web of secondary reflections and graphic renderings of them and what they do. They noted that acts of emanation, regardless of the sense, are inseparable from perception and its semantic interpretation. As such, substance and creative energy are claimed for things,

states, conditions and forces that are invisible, non-material, non-causative, and devoid of essence in which physical and non-physical entities share a charged vitality through speech, sight, smell or taste. For different cultures, the senses attain central importance because they explain how the world is influenced by creative, wilful projections from the eyes, mouth and nose. In Mesoamerica, the sensory organs are considered to possess individual consciousness and have their own capacity for decision, will, and creative action, this perception underlain by the postulate that the physical and spiritual universe are one and that internal and external worlds hold communion (Bennett 1996:64-69; Collinson 1987:61-62; Houston and Taube 2000:264-265).

For archaeologists, understanding is sought from cultural material encoded with sensual experiences and metaphors that “make visible that which is invisible” (Houston and Taube 2000:261, 263). This permits insight into a lifestyle that blurs any distinction between transcendence and immanence, and in which rational decision-making is distinguished from ritual and beliefs in the supernatural (Lewis-Williams and Pearce 2005:256). Pauketat (2013: 27-28, 78) has metaphorically termed ‘bundling’ the way in which cultures connect distinct things, substances, or qualities of perceived cosmic powers with earthly ones. He argued that such connection occurred “whenever the pathways of human and non-human beings or things-in-motion converge and whenever the activities of people might be witnessed by gods”. The more pathways that converge, the more cosmologically powerful the relationships appear. Pauketat saw this to be inherent in the central organisational axes of Chaco Canyon, movement along which would have been an experiential cosmology that engendered senses of history, heritage and time. Noting that solar and lunar observations lent weight to the concept of the site being the centre of the world, and that architectural alignments and rock art marked the ways in which the sun and moon appeared to revolve around the canyon, he suggested time itself may have revolved around Chaco. Pollard (2017) saw similar engagement in the relationship of the Uffington White Horse geoglyph within the broader archaeological landscape of the area. He argued that the prehistoric hill feature, exhibiting an upwards and westerly route, served as a sun-horse image connected with the diurnal passage of the sun, especially during mid-winter.

6.3.1 Sight: light, and the colours of light; translucence and iridescence

Aesthetic valuations and cosmological associations of light are reflected in a complex relationship between different kinds of materiality, spirituality and natural phenomena, especially the conceptualisation of brilliance and colour (Saunders 2002:209, 212). Brilliance denotes supernatural power in many ethnographic contexts: prehistoric people

probably perceived their world as infused with a spiritual brilliance, manifest in natural phenomena, such as the sun, moon, water, ice, rainbows and natural materials (quartz and crystals; feathers; pearls and shells), that were perceived to have come from places considered animated by supernatural forces and ancestral beings (Saunders 1999:245-246). Artefacts, such as textiles, ceramics and metals, also could have similar properties.

In many ethnographic cultures, such as the Yolngu, brilliance associates with ancestral power (Morphy 1992:189; Scarre 2002:236). Among the Wiradjeri, Eliade (1964:138) noted that a shaman was stuffed with 'solidified light', i.e., quartz crystals, making him mystically like the sky. For the Jívaro, Harner (1980:23) reported that the shaman emanated light, a multicoloured aura from the head during ASC, that could only be seen by another shaman. Quartz has unusual triboluminescent properties that make it universally important. When rubbed or hammered, it emits bright light or sparks, and its crystals produce electrical voltage (Lewis-Williams and Pearce 2004:16-17). This was recognised by ritual specialists in Neolithic Brittany and Ireland (Reynolds 2009:164; Scarre 2002:326). Other peoples have used it to control the weather (Whitley 2000; Whitley *et al.* 1999:224, 234) or exclude disruptive spirits (Gage and Gage 2009). It was employed cross-culturally by shamans to demonstrate 'magical power' (van Pool 2009:183).

Throughout the Americas, light, dazzling colours and shiny materials indicate the presence of supernatural beings, essences and shamanistic worldview. Indeed, the iridescence of shells and feathers, the gloss of fish and translucence of pearls were natural qualities imbued with a sacredness magnified by their origin and the danger associated with acquiring them (Saunders 1999:245, 247). Evidence from bones, artefacts, and imagery at Southwest/Northwest U.S. sites has been used to demonstrate the importance of scarlet macaws as indicators of exchange, ritual, and social complexity. Use of the birds, their skins and feathers reflects a widespread and apparently stable set of practices with implications for interaction, beliefs, and politics (Crown *et al.* 2016).

6.3.2 Touch

Touch and texture are significant to worldview. Complex meanings and identities are expressed in the choice of stone for construction and tool manufacture. It is associated with landscape, significant locations, and the interrelationship between cosmological principles and routine practices. A detailed study of recumbent stone circles of northeast Scotland, for example, has indicated that they differ only in stone texture, as evidenced at Easter Aquorthies. The recumbent and most stones in its southern section are medium-

textured, while those in the north are fine-grained; and in the southeast, Stones 1 and 3 are of very coarse granite, and the jasper of Stone 2 has an unusual waxy quality. This suggests that the haptic quality of the stones was one reason for their selection and placement (Jones and MacGregor 2002:142, 147-148).

6.3.3 Sound

Sound is a vital characteristic of many important places in the ethnographic present and past. How far speech, music and drumming can be heard at and surrounding a site depends on the acoustic properties of the site itself and the immediate landscape (Watson and Keating 1999). According to Rifkin (2009:585), in many societies the concepts of landscape embrace what is a cosmologically-prominent 'soundscape' in which the aural and acoustic integrate with the natural, social and spiritual in a complex cosmological framework. In his studies, attention focused on rock art sites with aural resonance such as rock gongs and places that echo. Both Eliade (1964:179) and Needham (1967:607) have stressed percussion as a component of a rock art-sound-ritual relationship in contacting supernatural and spiritual realms. Hosler (1994), documenting the development of metallurgy in Mexico, determined that the earliest metallurgists were fascinated by metal's potential for sound as well as its brilliance. She commented that the range of metallic artefacts made it clear that the artisans were interested in items that aurally reinforced their conceptions of the sacred.

6.3.4 Smell

Smell features in the understanding of ethnographic and prehistoric peoples. Houston and Taube (2000:267, 270-1) documented its significance in Mesoamerican thought and close integration with concepts of the soul and the afterlife through the medium of breath. In particular, the Classic Maya texts state that the breath soul was associated with flowers and the wind upon which scent is carried. This was indicated by a symmetrical pair of everted elements, also used over the mouths of alcoholic beverage containers, alluding to the smell of the fermented beverages. In many cultures after death, the body was purified with decoctions of aromatic herbs and flowers.

6.3.5 Taste

Some tastes, such as animal protein and fat, saltiness, sweetness or spiciness, have cultural value to ethnographic societies and those of the past that overwhelmed the basic desire for calories (Curet and Pestle 2010:23). Farrington and Urry (1985:4) have argued that such importance can be observed in the sequence of early domestication in

Southwest Asia, Southeast Asia and Mexico, where there is a predominance of sweet-tasting fruits, oily fruits and legumes, and condiments, yet none was a staple. In Southwest Asia, Zohary and Spiegel-Roy (1975) noted that the earliest evidence for domestication of major fruit and nut trees occurred 6000-5000BP. There is also a cultural preference for bitter and acidic foodstuffs, including alcohols. An archaeological example is the consumption of the ritually important 'Black Drink' in southeastern North America for purposes of purification. Produced from *Ilex vomitoria* containing the methylxanthines of caffeine and theobromine, it was consumed in prodigious quantities, especially by men, and was often followed by bouts of ritual vomiting prior to religious rituals, political councils and negotiations, ballgames, and departure of war parties (Crown *et al.* 2012:13944-13945).

6.3.6 Sense Enhancement and Alteration

Many plants have been utilised for their psychoactive properties and for the brewing of alcoholic beverages to induce ritual intoxication and trigger powerful/often physically violent hallucinations, including visual, auditory, olfactory, and tactile sensations experienced as supernatural phenomena. These include tobacco, opium poppy, cactus, mushrooms and cannabis. That they were regarded as culturally important and sought after is supported by the fact that virtually all hallucinogenic plants are extremely bitter and unpleasant to taste, if not nauseating, with many requiring pharmacological preparation for effectiveness, thus reducing their chance discovery in the course of the everyday food quest (Dimbleby 1967:70; Furst 1972; van Pool 2009:180).

Carr (1995) stressed that hallucinatory and psychoactive drugs have been part of human culture and religion from the distant past through to the present; and noted that the work of La Barre (1972) indicated that the practice of shamanism and the ritual taking of hallucinogens may be plotted as far back as fifteen to twenty thousand years. Sherratt (1990:51) believed that the ritual behaviour of body painting, using ornaments and special clothing was especially enhanced by changes in mood or metabolism. Pointing to the importance of plants with psychoactive properties, he indicated that sensory-altering substances would have played a powerful role in Neolithic Europe; there would have been extensive knowledge of the various mood-altering substances which were available in the natural flora. Sherratt (1990:52) referred to burials found at Cueva de los Murciélagos dated to c.4200BC containing large numbers of opium poppy capsules, which he considered to indicate that the seeds had symbolic significance beyond use as a food source, and that this symbolism was particularly appropriate as an accompaniment of the dead.

Pre-Columbian Maya society ritually consumed balché, a mead-like drink made from the hallucinogenic plant *Longocarpus longistylus*. The Olmec used native tobacco (*Nicotiana rustica*) or the psychoactive venom of the marine toad *Bufo* (Diehl 2004: 106; Sharer and Morley 1992). Maori religious specialists employed kava (*Macropiper excelsum*) in religious ritual. Hawaiians and Tongans used awa (*Piper methysticum*) as an aid to communicating spiritually with ancestors (Kirch 1985, 1988). Iron Age groups such as the Scythians and the Dacians utilised *Cannabis sativa* and *Melilotus officinalis* as part of a consciousness-altering repertoire for spiritual purification (Rudenko and Thompson 1970; Rolle and Walls 1989). The priestly class at Chauvin de Huanter used psychoactive substances such as mescaline-bearing San Pedro cactus (*Trichocereus pachanoi*) and vilca snuff (*Anadenanthera sp.*) in ceremonial contexts. Similar substances and accoutrements have been found in priestly burials at Tiwanaku. Scholars suggest that in some pre-Columbian Andean cultures, social linkage revolved intensely around cults sharing religious experience brokered by religious specialists who included wakeful hallucinogen-induced ASC as an important part of their spiritual repertoire (Kolata 1993:272; Burger 2011). Artistic motifs at a number of late Neolithic megalithic ceremonial complexes in northern and western Europe are thought to have been derived from entoptic hallucinatory imagery and designed as multisensorial experiences in which darkness and acoustic resonance could produce ASCs (Twohig 1981; Watson 2001; Wesler 2012; Lewis-Williams and Dowson 1993).

Furst (1972) remarked on the universal similarity in the premises and motifs of shamanism that suggest great antiquity in the enhancement and alteration of the senses. He noted that its central features are sacred plants promoting visions and hallucinations which have helped humans to experience the “other worlds” (Fig.6 7). These institutionalised personal ecstatic experiences producing an ecological and ritual framework accepted by the community. Generally, the psychotropic components of sacred plants are in the alkaloids, resins, glucosides and essential oils found in leaves, bark, stem, flowers, sap, roots or seeds. These are capable of producing dramatic and profound changes in perception, such as the enhancement of colours, bright light, vortices and the appearance of spirits, while the plant appears god-like to the shaman, who has invoked it ceremonially. Barriers between humankind and the supernatural realms are removed (Drury 1989:43-45).

In the Andes and Europe, alcoholic beverages were status products with fundamental religious and socioeconomic significance, and served both as a social lubricant and a social barrier. Feasting, especially the distribution of food and drink, played a key role in establishing and maintaining social relationships. Sherratt (1997) discussed how the

ritual importance of stimulants, such as alcohol with its symbolic and social implications, was reflected in the quality of drinking vessels and serving equipment (Figs 6.8, 9).

Alcohol was a means by which divine sanction was transferred to individuals being established in a position of power. It was the divine medium, and its consumption a 'magical' device for both legitimation and protection of their status. Arnold (1999:87) noted a liminal association in the production of alcoholic beverages involving a 'magical' transformation of essential elements. Consumption can be inspiring in moderation and destructive when over-indulged and has special qualities. Its importance can be enhanced by danger in acquisition, such as collecting wild honey for mead.

6.4 COSMOLOGICAL EMBEDDEDNESS: THE CULTURAL LANDSCAPE

6.4.1 Sky

Astronomy is not only a major element of traditional and prehistoric life, but also integral to everyday existence. The sky is the domain of weather, time, seasons, sun, moon, stars and planets; additionally, it is animated and rotates. As such, it is a powerful source of perceived cosmic order among cultures. Human concepts about it are expressed as belief, ritual and religion; symbolism in arts and crafts; mythology, lore and storytelling; and architecture (Krupp 1983:231-285).

In some cases, verbal and visual art demonstrate a clear knowledge of solar, lunar and stellar appearances and periodic movement, as well as interest in meteors, rainbows and eclipses. Among the Pueblo and Navajo, knowledge of the sun, moon, planets, stars and constellations enables an annual calendar governing the daily round and determining the timing of agricultural tasks, ceremonies and rituals. This is intertwined with how they perceive the cosmos, conceptually organising the world. Their philosophy is that one can live harmoniously with the supernatural world by doing things in the proper ritualistic manner. The cosmological interrelatedness of various elements is readily seen in Zuni ritual directions. Young (2005:49-50) noted that in the American Southwest, sun-watching sites included buildings with astronomically aligned doorways, windows and walls, particularly for the solstices, which "seemed to be a celebration of the sun of the event — an 'inviting in' of the sun or the shadows it cast".

Many authors have argued that cultural interest in sun and moon movements is indicated in the orientation of prehistoric structures towards particular astronomical phenomena. For example, Ruggles and Martlew's (1992) research in North Mull found that sites were preferentially placed to associate prominent secondary peaks or groups of them with the southernmost moonrise at the minor standstill and the rise and set of the winter solstitial

sun. Higginbottom and Clay (2014) and Higginbottom *et al.* (2013, 2015) confirmed these conclusions, adding that when erecting a monument consideration was given not only to a single astronomical phenomenon but also to a complete cosmological cycle(s) illustrated by similar horizon profiles around 360°.

The importance of mythology about the sky is illustrated by a study of the social contexts of the production and distribution of greenstone axes from Mt William in Victoria (McBryde 1984). That quarry was preferred over other technologically equivalent sources of the raw material, indicating its symbolic significance. A widespread belief in regional cosmologies that stone axes ‘kept falling from the sky’ implies that their production and movement across the landscape were underwritten by symbolic considerations such as the need to propitiate dangerous supernatural forces to maintain cosmic order. Another myth stated that axes were used by a supernatural being to prevent the sky from falling (Brumm 2009:188, 193).

6.4.2 Earth

Particular natural places acquired significance as doorways between the physical and spirit worlds. Caves and springs served as openings into the underworld, while mountains led to the upper world where the earth joined the sky. All were perceived to be associated with ancestors and the supernatural. Many remained untouched, enshrined in mythology, while others have evidence of human activity, including sacrificial remains, votive deposits, art and buildings (Bradley 2000:5, 13, 35-3; van Pool 2009). Caves were venues for ritual and burial, presenting a liminal boundary between the world and cave interior, enhanced by silence and darkness. Restricted space and claustrophobia, fear and danger, and the sense of a permanent night with a constant temperature, all of which could have induced ASC, heightened the sense of moving into another realm.

6.4.3 Water

Water, including rivers, streams, lakes, rapids, springs, waterfalls and whirlpools, represents a fundamental element in virtually all non-western cosmological schemes. It is a portal to the underworld, a metaphor for transition and transformation, and its flow from source to sea provides one for movement, journeys and progression. Its properties and qualities promote its cosmological and elemental significance and engage in all areas of human experience (Richards 1996a:316-317). As noted by Douglas (1994:162), water breaks down form and is associated with purity and regeneration. Bradley (1990:64-68) and Thomas (1991:73-75) have commented on the deposition of objects such as

Peterborough Ware, polished stone axes and maceheads, jet sliders, and human skeletal material, into British rivers and 'watery places' during the Neolithic. These artefact types are generally associated with mortuary contexts in caves or barrows, underlining the significance of water during the Neolithic (Richards 1996a:317).

6.4.4 Animals

For many cultures, animals represent not only food that can be hunted or domesticated but are respected as sentient beings that possessed souls and speech and were reborn after death in a continuous round of fertility (e.g., Fienup-Riordan 2003:182-187). Peoples with tiered cosmologies have considered certain animals as totems and as representative of the divine, such as cattle in India; and imbued with supernatural potency as seen in the San with the eland antelope (Lewis-Williams and Pearce 2005:139), the Colombian Indians and the jaguar, and the Haida Indians of the Northwest Coast and the raven (Reichel-Dolmatoff 1975:44, 50,77-80). Animals, particularly those that can or are thought to kill humans, such as snakes, crocodiles, felines and even eagles, were feared and revered within many cultures around the world as guardians of supernatural places. Shamans relate to and can transform into them. They can represent people in power.

Lewis-Williams and Pearce (2005:191-192, 145) have commented that movement between levels of the cosmos is always steeped in ritual and religious beliefs, and is symbolically represented by selected creatures. Snakes are prominent in this context in that they live below and above ground, in trees and can swim. Furthermore, in shedding their skins they represent transition and resurrection. Ethnography suggests shamans seek power relationships with a number of species. It is considered that at the beginning of the Neolithic, this kind of differentiation held the potential for competition and social struggle between individual ritual practitioners and small groups of them.

6.4.5 Plants

As noted, plants play many roles and can be regarded as having souls or spirits. Long-lived trees are thought in the Andes and elsewhere to represent ancestors, as they had lived with them and continue to live longer than the human life span. Importantly, some cultural plants are perceived to have special qualities and effects, such as hallucinogens to which shamans credit their extraordinary supernatural power. They are deemed sacred, even deified, and need to be treated carefully and propitiated with offerings lest they turn against those who use them.

6.4.6 Stone and Other Portable Objects

Natural portable objects, such as rock and stone, minerals and crystals, shells, and fossils, also have had a long association with humans throughout prehistory and been perceived to have special qualities. In pre-Columbian Peru, for example, stone gained such importance that large rocks were placed in a community centre or on a nearby peak and recognised as the guardian with long-lived human qualities. Small stones, including quartz crystals or unusually shaped or coloured pebbles, were thought to house family ancestors and used to promote fertility of crops and livestock (Sharon 1978:59).

Minerals with qualities of translucence, iridescence and light-giving were items of elite Aztec tribute. Green items were especially valued, denoting fertility. The complexity and inextricability of such imagery for the Aztec is indicated also by the placing of a greenstone in the mouth of a deceased emperor; and by the glyphic combination of a greenstone in a stream of water to signify 'precious water', a metaphor for sacrificial human blood (Saunders 2002).

There is worldwide evidence for the ritual and cultural importance of shells as offerings and jewellery. For example, in North America, cylindrical shell beads signified light and spiritual well-being, while pearls were highly regarded for their light-giving and spiritual qualities (Saunders 2002). *Dentalium* shell was prestigious in Southwest Asia and traded widely.

Bradley (2000:91) suggested that fossils were of importance because they represent ancestral creatures and plants, as of the long existence of this world, expressing links with the past and other places. They have been included as offerings in many prehistoric places, such as megalithic tombs and incorporated in artefacts (e.g., pottery).

Other natural objects of importance in the prehistoric world are stalactites and stalagmites which are perceived to hold supernatural qualities not only for their unusual shapes but also for the exclusive development in caves (Bradley 2000:100). At Çatalhöyük, stalactite pieces were found in structures, some carved with human-like features and even used in jewellery. Their presence suggests cosmological and religious beliefs about an underworld (Lewis-Williams and Pearce 2005:105-106; Mellaart 1967:178). Among the present-day Tukano, a hollowed-out tube of stalactite is the 'penis of the sun', holding narcotic powder, which is scraped and consumed with the drug in the transformational process of shaman to jaguar (Reichel-Dolmatoff 1975:111).

6.5 COSMOLOGICAL EMBEDDEDNESS: MATERIAL CULTURE

Man-made objects express the worldview of shamanistic society. While these might be considered as single elements in artefacts, it is their manifold integration within individual units that highlights the overall pervasiveness of worldview. Chapman (2000a:5-6) noted three fundamental links between objects and people:

- *places in the landscape* — dwellings and particularly burial in houses and specific places or community areas that connect with ancestral space; the occupation of ancient places, such as tells; and the creation of a distinct mortuary domain as a counterpoint to the domestic domain;
- *distribution* — the development of social relations through the enchainment and accumulation of personalised objects; the fragmentation of objects and human skeletal remains as an aspect of enchainment; and the creation of object sets as part of accumulation; and
- *deposition* — the retention of domestic objects near the living area during and after their use; the structured deposition of objects, human remains or burnt material in specific places; and the exchange of materials of the living with those of the ancestors through pit digging, and house burning, etc.

Chapman regarded enchainment and accumulation as practices that sustain social relations, noting that exchanges are potentially asymmetric with indebtedness and long-term dependence if constraints on accumulation are circumvented. They operate through the breaking of an object into the required number of parts to establish a relationship.

6.5.1 Constituent Parts and Associations

Objects made from an exotic material can take on special values, not only for the manufacturer and owner, and bring such sources into memory. Examples exist from many parts of the world: for the Irish Neolithic, Cooney (2000) has argued that temporality and spatiality are important in the exchange of polished stone axes. Particular sources are distinguished by their colour, and the process of polishing serves to highlight this relationship to specific places, as with the Langdale quarries in Cumbria and those of Lambay Island, Ireland. It emphasises the significance of these places and those with access to them. As such, colour, place and identity are intertwined, establishing a cognitive coherence between spatial distance, identity and the exchange and use of exotic items.

6.5.2 Decoration

Dazzling costumes and jewellery incorporating shiny, iridescent objects, the use of certain colours, and particularly entopic motifs, make definitive statements of social prestige for the living, and figure prominently in symbolic representation of political power and elite status. Individuals with them are seen to control, wear and manipulate cosmic energy from whence political power flows (Blanton *et al.* 1993:220-222; Hoskins 1998:195; Saunders 1998:230).

6.5.3 Technology

Technological understanding is enveloped in ritual knowledge by selecting and mixing the cosmic energies embodied in raw materials. What might, from a Western perspective, be viewed as the secular use of such objects is assessed by Pfaffenberger (1992:505) as “a design constituency (which) creates, appropriates, or modifies a technological production process, artefact, user activity, or system in such a way that some of its technical features embody a political aim”, with the intention of altering the allocation of power, prestige or wealth. In this sense, the process is clearly strategic.

The technological production of shiny and coloured items objectified a society's valuation of these qualities which themselves were mediated by the sacred nature of technologies used to make them. Such processes are social and cultural choices whose practical consequences are valued, legitimated by and operated within the spheres of mythology, religion and ideology. In Amerindian worldviews, making such objects was an act of transformative creation, harnessing the social and mythical significances of light, colour and matter, and shaping synergy of myth, ritual knowledge and individual skill (Saunders 1999:24; 2002:215).

6.5.4 Settlement and Housing

In the ethnographic literature the cosmos is reflected at a range of scales: the landscape; the village; and the house and its contents, regardless of its form, four-cornered or circular (Rapoport 1969:49-50; Redfield 1958:87). One example is the Dogon of Mali in whose worldview, the body, behaviour and society conform to the patterns and processes of nature and the cosmos. Villages are built in pairs to represent heaven and earth, and laid out as parts of the body. Fields are cleared in spirals because of the way the world has been created. The house of the paramount chief is a model of the universe, while household objects and chairs have symbolic quality within it (Krupp 1997:161-16; Rapoport 1969:50-55).

REDACTIONS

- Figure 6.1** Schematic rendering of the tiered cosmos with axis mundi shown in red
ref: Roe 1982:128
- Figure 6.2** Tiered mythological Mesoamerican cosmos: the central tree, growing out of a mountain, links the upper world, the earth's surface and the underworld; on the vertical plane, people distinguished quadrants like a four-petalled flower
ref: Lewis-Williams and Pearce 2005:65
- Figure 6.3** Cross-Pacific Polynesian vision of the cosmos with structural hierarchy
ref: Krupp 1997:170
- Figure 6.4** Mongolian 'golden nail', the Pole Star, considered to hold the sky in place and around which the northern stars rotated providing the highest power in heaven
ref: Krupp 1997:189
- Figure 6.5** Hawaiian engraving considered to represent shaman disarticulation
ref: <https://amazing-1700-year-old-hawaiian-petroglyphs-done-in-lava-from-the-big-island.jpg>
- Figure 6.6** Shaman transformation ref: Lewis and Pearce 2004:150, 130, 168
(a) Transformed shaman
(b) Shaman transformed into a bird
(c) Shaman transformed into an antelope
- Figure 6.7** Hallucinogen: San Pedro cactus (*Trichocereus pachanoi*) ref: Sharon 1978
(a) Chauvin stone carving of a mythical being holding a stalk
(b) Moche ceramic bottle representing an owl-woman curer holding a slice
(c) Chimu ceramic bottle representing a female curer holding the cactus
- Figure 6.8** Ritual imbibition of hallucinogens: pottery assemblages ref: Sherratt 1991
(a) Probable supports for braziers used for opium (Chasséen period, Brittany)
(b) Set of vessels for alcoholic beverages (TRB, Jutland)
(c) Possible braziers for cannabis: (left) Mihailovka period, Ukraine; and (right) Vučedol period, Jugoslavia
(d) Elaborate pottery vessels for communal consumption of special food/substance (Tustrup, Jutland); characteristic of TRB (MN), especially of such ritual sites
- Figure 6.9** Lambayeque/Sican Brazier (Peru), decorated with three detailed and ornately attired shaman figures engaged in rain-bringing ceremony
ref: <https://www.google.com.au/sican+shaman>

Chapter 7 SHAMANISM BELIEVER EXPERIENCE

7.1 WORLDVIEW

Rappaport (1971a, 1971b), as discussed earlier, determined that an essential part of cognised models of the world was the unverifiable beliefs, unquestionable in being ‘verified’ by ritually induced, religious experience — by experiencing the numinous, people knew these to be true. Acceptance is seen to have been heightened by the use of hallucinogens or alcoholic beverages (Flannery 1976:332-333).

Shamans not only assumed previously unacceptable individuality but also maintained it because what the people understood and believed was reinforced by how they had perceived it. Understanding of the concept of ‘power’ is the foundation of shamanic influence and control, with communities open to manipulation and exploitation.

7.2 UNDERSTANDING THE CONCEPT OF ‘POWER’

Sharon (1978:49) considered the central concept of shamanism to be power:

This is the notion that underlying all visible forms in the world, animate and inanimate, there exists a vital essence from which they emerge and by which they are nurtured. Ultimately everything returns to this ineffable, mysterious, impersonal unknown. The varied religious expressions of humanity are attempts to develop a meaningful and/or practical relationship with this power. The ancient Chinese called it life force; the ancient Hindus referred to it as *prana*; among the Polynesians it is known as *mana* ... Modern psychologists refer to its manifestation in the human psyche as libido. But only the shaman and the mystic actually identify with power through direct personal experience. Apparently all humanity has the potential for such identification, but few realise this potential, perhaps because most are unaware of it or do not know how to develop it.

7.2.1 Power: People Perception

Krupp (1997:247) observed that traditional people perceived a universe saturated with power, the acquisition of which was considered useful; and as the power of shamans came from liaising with the celestial realm, affiliation with the sky legitimised their authority and credibility. While ritual knowledge was central to this, such power was not readily acquired; it sought out shamans and was focused not only in them but also their paraphernalia. Depending on the innate disposition of the society it could be used for good or evil. Success, especially in curing or practising magic against enemies, was vital, particularly if shamans could guarantee good fortune (Sharon 1978:50-51).

It is important that shamans understand the sacred geography of the *axis mundi*: the road to the centre of the world; the portals to the highest heaven; and the terrestrial aperture to

descend to the land of the dead. Shamans have learned how to become spirits, and it is accepted that they have the “ability to leave the body with impunity [and] act in the manner of a spirit: he flies through the air, he becomes invisible, he perceives things at great distances ... sees the souls of the dead and can capture them, and is impervious to fire” (Furst 1994:10-11). According to Eliade (1987:203), the shaman in ASC ecstasy re-establishes the communicability that existed *in illo tempore* between this and the ‘other world’.

7.2.2 Power: Shaman Perception

Shamans perceive power in two ways. First, while there is ultimately no distinction between helping others and yourself, in doing so the shaman becomes more powerful (Harner 1980:139). Second, each culture has its own symbolic indicators of power, the possession and display of which indicate who has it. These reinforce belief in the permanence of social order to the extent that it moulds community character and can be used by those with influence as “a protective additive for the social engine ... to persuade ... that power is at work” (Krupp 1997:247).

Animism provides a framework for the acquisition of supernatural power by shamans who believe that their powers are those of animals and plants. Animal–human unity is accessible in non-ordinary reality to the shaman. Eliade (2004) emphasised that the only ‘real’ events are mythological ones that become the models and make the **non-sacred** real. The Australian Aborigine concept of the ‘Dream Time’ embodies this awareness, for it refers to a mythical past that exists in parallel time to present-day ordinary reality and is consulted in dreams and visions. Shamans are regularly able to effect the animal-human unity by entering ASC, and as such the mythical past becomes accessible. The fact that the shaman can interact with these realms is of vital importance to the respect and legitimacy commanded, and much of the performance is dedicated to demonstrating control of spirits (Nelson 2008:90).

Harner (1980:43) advised that to become a shaman the strong, basic power of a guardian spirit is necessary in order to cope with and master the spiritual powers. Such a spirit is often a power animal that not only protects and serves him but becomes his *alter ego* (Fig. 7.1). While others may have a guardian spirit, a shaman uses his actively when in an ASC. He frequently sees and consults with it, travels with it on journeys, has it assist him, and uses it to help others to recover from illness and injury. In addition, a powerful shaman normally has a number of spirit helpers, providing great collective power with specialised functions for particular purposes. These are recruited from among animal

and plant spirits to assist in encounters with the supernatural masters of game and plants, with the rulers of the sky or underworld, and with the dead. They accompany shamans on celestial or chthonic out-of-body journeys, assist in overcoming obstacles or dangers, do battle at their side or in their place against demons and sorcerers, and help locate and retrieve lost or stolen souls of clients. Typically, shamans are the masters of spirits, not their instruments (Furst 1994:6).

7.3 PEOPLE EXPERIENCING SHAMANS

Shamans need to demonstrate the power relationship with supernatural beings and distinguish themselves by their behaviour, costume and paraphernalia from the community.

7.3.1 Modus Operandi

The shaman interacts with the community directly but is separated physically with respect dwelling and in terms of behaviour, dress and social rules. His performance in public is often in an isolated, special place (Eliade 1987). These characteristics, amounting to significant and deliberate social isolation on the part of the individual, contribute to his personal mystique.

While only shamans make the trance journey to contact the supernatural, community members participate in trance-inducing activities, such as prolonged dancing and chanting, and the taking of drugs. This permits the latter to 'experience' what the shaman is doing and the 'reality' of his professed travel.

7.3.2 Recounting and Explanation

Shamans present their visions of confrontation with the supernatural as characterised by brilliant colours and light. Paraphernalia and ritual knowledge reinforce these visions that are conceived to be enveloped in shimmering light. The light, shadow and colour effect can reveal and transform the appearance of an object, person and phenomenon, and is assumed by shamans whose status is predicated upon their abilities as 'shapers' of worlds. Community acceptance relates to belief that shamans understand more than ordinary people do. Furthermore, visions are regarded as seeing the internal essence, not the outward appearance of things (Saunders 2002:213-214).

7.3.3 Self-Presentation

Krupp (1997:248-249) stated that shamans have brokered cosmic power in their costumes that incorporate celestial symbolism infused with power (Figs. 7.1, 7.2, 7.3). The

idiosyncrasies of each costume are the product of the shaman's relationship with the spirit world. Nevertheless, they operated within a shared symbolic system.

Eliade (1964:145-147) considered that the shaman's costume *per se* constituted both a religious hierophany and a cosmology, disclosing "not only a sacred presence but also cosmic symbols and metapsychic itineraries ... By the mere fact of donning it — or manipulating the objects that deputise for it — the shaman transcends profane space and prepares to enter into contact with the spiritual world. The costume inspires the same feelings of fear and apprehension as any other object in which the spirits reside".

Without a costume, a cap, belt or something from his sacred wardrobe is sufficient. Its composition provides the shaman with a new, magical body of animal nature into which he transforms, as a culturally determined 'power animal'. This perception is reinforced by art, showing them transforming into/from their power animals.

Eliade (1964:157-158) noted that *birds* appear cross-culturally in connection with shamans, particularly in the mythical relations between them and the eagle, the father of the first shaman. As such, it represents the supreme being in a solarised form. Feathers are included in shamanic costumes, highlighting the importance of 'soul flight', with headgear being made of these to imitate a bird. Additionally, the Mongol shaman has 'wings' on his shoulders, while owl feathers decorate the staff of the Kazak-Kirgiz one.

The costume includes objects imitating bones to appear like *a skeleton* (Fig. 7.4). Eliade (1964:159-160) stated that this is the life-substance, the primal matter preserved by mythical ancestors. The gloves and boots of the Siberian Nganasan shaman, for example, depict bones, joints and veins; and additionally, representations of twelve reindeer leg bones for when performing he 'walks' on fourteen legs (Gračeva 1978:320-323). Bones can represent the final source of life, both human and animal, from which it is reconstituted. Eliade (1964:168) emphasised that the costume "transubstantiates the shaman, it transforms him, before all eyes, into a superhuman being". The costume conjures travel to other realms. Nganasan shamans use one costume to negotiate the underworld and another, lighter in weight, for the upperworld. On the caftan of both the Yakut and Altaian shaman are disks representing the sun, one pierced to represent the earth with its portal to enter the underworld (Eliade 1964:148; Krupp 1997:248).

The headgear is shaped to distinguish it from everyday wear (Figs. 7.5, 7.6). They include variously pointed hats, circlets with uprights, and strings of beads dangling over the face. In Siberia, some have bands with antlers, trees or birds springing upwards, or with shells and feathers (Nelson 2008:118), while the Tungus wore deer antlers. Antlers are infused

with the power of seasonal renewal, providing an analogy for the shaman's own transformation (Krupp 1997:248-249). Also powerful are the cap for the Yurak-Samoyed and a head cloth or blindfold to enter the spirit world by their own inner light.

Masks play the same role as costume (Fig. 7.7). The shaman wears one to avoid recognition by spirits, for magical participation in the spirit world, and for representing and reincarnating the souls of ancestors or mythical persons/animals. Samoyed shamans cover the face with a small piece of cloth as a blindfold in order to enter the spirit world by their own inner light (Eliade 1964:147-148, 153-154). Belts and streamers that whirl outward during dance are also important, particularly if made of metal or shell, that rattle and flash as the shaman spins.

7.3.4 Paraphernalia (Sacra)

Shamanic paraphernalia are individually owned and have cultural powers that add to those of the shaman himself (Eliade 1964:169; Krupp 1997:247; van Pool 2009). Eliade (1964:149-152) noted that it embraced 'power objects', such as crystals; staffs and sticks; whips; mirror; rattles or other noisemakers; and collections/caches/bags of 'magical' and healing objects (Figs 7.8, 7.9, 7.10). Among the latter are psychoactive agents and their containers and associated equipment, such as pipes or other means to ingest drugs; 'curing' or sucking tubes used to find or remove illnesses; and shrines or altars serving as entry points into the spirit world (van Pool 2009:182). Mithen (1996:196-197) noted that as these can be manipulated at will for any purpose, such cognitive fluidity creates the possibility for thinking in terms of people being open to manipulation in the same way, particularly by shamans.

The drum (Fig. 7.11) is important in ceremonies, its symbolism complex with many functions. Rhythm is essential in performance, and drums, along with other rhythmic instruments such as rattles and bells, are used to summon spirits and access their world. They facilitate ASC attainment to enable flight — the shaman's journey to the Cosmic Tree at the centre of the world where communication between earth and sky is possible. Some shamanic drums bear no decoration, while others display an array of designs and elements, each with its own meaning in the shaman's ecstatic journey or other mystical experiences (Eliade 1964:168-173; Hoppál 1992:160; van Pool 2009).

7.3.5 Feasting

Commensal consumption, being an important tool in the recurrent negotiation of social relations, played a crucial role in establishing and legitimisation of powerful shamans

and emerging elites. It was intimately associated with the sequence of shaman, priest and religious complex discussed previously, facilitating interaction with other individuals and small groups to create and reinforce linkages. Ritual being involved, the accumulation of spiritual advantages for individual parties was allowed; and a framework for collective emotional experiences provided that through their communicative and performative structure constituted meaning. Enhanced by the influence of unusual states of mind, a level of higher excitement and greater sensitivity could be reached that provided reason for unusual behaviour impossible (or at least uninhibited) under normal circumstances. Importantly, social tensions could be resolved, personal relations changed, and group coercion enhanced. Feasts, therefore, facilitated both the maintenance of the changing/changed social body and negotiation of individual relationships. Not only could there be establishment of mutual obligations, alliances and co-operation, the enhancement of status and social inequalities, and thus the creation of political and economic power through wilful manipulation, but also a means provided to make such changes possible (Helwig 2003:65-66).

Three major aspects of such feasting may be recognised archaeologically since their remains show systematic deviation from site standards: the commensal consumption of special food, drink and narcotics; the spatial distinction of the feasting stage; and status symbols involved in the negotiation of social relationships. Communal consumption of large amounts of special food, beverages, and possibly narcotics, can be detected through the remains of food preparation, consumption and disposal facilities. These include areas allowing preparation of unusually large amounts of food; special cooking vessels and ovens that differ in size from those normal; serving vessels in numbers above the average household amount and specially decorated plates of varying size; accumulations of wasted food or garbage pits containing unusual animal bone assemblages; and residues of narcotics and artefacts related to their consumption. Similarly, because enhancement of personal status requires use of prestigious items for display, exchange, and possibly public destruction, these can provide evidence of ritual feasting. Furthermore, ritual feasting can take place at locations that are distinct from normal, domestic locations: an open space, such as the village plaza; an area with restricted access; a sacred precinct or platform; or a special building such as a shrine or temple distinguished by their attributes, elaboration, size, and possibly spatial separation (Helwig 2003:66).

7.3.6 Entoptic Phenomena

The ASC enables the shaman to control access to the 'deep' end of the spectrum of human consciousness. In defining the different values of that spectrum, shamans become

powerful. They make their constructed, historically situated definitions and controls appear natural and immutable. This relates to the encoding of particular visual imagery, entoptic phenomena, with specific meanings. These are derived from the structure of the optic system and cover two classes of geometric precepts: phosphenes and form constants. These are distinguished from hallucinations, which have no foundation in the structure of the optic system and can be generated by drugs (Lewis-Williams and Dowson 1988, 1993; Schultes and Hoffman 1980).

Under certain circumstances the visual system generates a range of luminous percepts independent of light from an external source. ASC research has shown that these take abstract geometric forms such as grids, zigzags, dots, spirals, and catenary curves — collectively known as geometric entoptic figures. All are experienced as incandescent, shimmering, moving, rotating, and sometimes enlarging patterns; they also grade into one another in a complex way. Because they derive from the nervous system, all people who enter certain ASCs are able to perceive them. These visual percepts can be induced under a variety of laboratory conditions. Prehistorically, their generation could have embraced a number of means including ingesting of psychoactive drugs; action generating fatigue, extreme fasting, dehydration, extreme pain, bloodletting, sleep deprivation; sensory deprivation; intense concentration; auditory driving by drumming and chanting; migraine; schizophrenia; hyperventilation; and rhythmic movement such as dancing. Sensations differ depending on the specific means employed, but usually involve visual and auditory hallucinations, the feeling of flight or swimming, and extreme emotion, including fear and perhaps the sense of dying. These experiences are often depicted in visual imagery, such as rock art (Lewis-Williams and Dowson 1988:202; van Pool 2009:180, 182).

Although there are numerous geometric entoptic forms, experiments with psychotropic drugs indicate that certain types reoccur during ASC. These are: a basic grid and its development in a square lattice and expanding hexagonal pattern; sets of parallel lines; dots and short dashes; angular or undulating zig-zag lines crossing the field of vision; arcs, nested catenary curves; filigrees or thin wavy lines, sometimes overlapping or tree-like; spiral or tunnel-like vortices, including concentric circles (Lewis-Williams and Dowson 1988:203; van Pool 2009:180) (Fig. 7.12). These can occur in isolation or combined with cosmologically significant beings, which are probably associated with tutelary animals and liminal creatures. Shamanic sacra, such as drums, may be painted with important entoptic motifs containing sacred knowledge to augment their power (van Pool 2009:182-183).

Lewis-Williams and Pearce (2005:48-55) proposed an idealised model of brain function and possible course of a person's experience during an ASC involving principles governing perception of entoptic phenomena and iconic hallucinations, using published descriptions of such effects (Fig. 7.13a, b). There are three stages in progression of ASC consciousness/depth:

- Stage 1** ASCs start with geometric mental entoptic images of which seven frequently repeated forms are identified: a grid, lattice or expanding pattern; sets of parallel lines; bright dots and short flecks; zigzag lines, angular or undulating; nested catenary curves, the outer arc of which comprises flickering zigzags; filigrees, or thin meandering lines; and spirals (Figs. 7.14, 7.15, 7.16);
- Stage 2** The nervous system produces a variety of images, including entoptic phenomena, which the brain attempts to recognise or decode. If these are set in a religious context they can be construed as supernatural entities, beings or symbols. Later, a vortex or tunnel is often experienced, at the end of which is a bright light. It has an internal grid, in which appear images of people and animals; and
- Stage 3** Emerging from the vortex, the subject enters a strange, ever-changing world of hallucinations, such as attenuation of limbs and bodies, polymelia, zoopsia; and changing into animals and other transformations — therianthropes (Fig. 7.17).

Their cultural contexts permit individuals to select motifs and standardise them in culturally specific ways. Zig-zags with grids might be labeled snakes in some cultures or plumed serpents in others (van Pool 2009:180). Lewis-Williams and Pearce (2005:198-249) have identified a link between art and ASC that is shaman-related. Although Paul Bahn (2010) and others have concerns with this, it can provide insight into the context and meaning of prehistoric behaviour.

Shamans present themselves through visual imagery in two ways, figuratively or abstractly, which can be used to convey mystical or magical messages. While the former offers something familiar to which people could relate, the latter is different and needs explanation that only shamans could provide. As such, it represented convincing evidence of their interface with the supernatural, thus bringing together supernatural presence and shamanic power. Through this, a 'real' community relationship with the supernatural is confirmed and experienced.

Most shamanic rituals include some form of hallucinogenic agent. In some cases, shamans lose consciousness completely and appear dead, and their hallucinations are considered divorced from the mundane, reflecting the underlying 'real' spirit world (Barclay and Russell-White 1993; Littlejohn 1998; van Pool 2009).

7.3.7 Behaviour/Activity: Music, Song and Dance

Laboratory research by Nether (1961; 1962) has demonstrated that drumming produces changes in the central nervous system which are the result of the many sound frequencies transmitting low frequency impulses to nerve pathways in the brain. Research by Jilek (1974) on shamanistic spirit dances of the Salish expanded on the capacity of rhythmic drumming to induce ASC. It found that frequencies in the theta wave EEG range predominated with a deer-skin drum and was the most effective in the production of trance states. While the shaman may beat the drum himself, complete trance requires an assistant to maintain it. At that point, the shaman sets the tempo by dancing, the rhythm of bells and other trinkets on his costume leading the drum and supplementing it with higher frequencies. This provides body motion input to the shaman's nervous system. As Shirokogoroff (1935) observed, dancing is called forth by the necessity of producing rhythmic sounds (Harner 1980:52-53).

The shaman's entry into the ASC state is also helped by singing. Typically, he has special 'power songs' that he chants. These are repetitive and monotonous, mainly increasing in tempo as he approaches ASC. Words help to evoke trance, referring to his spiritual guardians and helpers, and reaffirming his power. They animate the spirits in power objects which then take over the artefacts. This process is also enhanced by the audience joining in singing (Harner 1980:52-53; Joralemon and Sharon 1993:65). As noted earlier, group participation in song and dance permits sharing of the shaman's out-of-world experience.

REDACT10NS

- Figure 7.1** Siberian shaman and costume ref: Siikala and Hoppál 1992
- Figure 7.2** Siberian shamans and costumes ref: Diakonova 1994
- Figure 7.3** Siberian shaman costume vestments ref: Diószegi 1968
- Figure 7.4** Siberian shaman costume symbolism: Skeleton ref: Diószegi 1968
- (a) Dress
 - (b) Vest
 - (c) Boots
 - (d) Leggings
- Figure 7.5** Siberian shaman costume symbolism: Bird
- (a) Shaman headdress with bird motive and feathers ref: Diószegi 1968
 - (b) Feathered headdress ref: Joki 1978
 - (c) Feathery headband ref: Diószegi 1968
- Figure 7.6** Siberian shaman headgear: Power animal:
- (a) Deer ears and antlers ref: Drury 1989
 - (b) Bear snout ref: Joki 1978
- Figure 7.7** Canadian Eskimo masks ref: Sullivan 2003
- (a) Crescent-shaped eyes and spots on dark background may represent the moon and stars
 - (b) Black forehead with dots may represent the upper world with star holes to the beyond
 - (c) Complex mask with opposing faces possibly representing complementary relationships between land/sea, land/sky and men/women
- Figure 7.8** Shaman paraphernalia (sacra):
- (a) Basket of power objects ref: Furst 1994
 - (b) Rattle of timber stick and metal rings ref: Diószegi 1968
 - (c) Rattle of seedpods filled with stones ref: Lewis-Williams and Pearce 2004
- Figure 7.9** Shaman paraphernalia (sacra):
- (a) Staffs headed with owl, curer and serpent ref: Sharon 1978
 - (b) Drumstick ref: Diakonova 1994
 - (c) Moon and sun pendants ref: Krupp 1997
- Figure 7.10** Shaman paraphernalia (sacra): Drum-shaped idols ref: Diószegi 1968
- Figure 7.11** Shaman paraphernalia (sacra)
- (a) Siberian drum ref: Lewis-Williams 2004
 - (b) Siberian drum ref: Krupp 1997
 - (c) Chilean Drum ref: Krupp 1997
- Figure 7.12** Altered states of consciousness (ASC) ref: Lewis-Williams and Pearce 2005
Diagram illustrating how distinctive motifs are completely derived from the structure and function of the human brain.
- Figure 7.13** Altered states of consciousness (ASC) ref: Lewis-Williams and Pearce 2005
Diagram illustrating the three stages of ASC. As the human mind moves deeper into altered states, hallucinations shift from scintillating geometric forms through a narrow tunnel or vortex to bizarre, full sensory hallucinations.

Figure 7.14 Altered states of consciousness (ASC): Entoptic Phenomena in Shamanic Rock Art
ref: Lewis-Williams and Dowson 1988
The six categories of entoptic phenomena are shown in two forms (A, B); their presence in San (C) and Shoshonean/Coso art (D); and Upper Palaeolithic mobile and parietal art(F, G, G, H, I)

Figure 7.15 Altered states of consciousness (ASC): Entoptic Motifs
(a) Californian rock art ref: Pearson 2002
(b) Mexican yarn painting depicting a shamanic vision ref: Descola 2010

Figure 7.16 Altered states of consciousness (ASC): Entoptic Motifs in Art
(a) Wales ref: <http://pm.reveues.org/docannexe/image/887/img-3-small480.jpg>
(b) Tasmania ref: Flood 1983

Figure 7.17 Altered states of consciousness (ASC): Therianthropes
(a) South Africa ref: Lewis-Williams and Pearce 2004
(b) Australia ref: Flood 1983

Chapter 8 SHAMANISM ARCHAEOLOGICAL MANIFESTATION

Identification of the shaman is notoriously difficult in the archaeological record without supporting ethnographic or ethnohistorical evidence. While physical deformities can be readily recognised, entoptic motifs discerned on various objects and surfaces, and the consumption of hallucinogenic substances noted, detailed local archaeologies need to be understood to identify the unusual characteristics that may be manifest in such items as costume, and artefacts that may or may not be regarded as sacra. Furthermore, local burial practices, tomb construction and grave orientation need to be included to determine particular patterns to isolate ideological potential. Feasting has to be understood in terms of spatial context and, if possible, timing.

Ideally, it is the combination of features that identifies them and their potential role in a society. Imagery on artefacts, structures, and/or in caves, can reveal entoptic motifs indicative of the importance of trance-like states. Graves may contain sets of artefacts known from ethnographic and ethnohistorical literature to be sacra-like and therefore shamanic. In addition, skeletal evidence can point to physical characteristics distinguishing individuals from the general population, indicating possible social difference. That said, archaeological identification of any social role is always difficult; however, placing such evidence in site or regional context permits interpretation not only of the buried person as having been special and shamanistic, but also the level of his/her influence within the culture concerned and the extent to which shamanism was integrated within societal behaviour.

8.1 NATURE OF EVIDENCE

The main categories of evidence are general and culturally specific (Table 8.1). Not all expected to be represented in any one instance and some may be culturally specific; indeed, given the possible range of combinations, shamanic burials can present as being significantly different from each other. The important consideration is understanding what the artefacts used for, their relationships, and the context in which they were found. Particular attention needs to be paid to discernible change in this regard in the archaeological record as possible indication of new ideology and powerful individuals, and external influence.

**Table 8.1 SHAMANISM MANIFESTATION
GENERAL CATEGORIES**

Direct Evidence

In comparison to general cultural practice for disposal of the dead:

. *burial*

- grave location (special site such as a cave; or a particular, demarcated section within a burial zone)
- grave form, construction and preparation
- physical nature of the individual, using pathological and skeletal evidence for personal idiosyncrasy and/or caused behaviour different from other community members
- position-of the individual within grave and orientation
- associated activity (e.g., feasting)
- very different nature of clothing/costuming (e.g., beads; pendants; headdresses)
- nature, number and placement of grave goods
- associated burials and sacrifices: number, gender, apparent status, relationship, presentation, positioning, and origin
- presence of hallucinogens, often in cylindrical containers
- foreign characteristics of grave goods or grave type

Indirect Evidence

. *artefact characteristics*

- unusual form, colour, shininess
- exotic objects and materials

. *visual imagery*

- entoptic motifs: variety of decorated media and its distribution on portable objects and structures
- statues, stelae, figures and figurines in various media
- dangerous animals and birds that can harm or kill humans or perceived so (e.g., leopards, boars, snakes, and raptors)
- decorated, plastered and culturally deformed human skulls

. *cosmological references* with respect to the tiered universe

. *cosmological alignment of structures*

- orientation towards the equinoctial and solstitial rising and setting of the sun, to the waxing and waning of the lunar cycle and to other celestial events
- orientation to geographical features such as mountains, whirlpools and caves with perceived supernatural connotation, to man-made structures of ideological significance

- . *ritual framework*
 - shrines; altars; and special isolated buildings
 - ongoing, staged repetitive processes over long periods designed to achieve many objectives
 - . *ochre*
 - containers; grinding equipment; ritually scattering and/or on bones and objects
 - . *paraphernalia/sacra*
 - staffs; sticks; whips; unusual ornaments suggestive of ritual/ceremonial regalia; portalling objects and the materials from which they are made
 - containers/bundles of 'magical' and medicinal objects
 - . *caches*
 - presence of different objects; specialised equipment and raw materials
 - . *parts of rare, dangerous or culturally important animals and birds*
 - skulls, antlers, horns, teeth, tusks, claws, paws, phalanges and other particular bones; bird beaks, claws, wing bones and feathers; exotic shells
 - . *stones*
 - difference in form and nature; special qualities particular features such as shininess/polish, translucence, colour, and banding; being from cosmological sources such as caves, accessing different realities
 - . *trance-state inducing psychoactive drugs*
 - chemicals, plants and alcohol; and associated containers and equipment
 - . *strong magico-religious sexual tenor*
 - visual imagery, structures and equipment
 - aphrodisiacs and containers
-

8.2.1 Burials

Shamans are unusual and can be identified as men or women having unusual physical features and by the nature of clothing and grave goods, and through use of indirect archaeological evidence. Useful in this latter regard are: the presence of trance-state inducing psychoactive drugs and alcohol (Dimbleby 1967:70), and associated containers/equipment; and stone type, including colour and banding. Critical solar or lunar event orientation of a grave can indicate the possibility of a shaman burial, but in itself is not sufficient. Other evidence is required to establish this. Difference can also extend to grave location, construction, amount of grave goods and their placement, and associated burials.

8.1.2.2 Sexual Tenor

A strong sexual tenor permeates all aspects of the ASC trance state. Sexual potency is equated with supernatural power. Shamans were considered unusually virile. Although humans are sometimes depicted as phallic or priapic, intercourse is rarely portrayed, the sexuality implied understood to be of a magico-religious character and a specific metaphor for the shaman's entry into the supernatural world. Visual imagery, such as rock art, pillars, stelae and figurines, reflects sexual symbolism, and is particularly useful in recognising shamanic presence and influence in both operative and burial contexts. As noted earlier, sexual overtones are particularly obvious in objects such as pottery vessels, and groundstone mortars and pestles, as they relate to the use of aphrodisiacs. During the preparation of these, shamans perceive explicit allusions to the sexual act, not in the sense of mechanical eroticism but linked to the process of creation (Pearson 2002:134-140). Given the sexual tenor emphasis of shamanic behaviour, particularly in the ASC, a further indicator of a shaman burial is the presence of aphrodisiacs. The 800 year-old grave of the Sicán shaman, for example, had a ceramic vase containing nectandra seeds known to be used for this purpose (en Perú 23012010; Räscht and Müller-Ebeling 2013).

8.1.2.3 Visual Imagery

Cross-cultural research has helped to articulate the shamanic paradigm in cave art and to explicate its role in this transition. Understanding of the nature of shamanism and an identification of the psychological basis of shamanic universals has extended the approach of Clottes and Lewis-Williams (1998). Lewis-Williams (1991; 1997) has demonstrated the importance of applying ethnographic analogies and neuropsychological models to discern shamanism in Palaeolithic art. This has expanded earlier theoretical interpretations of the significance of cave art that failed to account for its central aspects (Winkelman 2002:71). Clottes and Lewis-Williams suggested that, despite the temporal distance, this is a better way to access the religious experiences of Upper Palaeolithic peoples than through other aspects of their lives because of the neuropsychological basis of those experiences. The study of trance-induced images by Lewis-Williams has revealed entoptic motifs as critical indicators of ASC and hence the presence of shamans.

8.2 SHAMANIC BURIALS

One key archaeological observation is the shaman grave that displays a degree of difference from those considered the norm for each culture, as illustrated by the elaborate Puyang (China) and Filippovka 1 (Southern Urals) ones with, respectively, animal

mosaics in shell and gold leaf costuming (Figs 8.1, 8.2). This difference is not simply in one feature but many, marking the special role and status held by the individual in life. These embrace grave location; grave construction and closing; mortuary feasting; grave goods, particularly those marking important symbolic and shamanistic roles in the spiritual arena; positioning and treatment of the corpse and its pathology; and the use of red ochre. Three shaman graves are described below.

8.2.1 Hilazon Tachtit: Israel

Hilazon Tachtit is a 12,000-year-old, single-occupation Natufian cave, 150m above the Nahal River and 14km from the Mediterranean. The grave (Fig. 8.3) represents the first use of this difficult, elevated site. Cultural remains were concentrated in the centre in two small circular structures, *c.* 1m diameter, built of large undressed limestone cobbles, and three pits. Structure A was a single grave constructed for a 45-year-old, gracile but disabled woman considered to have been a shaman; the remains of 28 individuals were contained within and between the three pits and Structure B positioned close to it (Grosman *et al.* 2008). The female burial is unusual. Significant investment in time and energy was invested in its preparation, arrangement, construction and closure; as well as for feasting, provision of grave goods and transporting the body. The discrete stages of deposition in the grave implies a predetermined sequence of ritual and ideological importance, suggesting complex ritual knowledge and performance. The burial stands out with its investment in the burial pit and the very high frequency and wide variety of exceptional animal and artefact inclusions. The latter are considered to reflect expression of personal identity of the woman, and possibly include contributions of those participating in the burial process. Evidence suggests that she held a unique position in her community. The grave shows six stages of ritual burial (Table 8.2) implying significant preplanning (Grosman *et al.* 2008; Weisberger 2016; Grosman and Munro 2016).

Table 8.2 HILAZON TACHIT STAGES OF RITUAL BURIAL

Grosman *et al.* 2008; Grosman and Munro 2016

- | | |
|-----|---|
| 1 | a symmetrical oval pit, the floor and walls of which were covered with layers of mud, limestone and other sediments; |
| 2/3 | the pit floor was lined with several large limestone slabs, and the walls with small limestone blocks and “unique” elements — shells, gazelle horn cores and tortoise carapaces, these covered with a layer of ash and chipped stone; |
| 4 | placing the body in the pit in an “unusual” squatting, child-bearing position, and facing north with back against the southern wall; and tortoise shells underneath the head and pelvis where they rested against the grave wall. Animal bones and more tortoise shells, the latter representing animals eaten during a ritual feast at the site, were positioned atop and around the body; |

5 the grave was filled with residues from the funeral feast; and

6 a large triangular block of limestone was positioned on top to seal the grave. At the time of burial a number of large stones were placed directly on the head, pelvis and arms to keep the body in a desired position or to hold it in the grave.

Several skeletal pathologies, including vertebral lipping, osteophytes and heavy tooth erosion, are consistent with those accrued during life, indicating that she was relatively old. Congenital pathologies, including fusion of coccyx and sacrum, and deformations of the pelvis and the lumbar and sacral vertebrae, would have affected her gait and given her an unnatural, asymmetrical appearance. The cranium may have been detached.

The woman was interred with unusual grave goods (Table 8.3), particularly a completely articulated human foot of a larger adult which Hayden (2017:410) saw as being consistent with human sacrifices often associated with secret societies. The other items may represent her personal possessions or objects donated by attendees at the event. They include a 14cm fragment of a basalt palette above the left leg, red ochre and white chalk, as well as a completely articulated human foot of a larger adult. A pointed bone tool was placed perpendicular to the left tibia and a 10cm diameter round pebble on the left side of the pelvis. There were at least 86 complete or fragmented tortoise shells and many fragments, and while their breakage pattern is considered to be consistent with feasting as part of the burial ritual they must have played an important symbolic and shamanistic role within that culture. [In Mesopotamia from the Neolithic onwards, the symbolic, apotropaic and healing value of these animals were important, including their role as psychopomps, responsible for escorting newly deceased souls to the afterlife (Berthon *et al.* 2016:122).] Body parts of several unusual animals that rarely occur in Natufian assemblages were present and largely unbroken, indicating that no marrow was extracted, again an uncommon Natufian feature. These also appear to have held important meanings.

Grosman and Munro (2016:322) commented that the burial's staged sequence of activity adds dynamism to the ritual, the strongest impact of which would have been imparted to participants through the sounds, smells and visual stimuli which would have had a potent effect in maintaining and renegotiating social and political roles. In this context they noted that the stone slabs lining and paving the grave give off hydrogen sulphide when broken.

Table 8.3 HILAZON TACHTIT SHAMAN BURIAL

Grosman *et al.* 2008; Grosman and Munro 2016

A completely articulated human foot of a larger adult

Two stone marten skulls, one complete and one anterior half, the absence of skinning suggesting that they were buried with skin attached — possible medicine bag

Wing tip bones of a golden eagle (raptor) that support the bird's large and colourful primary feathers

Several articulated caudal vertebrae of an aurochs tail

Snake vertebrae; and the remains of fox, hare and partridge

Almost complete pelvis of a leopard (an exotic/extremely rare animal in Natufian contexts)

Articulated radius and ulna of a wild boar was directly aligned to the woman's left humerus – unlike all other ungulate long bones, these are complete except for a long thin segment split from the anterior shaft which would have enabled extraction of bone marrow while leaving the fused radio-ulna intact

Three cockle shells — exotic/marine; possible portalling function; and two shell pendants

At least eight gazelles of which four were newborns or possibly foetuses; and a complete male gazelle core (male gazelle cores had both functional and symbolic/spiritual uses in Natufian contexts)

Remains of at least 86 tortoises with indications of cooking

Broken basalt bowl/palette reworked by knapping

Groundstone fragments, all derived from either an uncommon vessel type or rare raw material

Red ochre and white chalk

A complete bone point, heavy-duty limestone scraper and a lightly retouched limestone pebble

8.2.2 Bad Dürrenberg: Anhalt-Saxony

This grave, dated 7080-6230 cal. BC, contained 25-35 year-old woman and a neonate (Porr and Alt 2006) (Fig. 8.4). Within its regional Mesolithic context, it was considered to be “without doubt special”. The woman was placed upright, legs and arms flexed, in a small pit filled with red ochre, possibly with the child between her legs. Except for most cervical vertebrae and smaller hand and feet bones, the adult skeleton was complete. Grave goods comprised 140 artefacts and animal bones (Table 8.4), a number of which were considered “remarkable” and unique: a longitudinally split roe deer metatarsus with red ochre on its tip, interpreted as a tool for decoration as part of the burial process; a small fragment of a boar thyreohyoid (tongue) with holes pierced in the proximal section

and part of a pendant; and 50 frontal teeth from aurochs, bison and deer considered pendants incorporated in costume decoration. Two notable artefacts are the pieces of roe deer skull bone with attached antlers, possibly worn as headgear; and the assumed symmetric arrangement of wild boar canines, possibly related to costume. Also included were bone beads, fragments of tortoise and fresh water mussel shell; and a crane long bone used as a container for 31 very well-made microliths. Sánta (2014) noted the presence of bird wings. These and the microliths container were probably of the migratory *Grus grus*, the common crane, universally known in European mythology.

The skeleton shows an irregularity in the *foramen magnum* causing scoliosis and asymmetrical development of other vertebrae. This has neuropathological consequences, including temporary severe pains to the head, neck and shoulder; and temporary paresthesia and abnormal sensations of the body, such as numbness, itching, tingling or burning. Instability at the craniocervical junction may have affected perception, resulting in nystagmus (involuntary eye movement from side to side in a rapid, swinging motion rather than staying fixed on one object) and/or diplopy (seeing double). Similarities exist between these physical features and related conditions, and the clinical experiences of ASC, such as tingling, prickling and burning sensations in various parts of the body. It is difficult to estimate the amount of control she would have had over her conditions, but she may well have come to master them. This genetic condition is exaggerated by a number of the means noted earlier for entering an ASC trance (Mathews and Lowe pers. comms). Involuntary and temporary loss of control over body movements could have been interpreted by herself as well as others as possession by spirits.

Dental pathologies are evident, particularly a pulpal abscess, an advanced chronic infection which spread through the maxillary and facial parts of the woman resulting in loss of bone substance. In addition to severe pain, this would have caused swelling/distortion of the gums, upper lip and face. The woman would also have had chronic bad breath (Elfar pers. comm.). Her speech would have been affected. The condition can progress rapidly to being life-threatening with possible lethal consequences and may have caused her death (Elfar; Porr and Alt (2006:402)). An irregularity associated with the first vertebra probably caused her to limp.

While the burial process cannot be reconstructed, the majority of artefacts are pieces of ornamentation and utilitarian objects. Most are polished and carry signs of extensive periods of use before their deposition. Consequently, it is assumed that the grave goods generally reflect her personal belongings. This interpretation is supported by the composition of the inventory consisting of a variety of single artefacts or small quantities

that could be viewed as a tool kit. The simultaneous occurrence of these grave goods in the context of an “exceptional” burial led Poor and Alt (2006) to interpret this burial as shamanic.

Ornamentation objects in themselves, however, do not necessarily point to a shaman burial. Their provenance (e.g., water related; dangerous; ‘out there’) is the critical factor; and in this context the majority in this grave do, and strongly so. Similarly, utilitarian objects need not be shamanic, as interment of an individual’s personal equipment with him/her is not uncommon; but what is lacking in this case enough information to indicate what these objects were used for. That said, the significant number of the Table 8.1 categories reflected in the burial support shamanic interpretation. The woman’s physical features and related behaviour would certainly have identified her as being different in that context.

Table 8.4 BAD DÜRRENBURG SHAMAN BURIAL Porr and Alt 2006

The woman was placed upright, legs and arms flexed, in a small pit filled with red ochre powder, possibly with the child between her legs

Costume material: 50 pendants made from frontal teeth of aurochs, bison and red deer; and pierced wild boar tongue bone

Bone beads — possible costume decoration

Two pieces of roe deer skull bone with attached antlers, possibly costume headgear

Tortoise shell fragments — possible water world other cosmic associations

Fresh water mussel fragments— possible portalling function; cosmic water world association

A crane long bone (possibly symbolic relationship as in this region the crane is a migratory water bird) used as a container for 31 very well-made microliths

Bird wings

A polished axe made from local river gravel

A symmetric arrangement of wild boar canines — costuming

Roe deer metatarsus (painting tool) with red ochre in cavities

8.2.3 Beaded Birdman, Cahokia: Illinois, USA

This burial (AD 1000-1050) in a log-lined tomb is the central one within Mound 72 at Cahokia (Pauketat 2009; Peregrine 2013) (Figs 8.5, 8.6). Both the Mound and its mortuary elements have become central to interpretations of the political, social and cosmological organisation of Cahokia and Mississippian cultures in general. Initially, it was seen to

contain two males, one supine above the other prone, and surrounded by retainers. They had been laid out northwest-southeast with heads facing southeast, roughly matching the winter solstice sunrise or the summer solstice sunset. The burial was considered paradigmatic of a paramount chiefdom; or conversely, as a mythic cosmogram. Pauketat (2009) suggested that it related to legendary orphaned twins or half-brothers. The upper skeleton is of a tall individual in his early 40s laid on an arrangement of twenty thousand marine shell disc beads, viewed as being falcon-like in shape and probably sewn onto a cape. It was interpreted in terms of early Cahokian symbolism associated with the male Red Horn theme of Siouan myth and linked to later falcon/warrior-male hero (Birdman) myths. Belknap (2016) noted that the beaked (raptorial) face of this individual appears on Cahokian artefacts. Recent bioarchaeological and independent osteological studies of the human remains and associated burials, however, have identified the presence of male/female pairs, numerous females, and at least one child, suggesting that previous explanations should be re-examined (Emerson *et al.* 2016). The central two individuals were a male on top and a female under.

The burial complex is considered to have been correlated with ritual practice promoting world creation, life renewal, and fertility symbolism. The cape can be equated with the thunderbird myth that in the Eastern Woodlands has strong associations with serpents, thunder and lightning, and water, all aspects of the Underworld portrayed in early Cahokian iconography. Belknap (2016) stated that motifs on pots have to do with water and the Underworld. Such connotations are strengthened by the mass of shell being laid down as part of the event rather than directly associated with the two individuals (Fig. 8.7). Detailed examination indicated that the bead deposit represented multiple, complex, nonregular depositions of strung and loose beads placed over and between the primary male/female pair and the adjacent male/female bundle. The other deposits associated with the primary burial are considered to be communal votive offerings representing items of economic, social, political and religious value, and likely to have been collective group assets that, as such, were appropriate votive offerings for celestial beings (Table 8.5).

Table 8.5 BEADED BIRDMAN SHAMAN BURIAL Pauketat 2009

Two bodies placed northwest-southeast with heads facing southeast, roughly matching the winter solstice sunrise or the summer solstice sunset

Both bodies laid out on a bed of animal pelts; the upper corpse on a two-inch layer of exotic marine shell beads, possibly sewn onto a cape in the shape of a symbolic falcon

Human sacrifices grouped in rows of pits, including four young headless and handless males; fifty-three women, mostly young; seven young males; and mass burial of thirty-nine men and women

Fifteen chunky stones

A long copper rod or tube segments laid out end to end — considered possibly chunky sticks but might well have been containers for psychoactive drugs

A string of very large beads — possibly body decoration

Two-bushel heap of raw, fragmented crystals of (possibly exotic) mica — possible portalling implications

>700 arrows bundled by style or colour in two groups, one positioned to point to the summer solstice sunset the other to the winter solstice sunrise

Exotic artefacts have been sourced from as far away as Oklahoma and Tennessee, and coastal regions. Radiocarbon dating has shown Mound 72 to represent a pattern of reopening and later inclusion of bodies, implying that process and memory were important aspects of the ritual involved (Pauketat 2009).

The grave goods included large numbers of arrowheads of different styles assembled in two bundles. These are of high quality and neatly sorted into distinct groupings, and from different regions probably as tribute (Fowler 1991:14; Pauketat 2009:82). Pauketat viewed them as embodying the power of the two men he considered the individuals to be, and meant to represent the intersection of the forces of the universe at the tomb. It was noted that the northern bundles had lighter-coloured arrowheads and pointed to the summer solstice sunset, while the southern ones were darker indicating the winter solstice sunrise. He reasoned that they balanced the perceived opposing forces of the universe by signifying that the two men were “unifiers of the diverse people and forces of the inverse into one society, one place, and one body politic”. Other grave goods include: mica crystals, seen as locating the burial in time and space, particularly as American shamans used crystals to prognosticate and to see into other dimensions; and chunky stones and a copper-covered chunky stick which were known historically in southeastern North America to have been community property and never buried (Pauketat 2009:83). The individuals with whom the latter were placed may have embodied the corporate identity of the community. Copper, as an exotic, was highly valued and associated only with important individuals (Young and Fowler 2000:134-135).

The mortuary process began by lining the grave in order to open the doors between this world and the next. Rites included human sacrifice carried out in a highly visible context. Four young headless and handless males were placed in close proximity within

the mound and may represent the four cardinal directions or the mythological thunderbolts. Adjacent to these were the remains of 53 strangled young women in a pit. Seven other corpses nearby may represent the Pleiades, the seven ‘brother’ stars of the Big Dipper (Ursa Major) that were thought to be the path to the spirit world for honoured dead. In this case, a copper-covered pole placed on top of the seven individuals is a sacred axis, a sceptre of authority.

Ritual practice at Mound 72 involved Black Drink, the ritually important consumption of which was pervasive across political, social and religious contexts: it was an integral part of Cahokian ritual activity, “intimately interwoven into the spiritual and political life”. This is seen to reinforce other evidence for the existence of a fertility/life-renewal cult. As the polity is located far north of the known range of the plant used in its preparation, these were exotic, “an imported luxury”. Special beakers were decorated with ceremonial motifs and entoptic spiralling (Crown *et al.* 2102). Smoking tobacco was also integral to Mississippian ritual practice (Emerson 2003:143).

8.2.4 Long Point: Ontario, Canada

On the basis of its isolation, archaeological literature concerning similar faunal, osteal and unusual lithic artefacts, and related ethnographic and ethnohistoric data, this burial (900-953AD) on the northern shore of Lake Erie is interpreted as that of a male Middle/Late Woodland bear shaman in a hunter-gatherer band (Fig. 8.10a). Little of the skeleton and artefacts remained intact (Table 8.6). The range of skeletal elements and their articulation indicates a primary burial, with the individual originally flexed on the left side, aligned east-west, and head to the east. It was associated eleven animal bone and three stone artefacts (Fox and Molto 1994).

This individual, 30-39 in age and slightly taller than the average Middle Woodland/early Late Woodland male reported in Ontario. His dental pathology is typical of these populations with a transitional dietary regime between hunting-gathering and horticulture. The most advanced osteoarthritis occurred in the spine which, together with that in clavicular articulations with the sternum and acromion, suggests he would have been somewhat humped with the torso pulled forward around the sternum, and walked with neck thrust forward duck-like (Webb pers. comm.). The face was slightly twisted to the left. In the anterior parietal and frontal regions of the endocranium, clusters of deep granular or archnoid fovea are associated with considerable bone resorption. Although this is normal, the expressivity in this case, which has reached and atrophied the endocranium to the point of transparency, is unusual. The etiology of these cranial changes is unknown (Fox and Molto 1994).

The animal bones include: two bear cub and one adult mandibles; four drilled bear distal phalanges; river otter premaxillae and maxillae, and a cut long bone shaft tube; a deer antler tine; and the mid-section of an upper left beaver incisor. All three bear mandibles have the distal ends removed, and two display smoothing and polish by grinding on the severed distal end surfaces. The cut long bone shaft tube was discovered projecting through the notched superior cranial portion of one maxilla. Fractures at both ends had been smoothed. The otter maxillae distal ends had been neatly severed from the frontals and smoothed on the dorsal surface (Figs 8.8a, b; 8.9a, b). Bird beaks and claws were also recovered ((Fox and Molto 1994; MacDonald *et al.* 1989:42).

The lithic artefacts comprised three pebbles (Fig 8.10b): one of unmodified red and white feldspar; another of milky white quartz, probably split by bipolar percussion; and one of lenticular black shale (Fox and Molto 1994).

The stone and bone artefacts are non-subsistence related and interpreted in terms of grave goods from shaman graves elsewhere in the region. Their unusual nature suggests magic and curing, reflecting the contents of ‘magician or conjurer bags’ known from other sites that also contained flutes, gourd rattles, sacred tobacco baskets and bark dippers. The presence of marten and otter skulls in burials dissociated other bones of these animals indicates that they formed portions of known Indian medicine bags made of the whole skins of these animals with skulls attached. A number of the artefacts possibly had healing contexts in terms of being used as whetstones and/or raw materials in the production of bone and stone powder medicines (as among the Cree tribes). As noted above, two of the bear mandibles display grinding smoothing and polish on the severed distal end surfaces (similar to one from another burial). The black pebble exhibited polishing possibly the result of bag wear; and similarly, the mature bear mandible. The smaller of the two pebbles may have been contained within a rattle of perishable organic material such as bark or gourd (Fig 8.10a). The antler tine had been scored, snapped and then ground at the distal end, and the tip blunted (flaked and smoothed) from use. Both a ground and pointed antler tine and black stone tool were found at another site in association with an assemblage considered to reflect a shamanistic worldview (Fox and Molto 1994).

Table 8.6 LONG POINT SHAMAN BURIAL ref: Fox and Molto 1994

Note: The following have been interpreted (i) as variously being related to shamanic healing/curing medicine bags; magic bags; headdresses and costumes; and paraphernalia/sacra

- . one adult bear and two cub mandibles with distal ends removed; the adult and one cub mandible display smoothing and polish by grinding on their severed distal end surfaces; wear polish is also evident over the distal dorsal surface of the mature bear mandible
 - (i) medicine bag tools used for grinding of medicinal powders from rock and bone; head dress and mask components
- . four drilled bear distal phalanges
 - (i) costume element; body decoration/necklace
- . marten and river otter skulls; the latter each dissociated from other bones of that animal
 - (i) medicine bag components
- . river otter premaxillae and maxillae; maxillae distal ends neatly severed from the frontals and smoothed on the dorsal surface
 - (i) medicine bag tool used for grinding of medicinal powders from rock and bone
- . river otter cut long bone shaft tube with fractures at both ends, projecting through the notched superior cranial portion of one maxilla
 - (i) whistle or sucking tube used in curing/healing practices
- . deer antler tine scored, snapped and then ground at the distal end, and with the tip use-blunted
 - (i) medicine bag tool used for grinding of medicinal powders from rock and bone
- . mid-section of an upper left beaver incisor damaged at both ends and along the ventral side
 - (i) medicine bag tool used for grinding of medicinal powders from rock and bone
- . bird beaks and claws
 - (i) shamanic sacra
- . a red and white feldspar pebble showing no modification
 - (i) magician/conjurer bag component; rattle component
- . milky white quartz pebble
 - (i) magician/conjurer bag component; possible portalling object
- . a lenticular black shale pebble with grinding striations and facets along its lateral edges as well as flake scars at both ends, all showing edge rounding due to soft material abrasion, possibly the result of bag wear
 - (i) medicine bag tool used for grinding of medicinal powders from rock and bone

The otter long bone tube might have functioned as a whistle. It is noted that among the Iroquois the otter was considered the most powerful of the medicine animals, and such a whistle was blown to frighten people who regarded it as a manifestation of the presence of the great otter. Alternatively, it could have been used as a sucking tube in curing practices. The bear was also considered to be a ‘medicine animal’. Bear skins were used by Iroquois and Huron curers. This is reflected in many bear bone articles considered to

have been associated with headdresses or head ornaments, mask components, necklaces, and charms. The four distal bear phalanges found near the person's hands exhibit drill holes ranging from 3-5mm in maximum diameter and derive from the paws of at least two different bears. They may represent claws once attached to a bear skin garment as indicated in Fig 8.10a, or a medicine bag; or part of a necklace. The fact that no maxillary bones or teeth were recovered with the mandibles suggests that they may not have been among the interred objects. Bear teeth, however, were ideologically important ... 'the one who holds the monster bear's teeth has its magic strength and power'. Together with other cranial elements such as cut and ground maxilla, and elaborately carved mandibles, they have been found associated with adult males in other Middle Woodland mortuary contexts and interpreted as mask and/or headdress components. Two males in the Terminal Archaic Hind cemetery were provided with bear masks, as evidenced by modified rostra. Similar mask components have been documented for mortuary sites in Ohio, a native copper headdress in the form of a bear having been reported from an Ohio Hopewell cremation mound (Fox and Molto 1994).

8.2.5 Pueblo Bonito: New Mexico

Strong shamanic overtones are particularly evident in cluster burials at Pueblo Bonito (860-1110AD) containing skeletal remains of individuals with six-toed feet, reflective of early and late Classic Mesoamerican divinities with six fingers and/or toes. This is seen to indicate that polydactyly is a marker of extraordinary or supernatural status. noted that individuals with more than 20 digits apparently deviated from the conception of 'human' and were viewed as anomalous. Imagery suggests that supernumerary digits came to be viewed as a supernatural trait, conferring such individuals with special status in Chacoan society and seeing them different in a positive and powerful way and continued throughout site occupation (Crown *et al.* 2016:426-445; Wrobel *et al.* 2012: 136-139). It is noted that anthropoid statues discovered at 'Ain Ghazal in Jordan similarly show concern with six toes instead of five (Schmidt 2012:40).

These burials contained an abundance of unique, exotic and valuable objects suggestive of ritual regalia (Table 8.7). There was also polydactylic imagery incorporating entoptic motifs. One of the earliest burials included 698 disk-shaped beads of highly valued turquoise associated with the ankle of a six-toed foot, the five-toed left foot having no offering; the left arm was similarly covered with turquoise. Crown *et al.* (2016:445) were of the view that the later artefacts and imagery may have referenced this individual.

Table 8.7 PUEBLO BONITO SHAMAN BURIAL ref. Crown *et al.* 2016

Mesoamerican copper bells and macaws
Caches of ceramic cylinder vessels and other pottery
Baskets of cylindrical and bifurcated forms
Wooden ceremonial staffs
Mineral specimens
Bone scrapers and awls
Baskets
Textiles
Bow, arrows and projectile points
Shell trumpet
Bear paws
An isolated skull in one grave articulating with a mandible in another
Rock art of polydactylic imagery, and foot and hand prints in plastered walls and on floors
Red ochre
Sandal-shaped stones of various sizes pecked and/or ground into six-toed shape, their ground surfaces showing ochre suggesting use for pigment preparation
Decorated-polydactylic sandals, twill-plaited with entoptic zig-zag designs
Ornaments and effigies made from turquoise, marine shell and jet
Disk-shaped turquoise beads

8.3 COMPARISONS

A comparative study of these five burials (Table 8.8) shows they display similarity when their characteristics are compared with the general categories of shamanism manifestation (Table 8.1). They are classified in terms of distinctive physical difference of the body and the grave, and sacra objects. Each grave tends to be similar to at least one other.

8.3.1 Physical Features: Body and Grave

Rather than casual disposal of the corpse, these were intentional burials involving significant investment in terms of time and energy in preparation and arrangement, and body positioning. When compared with other burials of their cultures, grave goods tend to be unique, 'valuable', and substantially more numerous. Degrees of associated burial ritual are evident, from that of Long Point to the considerable extent of Hilazon Tachtit. Where not interred alone, those accompanying the prime individual appear to have served a ritual purpose.

The individuals concerned all exhibit apparent physical difference to members of their respective communities — from one being taller and/or having a distinctive disability. They were unusual, some particularly so, and probably awarded particular social status because of these physical conditions perceived as having been supernaturally endowed and associated with particular powers.

All were associated with animals and birds that were either revered as cosmologically significant, fierce and/or exotic, possibly representative of the powerful guardian spirits with which shamans are associated. Their interment in part or whole, and/or as costuming and personal decoration, provided supernatural potency supporting and protecting the shaman in death as well as advertising his/her powers.

Table 8.8 COMPARISON OF THE SHAMANIC BURIALS

	HILAZON TACHTIT	BAD DÜRRENBURG	BEADED BIRDMAN	LONG POINT	PUEBLO BONITO
Individual					
physical deformity/ disability/difference	✓	✓		✓	✓
Grave					
cardinal/astronomical orientation	✓		✓	✓	
threshold and fire	✓				
large stones on top of body or sealing grave	✓				
Sacra					
staff			✓		✓
bag/container	✓	✓		✓	✓
hallucinogen; trance inducing substance/ equipment			✓		✓
medicinal substance/equipment				✓	
ochre/other pigments/equipment	✓	✓			✓
portalling equipment: quartz; shell; mirror; shiny objects; minerals; polished and coloured stones	✓	✓	✓	✓	✓
drum/rattle/whip/whistle/bell			✓	✓	✓
human material	✓				
exotic material	✓		✓		✓
artefacts with cardinal/ astronomical orientation			✓		
entoptic art			✓		✓
art with fierce/liminal animal			✓		✓
culturally powerful animal part present as container or costume element	✓	✓		✓	✓
other animals used as costume		✓			
birds/flight association	✓	✓		✓	✓
other culturally important animals/ those with a number of cosmic realms	✓	✓		✓	

8.3.2 Sacra: Objects of Spiritual Practice

Some features are common: medicine bags and equipment; ochre and related equipment; and parts of animals and birds in various contexts. Most noticeable is the presence of shell that was exotic and probably served purposes such as representing 'out there' places and the underwater cosmic realm, and as a portalling device.

8.3.3 Conclusion

These unusual burials have a number of common physical features that permit a collective shamanic interpretation, while at the same time exhibiting obvious differences clearly indicating a continuum of change in status and practice with regard politico-economic development as evident when comparing Long Point with Hilazon Tachtit and the Beaded Birdman complex. Changes are discerned in the nature of leadership and of shamanistic practice with regard a progressively increasing degree of social control and its presentation of power and relationships.

Also identified is change from ritual specialists, shamans, in traditional hunter-gatherer societies using ASC in accessing the supernatural directly to obtain knowledge from the spirit realm in assisting the people they represent; to ambitiously focused, full-time religious specialists and other agents of influence, associated with more agriculturally based and socially complex societies. These latter individuals act as representatives working for deities; they perform standardised liturgies and seek to propitiate the supernatural and mediate with the sacred. Such a generalised dichotomy has to be viewed against an acknowledged background of cultural diversity in the shamanistic practice.

REDACTIONS

Figure 8.1 ‘Marriage of the Gods’ – hieros gamos – at Stonehenge

- (a) Stonehenge with the Heel Stone on right ref: <http://www.liontours.co.uk/gallery>
- (b) Midsummer sunrise behind the Heel Stone
ref: <http://earthsky.org/earth/gallery-the-er-solstice-as-seen-from-stonehenge>
- (c) Rising midsummer sun casting shadow into the monument centre
ref: <http://www.stonehenge-avebury.net/stnhngmog.html>

Figure 8.2 Puyang Shaman grave, China ref: Nelson 2008

Figure 8.3 Filippovka Shaman grave, Southern Urals ref: Yablonsky 2013

Figure 8.4 Hilazon Tachtit Shaman grave

- (a) Grave goods
- (b) Artist impression of original grave
ref: http://www.ancientcraft.co.uk/reenactment/prehistoric_shamans.html

Figure 8. Bad Dürrenberg Shaman grave, Germany

- (a) Grave goods
ref: <https://www.google.com.au/bad+durrenberg+shaman&rlz>
- (b) Replica of the shaman’s headdress and costume
ref: http://www.ancientcraft.cp.uk/re-enactment/prehistoric_shamans.html

Figure 8.6 Beaded Birdman Shaman Grave, USA

- (a) Mound 72 cross-section ref: Chappell 2002
- (b) Reconstructed grave ref: Chappell 2002
- (c) Grave as excavated ref: Fowler 1991

Figure 8.7 Beaded Birdman Shaman Grave, USA ref: Fowler 1991

- (a) Human sacrifices: four decapitated and handless young males
- (b) Human sacrifices: executed men and women
- (c) Grave goods: projectile point cache; mica pile; roll of sheet copper; chunky stones; and large conch shell beads

Figure 8.8 Long Point Shaman Grave, Canada ref: Fox and Molto 1994

- (a) Modified bear mandibles
- (b) Drilled bear phalanges

Figure 8.9 Long Point Shaman Grave, Canada ref: Fox and Molto 1994

- (a) River otter maxillae and bone tube (superior aspect)
- (b) Deer antler tine and beaver incisor

Figure 8.10 Long Point Shaman Grave, Canada ref: Fox and Molto 1994

- (a) Reconstruction of bear shaman with bark rattle and otter skin medicine bag
- (b) Lithic artefacts: red and white feldspar pebble; milky quartz pebble; and lenticular black shale piece

Chapter 9 SEDENTISM THE PHENOMENON

Some scholars, such as Thissen (2005), have suggested the Neolithic be considered in terms of semi-sedentism, and that representative sites in a particular region are only one part of its total settlement system. Others, like Halstead (2005), argued that sedentism did not preclude a significant degree of mobility, and that different temporal and spatial scales of mobility characterised sedentary villages. He also recognised the possibility that mortality patterns of young livestock, used as an indicator of sedentism in particular cases, may display seasonality for reasons unconnected with the temporal patterns of human residence. In discussing complexity of the settlement record in southern Greece, he considered that tells were not occupied continuously but only for a few years at a time; and that flatland sites were probably occupied continuously but only for a few years at a time. Kotsakis (2005) has suggested that the logistical mobility for segments, as opposed to whole sites, is poorly understood. Milner (2005) questioned reliance on use of proxy evidence to support conclusions about residential activity, particularly with regard to faunal remains and plant availability. She questioned use of modern analogies to understand prehistoric behaviour, noting that while ethnographically a society may have had some mobility in its lifestyle, the archaeological record could suggest sedentism.

Research sheds light on some of the conditions under which hunter-gatherer groups became sedentary and elucidates a number of broad implications. Confusion, however, remains over just what constitutes the concept: it is viewed as either a combination of features or a process. To some scholars, sedentism is synonymous with Childe's (1942, 1951) 'Neolithic Revolution' and the rise of the 'settled arts'; or the 'hallmarks' of sedentary life, such as permanent villages, loom weaving and ceramics (Coe and Flannery 1964:650). Others have gone further and attempted to pursue its causes in terms of food production, believing that fully settled villages could not have come about without a secure resource base. MacNeish (1964:531, 1972:90), for example, saw people over time accumulating knowledge of the food potential of their environments, allowing occupation locations with greater intensity. Harris (1977:402), however, pointed out that proponents of this view tended to focus on the origins of agriculture rather than on the phenomenon itself. Binford (1968a:322) also has criticised such arguments, considering them to be dependent on 'emergent human properties' and stating that simply citing human tendencies is insufficient as an explanation of why changes occurred — "food

production and sedentism did not eventuate because people wanted them to, but rather in response to pressures on human systems which encouraged/necessitated organisational shifts”. Amsden (1977:337-338) observed that perceiving population as either sedentary or nomadic is inaccurate. To him, sedentism was a gradual process involving many variables, and seeing its origin as a single event is misleading: “it is more productive to consider it as one extreme of a continuum”. Kesarwani (1987:67-68) refined this by describing human settlement as “varying along a continuum of mobility that ranges from nomadism to sedentism, not in water-tight compartments but in the framework of cultural forms”.

9.1 TERMINOLOGY

Bradley (2003:5) commented that words gain a “terrible power” over the concepts they describe in that they can be technical terms yet convey more complex notions, particularly in defining sedentism. Ideas vary as to what constitutes this changed behaviour and lie along a continuum between circulatory foraging using a number of habitation sites in the yearly subsistence round to concentration on a more limited number. Hitchcock (1982:223) defined sedentism as being a process whereby the mobility of human groups is reduced to the point where they remain residentially stationary year-round. Similarly, Plog (1990:180) used it to refer to groups in which all segments of the population use facilities and structures within a village during all seasons of the year. For Rice (1975:97), sedentary settlement systems are those in which at least part of the population remains at the same location throughout the year. Hardy-Smith and Edwards (2004:285) have provided a more nuanced appreciation of residential scheduling — one of lengthy base-camp stays and intermittent evacuations.

The most useful definition is that of Edwards (1989:9): the practice of perennial, year-on-year occupation of one site, disregarding specific abandonments caused by environmental or social disruptions like earthquakes, droughts and invasions. He used it specifically to distinguish perennial settlement, viewed by Vita-Finzi and Higgs (1970:29) as economies practised by human groups which stay in one place all year around. This definition is simple and has the advantage of specifying year-round occupation sites while allowing some group members to be absent for varying periods. It can, therefore, encompass transhumant patterns as well as regular seasonal hunting parties, trading expeditions, and other regular short-term absence of some members from the site. Temporary sites would be considered part of the sedentary settlement system along with the residential sites that were occupied year-round. This definition can also embrace settlements exhibiting varying degrees of permanence. It accommodates

Rafferty's concern (1985:114) that a definition should not confuse societal mobility with individual mobility. The British and American literature supports this view that repeated use of associated sites, all of which tend to be occupied year-round in some context, jointly constitute the sedentary settlement (e.g., Bradley 1978; Mehrer 1995). Accordingly, it is expected that sedentism as a phenomenon may present variously depending on context — cultural, social, economic, political or ideological; or combination thereof.

Most arguments concerning the nature of sedentism focus on the permanently occupied house or shelter. This view is strengthened by construction of a permanent structure that has functions other than domestic, representing the establishment of a centre by a community at which they may gather from short to extended periods whilst remaining nomadic for their subsistence. In some circumstances, however, sedentism can precede that development which may follow the identification of an element of specialness associated with a particular location. This does not necessarily mean the labour required to build a structure permanently occupied the site, as construction could have proceeded over several seasons or years; but that the site was chosen as a 'permanent' location and built on accordingly. In that, the community is indeed settling down, not in terms of its everyday life but in constructing a permanent centre of durable materials. A social transition is indicated — a stage in the progression to sedentism reflecting mobile groups needing a place to assemble communally and regularly.

This view is held, for example, by Boyd (2006) who was concerned with community perceptions and use of space, place and landscape, and how these changed over time. He focused on how the establishment of architectural traditions, construction and the shaping of place allowed a different way of inhabiting the social landscape. This was not considered an evolutionary change from one form of social organisation to another; it was the "introduction of new traditions of acting and ways of being in the world". He noted that architectural traditions established at the beginning of the Early Natufian did not reflect a new social organisation or way of life; rather, they indicated a change in strategies of construction and in perceptions and understandings of place. The practice of building in stone indicated embellishment of particular places in the landscape; and while fixing these locales, it did not follow that the people who carried this out became similarly fixed. Boyd had a similar view with respect to other archaeological and biological categories of evidence equated with the appearance of sedentism in the Early Natufian, such as heavy-duty material culture; storage pits; cemeteries; commensal fauna; seasonality of hunting as indicated by cementum increments on gazelle teeth; and

thickness of archaeological deposits. It is clear, however, that dwellings can be both fixed and mobile, particularly in the case of portable posts, covering hides, tents and ties, which permit construction of a permanent structure on a regular basis but in different locations.

Finlayson and colleagues (2011), similarly, believed that rather than being part of a smooth developmental curve, Pre-Pottery Neolithic A (PPNA) architectural developments had to be considered unique; and added that even in the Early Neolithic it should be recognised that the appearance of architecture encompassed a wide array of behaviour. While acknowledging general consensus for a sedentary way of life in the Early Natufian, they raised serious doubts regarding the degree of sedentism at these sites expressed by many scholars, citing Edwards (1989), Olszewski (1991), Bar-Yosef and Belfer-Cohen (1992), Valla (1991), Hardy-Smith and Edwards (2004), and Shewan (2004).

9.2 TOWARDS AN UNDERSTANDING

Haas (1990: xv-xvii) presented a number of points that identify consequential elements in the transition to sedentism, providing sound leads as to the nature of its cause. While not directly concerned with sedentism *per se* or addressing the sedentism–agriculture nexus issue, he considered that a significant amount of research had focused on the agricultural revolution. Causes of the domestication of plants and animals had been examined in great detail and models developed to explain the processes; however, understanding of the related social revolution accompanying these changes in technology, economy and settlement “was not so secure”. He commented that the transition resulted in dramatic changes in the nature of social relations. Among nomadic hunter-gatherers, neighbours tended to be temporary and ephemeral; and relations between groups transitory and based on *ad hoc* circumstances. There were few long-lasting relationships to dictate the patterns of interaction and intergroup behaviour. With agriculture came greatly increased sedentism and investment in fields, crops and herds; and sedentism meant the likelihood of neighbours. Investment and permanent neighbours demanded more stable and predictable patterns of social relationships. New forms of social interaction proliferated, with political relationships in particular undergoing a major transformation as people struggled to adapt to the demographic and economic realities of sedentary life.

Haas noted that as a result of the agricultural revolution people are found to have lost their autonomy as social and political hierarchies developed. Although these are not an

inevitable outgrowth of agricultural intensification, agriculture does set the stage for political centralisation and social ranking. Decision-making authority comes to be delegated to a central leader, and the prevailing egalitarianism gives way to social and economic inequalities. People in egalitarian societies actively resisted trends towards political hierarchy and social inequality, but these emerge in spite of such resistance. Political centralisation and social hierarchies are imposed on egalitarian systems.

Chapter 10 SEDENTISM CONTEMPORARY THEORY

Sedentism is associated with the emergence of food production during the Holocene, and the view previously held that the reasons for the transition were to be found in environment and ecology. This is seen in models such as the ‘Oasis’ theory originally proposed by Pumpelly (1908) and popularised by Childe (1930s); the ‘Hilly Flanks’ theory of Braidwood (1950s); and the ‘Marginal Zones’ theory associated with Binford and Flannery (1970s). Environmental change remained a basic theme in more recent work which has focused on the cold Older/Younger Dryas, *c.* 13000BP in Europe and Southwest Asia, a sudden reversal of post-Pleistocene warming which, it is argued, may have caused communities to investigate new avenues of subsistence. This line of reasoning is now not generally accepted.

10.1 RECONCEPTUALISATIONS

10.1.1 The Transitional Period

The social direction in archaeological theory of the 1980/90s was given additional dimension by an ideological approach to explaining Neolithic developments, and asking questions which related to the origin and development of human thought processes. It is at odds with many traditional views, but closely accords with the concept that the period witnessed more than an economic transition and coincided with a transformation in the worldview of prehistoric societies. Cauvin (2000a) argued that primacy should be accorded to a restructuring of human mentality expressed in terms of new religious ideas and symbols. Mithen (1996) went further and, drawing on ideas from psychology, emphasised that dramatic transformations in behaviour have resulted from evolution of the mind, permitting “cultural explosions” represented by complex developments such as language, plant and animal domestication, religion and ideology, and sedentism. This influenced the work of Hodder (2001), who saw strong support for its basic premises in new data resulting from significant recent archaeological discoveries.

The conceptualisation of the Neolithic as a social, as well as an economic, process helps in understanding important issues including the links between population aggregation, sedentism and social change; how social differentiation may have emerged from within an egalitarian ideology; the mechanisms by which authority was ceded to individuals or groups; and how changing social relationships were negotiated through the built

environment and religious and mortuary practices. Such an approach also encourages reflection on data sets and processes identified in earlier work relating to locations where sedentism, for example, viewed single-factor explanations of the emergence of sedentism as insufficient; while Redman (1977:526) considered the development a complex process involving a wide range of variables. Flannery (1972a:23-24, 1972b:402) saw these positions confirmed by his studies in Southwest Asia, Mesoamerica and South America which have given rise to the perception that sedentism began in various parts of the world for reasons and processes so different that it might not be possible to provide an explanation in the same model.

10.2.1 Traditions

The two interconnected traditions emphasise respectively *cultural evolution*, which sees changes in culture as the product of adaptations to the natural environment; and *social evolution*, taking the view that change is best evaluated with regard to changes in sociopolitical organisation, these in turn being economically motivated.

The cultural evolution tradition, reflected in adaptation theory models and processual archaeology, emphasises functional relationships between systems. Early concern related to primary material and ecological factors, this later shifting to social relations (e.g., Binford and Flannery), and subsequently to the mind and cognition (e.g., Renfrew). Sedentism is seen to represent behavioural adaptation to external conditions and to be related to many, if not all, of the associated changes as cause or effect. Most explanations consider the presumed benefits of increased sedentism as both its proximate and ultimate cause. Hitchcock (1982) has classified adaptive theories and models according to postulated determinants into three categories: an environment-subsistence relationship (propinquity and subsistence security); resource availability (abundance and/or diversity); and population (environment and circumscription).

The social evolution tradition, on the other hand, reflected in social theory, is the domain of postprocessual archaeology. In this context, sedentism is accorded a causal role in producing the changes with which it is associated. Bender (1978b:204-213), for example, thought a techno-environmental explanation unacceptable; and that what is crucial is establishment and maintenance of social alliances to serve both economic and political ends. Such alliances make demands on production to meet reciprocal obligations, favouring residential stability and investment in permanent facilities. Similarly, Flannery (1973b:234) viewed the appearance of sedentary communities as possibly being a response to change in sociopolitical organisation and neither environment nor population. This tradition, however, embraces a wider range of

theoretical concerns within the social sciences, especially the derivatives of structuralism and Marxism; and the critique of positivism leading to discussion of relativism, hermeneutics and realism, i.e., interpretative archaeology.

10.2.2 Arguments

Four arguments about the origins of settled life can be classified according to the causal determinants postulated.

climatic change The ‘oasis’ or ‘propinquity’ theory holds that desiccation at the end of the Pleistocene forced people, plants and animals into smaller areas where permanent water was available (Pumpelly 1908; Childe 1942, 1951). This enforced juxtaposition led to symbiosis and domestication and in turn to food production which encouraged settling down. Later research in Southwest Asia by Braidwood (1952) concluded that there was little evidence of major climatic change and the observation that such change in the past had not resulted in the cultural developments postulated.

resource abundance/diversity A number of scholars, noting that macroenvironmental change may be insufficient as an explanation for the adoption of sedentism, have focused on such change at the micro-level. Coe and Flannery (1964: 651, 653; Flannery and Coe 1968) used ‘microenvironments’ and ‘microenvironment reduction’ to comment that only a drastic reduction in the number of exploitable niches concentrated in space would have permitted full-time village life. With data drawn from research in the Tehuacan Valley and the Guatemalan Pacific coast, they noted that whereas after the appearance of agriculture groups remained nomadic in Tehuacan, coastal populations became sedentary. A combination of effective food production and wild food resources from coastal lagoon-estuary systems facilitated year-round village occupation, negating the need for exploitation of a variety of ecological zones. Hitchcock (1982:228) saw these arguments reflected in mobility reduction research in both the Old and New Worlds. According to Sauer (1961:263-264), sedentism and utilisation of aquatic resources were correlated because fish and shellfish are both more abundant and predictable than terrestrial food resources.

The resource abundance argument is not restricted to aquatic resources. Birdsell (1968:239) and Bray (1976:83) pointed to many other situations where food resources were concentrated, citing the availability of acorns in California and dense stands of cereal grasses in Southwest Asia. Bender (1975:4, 7, 30) associated sedentism with “optimal environments” (i.e., zones of resource concentration) while Harris (1977:410) and Watanabe (1977:27) spoke of sites that provided access to resources sufficiently rich

and diverse within a small area to allow or encourage year-round occupation, ecotones with a number of different ecological zones in close proximity. Criticisms include first the question of why sedentism only emerged following the Pleistocene and not before during equally favourable environmental conditions and resource availability; second, as argued by Binford and Chasko (1976:139) and Schalk (1977:231), the availability of nucleated resources in large quantities was insufficient in itself to promote sedentism and must be coupled with storage in order for groups to remain residentially stable. Bender (1975:7) argued that food production replaced these most favourable conditions with another set and/or created one where it had not previously existed, extending the potential for permanent settlement. As noted earlier, however, there were fully sedentary communities in regions without domestic plants and animals, and where nomadic groups persisted in spite of domesticated foods.

demographic This relates to characteristics of population that affect major organisational change in subsistence and settlement systems: essentially in terms of food availability in response to environmental change on the one hand; and demographic structure resulting in impingement of one group on the territory of another on the other. Binford (1968a:330-336; Binford and Chasko 1976:137) has noted correlation between sedentism, population size and population density. Harris (1977:410) saw territorial confinement as a result either of environmental factors or of intergroup hostility as a possible factor in the emergence of sedentism. Similarly, Cohen (1977:83) argued that territorial impingement and resource depletion are factors. Flannery (1969:75, 78; 1972a:26) pointed out that at the time food production and settled life occurred in Southwest Asia, population was higher than ever before. One of the main criticisms of the population hypothesis is that population growth was regulated in every society and might have been expected to always stabilise at a level below that which would result in pressure on resources (Rafferty 1985:121).

social causality It is increasingly asserted that social motivation may have been the impetus for economic intensification rather than optimisation of ecological, demographic or utilitarian considerations. Of particular importance is Flannery's (1969) contention, as noted above, that, in the context of increasing population, differential access to strategic resources, including the means of production, was at the heart of ranked or stratified society, not agricultural success and a surplus.

Flannery (1972a:234-249) saw sedentism possibly beginning in response to changes in sociopolitical organisation. This was supported by Bender (1978b:204-213) who considered too much attention had been paid to technology and demography. She

suggested that the establishment and maintenance of social alliances was crucial to an understanding of systemic change, pointing out that they served to maintain social relations and also both economic and political ends. Alliances, in turn, made demands on production, and in order for people to keep up reciprocal obligations they must produce foods and goods over and above their own needs. There is thus a direct link between evolving social institutions and increasing pressure on production. Furthermore, producing a surplus can involve delay in return, promoting sedentism since this encourages stability and investment in permanent facilities. Group cohesion was also engendered that required leadership to mediate in social conflicts. Community leaders often had a monopoly of social knowledge, including alliances rules, and were able to reinforce their own positions: “[t]he leader both promotes and permits sedentism”.

Bender (1985a:22) also saw “the internal potential for change present in all societies”. She has suggested that success might lie more in the ability of certain individuals to accumulate and transform food surplus into more valued items, such as rare stones and metals. Agriculture is thus viewed as a solution to a social problem. In support, Bruton (1975) cited the Trobriands who have neither exceptional population density nor agricultural production, viewing participation in a closed system of kula exchange as limiting the range of people who can effectively compete for leadership. Hayden (1990) argued specifically that the driving force behind food production was the competitive and feasting aspects of big-men rivalry, this resulting in the emergence of a few who encouraged the creation of surplus.

A number of earlier researchers saw sedentism as the preferred way of life for human populations. Braidwood’s (1960:134) view was that once man became sufficiently familiar with his environment, he was able to settle down and produce food — “there was no need to complicate the story with extraneous causes”. MacNeish (1972:88) added that over time people were able to accumulate more knowledge of the food potential of their environment. This increased familiarity with local habitats, supposedly allowing people to “settle into” their environments “with relatively greater intensity”. Later he spoke (1992:3-4) in terms of generalisations or laws being derived about the development of agriculture and the “concomitant evolution” of settled life. Binford (1968a:322, 328) termed such arguments “vitalist” in nature. He commented that they were orthogenetic in character and dependent upon “emergent human properties”, and considered the simple citing of human tendencies insufficient as an explanation for change. In his opinion, change such as food production and sedentism did not come about because people wanted them, but rather in response to particular pressures

necessitating such behavioural shifts. Certain conditions obtained during the terminal phase of the Pleistocene that differentially favoured increased use of resources such as anadromous fish, sea mammals, waterfowl and migratory herd mammals. These nucleated resources promoted a tendency toward reduced mobility in certain areas.

Beardsley *et al.* (1956:134) accepted that “in general, sedentary life has more survival value than wandering life to the human race; and that, other things being equal, whenever there is an opportunity to make the transition, it will be made”. This implies that humans necessarily recognise the best strategies and will always initiate changes to enhance their survival. From an evolutionary standpoint, however, it is clear that while natural selection operates on choices made by groups, these were not always successful. Bender (1978b:207) saw cultural systems not dying but responding to changing circumstances through self-transforming properties “because variability is not geared simply to adaptive functioning. A given structure can have internal properties which are only resolved over time. Rather than societies being in equilibrium, they are always in a state of becoming”. Similarly, Joyce and Winter (1996) considered it crucial to understand the relationship social and cultural conditions. There was a response to the perceived tendency to ignore the goal-driven behaviour of individuals as dynamic actors in a social process and the intersocietal conflict among them.

As noted, social causality has its critics. Those who consider societal evolution as being dependent on the interaction of many variables see in such models a general failure to confront this fact and explain relationships among them (e.g., Hitchcock 1982; Redman 1977; Harris 1977). A further problem for proposers of single-factor hypotheses is that while they have been able to cite evidence from particular locations, none find widespread support. Hence the view that sedentism cannot be accounted for in terms of general theory, and that each case must be considered in terms of its particular locational nature. Such criticism is not surprising from researchers perceiving relationships between variables they regard as relevant. Harris (1977: 401-417) saw development of more complex societies as dependent on the interaction of a number of variables (i.e., population, environment, resource use and mobility). His principal concern was the circumstances under which the demographic equilibrium of a long-sustained pattern of hunter-gatherer mobility and population regulation broke down sufficiently to initiate evolutionary trends towards greater complexity of socioeconomic organisation. The MacNeish (1972:67-93) view was that in the Tehuacan Valley the transition to complex societies was due to multicausal factors, and occurred in a very definite sequence but seemed to have been a slow process. Hitchcock’s criticism (1982:227) of the social

causality approach was that it could lead to complacency, “lulling us into thinking that organisational changes are not in need of explanation”.

10.3 STUDY APPROACH

These social and adaptation approaches to archaeology are considered important, particularly in the dichotomy of influences that are involved in the transition to sedentism: *endogenous* — cosmological ideology integral to the hunter-gatherer way of life which engendered continuing general societal tension (with respect to the supernatural); and *exogenous* — environmental influences including social, economic and political factors external to the territory impacting on communities, and threatening the way of life. Both sets are considered to have been subject to skilful manipulation by influential individuals, the former used to maintain societal tension engendered by the latter with the objective of aggregating dispersed communities for more effective social control and increased power, status and wealth.

Chapter 11 SEDENTISM ARCHAEOLOGICAL MANIFESTATION

Recognising sedentism and the processes leading to it in the archaeological record is neither simple nor straightforward. A number of criteria are employed but there is not always agreement on their effectiveness. Bellwood (2005:23) termed several regularly used determinants “ambiguous”; Wyncoll and Tangri (1991:158) considered that such identification remains largely dependent on cultural markers very much “equivocal”; while Hardy-Smith and Edwards (2004:257, 259) spoke of “questionable evidential yardsticks” and “archaeometrical indicators [that] do not all pull in the same direction”, suggesting both mobility and sedentism.

The matter is dealt with more incisively by Edwards (1989:14) commenting that in dealing with interpretative issues of social behaviour, scholars have tended to have recourse to ethnography. He stated that the theoretical difficulty in this case, and the one which besets all explanations involving ethnographic associations between activity and material correlates, is that a uniform correlation must be assumed to have held between the phenomena under investigation from the prehistoric past to the present. If there are not contemporary equivalents of prehistoric systems, then the procedure is logically untenable; only extrapolation of a model or process would be legitimate. In dealing with problems in distinguishing between the prehistoric settlement remains of sedentary semi-mobile and mobile hunter-gatherers in Southwest Asia, Edwards (1989:38) stated:

Many of the material markers of sedentism ... show too much overlap with former Pleistocene sites or more recent mobile sites to be separable as novel developments. The most distinctive development in Natufian sites is seen to be the aggregates of curvilinear residential structures and, in some cases, their successive reconstruction. Many of the supposed sedentary markers look to ethnographic equivalents for reference, and it is here that precise, well-excavated and published equivalents are lacking. While the detailed excavation of further Levantine prehistoric sites will undoubtedly revolutionise our evidential base, much more ethnographic and experimental archaeological work is necessary for detailed comparative data to be gained, relating to site formation of known sedentary hunter-gatherer sites of the recent past. We may be forced to concede that the characteristics of early sedentary sites near the mobile/sedentary transition are more strongly influenced by particularistic local, historical developments, than those characteristics stemming from universal organisational principles underlying sedentism.

Edwards (1989:11, 15) refers to the Kebaran site, Ein Gev I, where excavation revealed flaked stone artefacts stylistically an idiosyncratic facies of the period; but at a technological level, the site possessed many substantive elements of later Natufian assemblages, including basalt vessels and pestles, bladelets bearing silica sheen, and also sub-floor burial. He considered the difference reflecting sedentism to lie in a marked overall rise in the magnitude of previously known features:

Even though clear breaks in occupation can sometimes be discerned in archaeological deposits, it should be stressed that at present there is no definitive or clear-cut way to distinguish deposits resulting from sedentary occupations from those produced by continual, intermittent occupations.

11.1 MANAGING THE ISSUES

To deal with the issues it is necessary to consider two questions: if sedentism is seen to involve year-round settlement in permanent structures, does 'permanent settlement' equate with year-round occupation; and does it represent permanent settlement?

The first is dealt with by adopting the Edwards (1989:9) definition as stated on earlier, extended to embrace the construction of a permanent structure with functions other than domestic. The approach encompasses the range of activities considered associated with a sedentary way of life, and sites exhibiting varying degrees of permanence. It then proceeds on the understandings that: (a) whether or not permanent year-round occupancy can be established conclusively, mobility in particular areas changed in terms of longer and multi-seasonal stays at sites; (b) certain sites within the territorial round came to be occupied more frequently and for longer periods than others, and for purposes other than domestic; and (c) eventually some sites, without doubt, became permanently occupied. This is not to propose a direct line in the transitional process from (a) to (c) but rather a general trend.

The second issue is more problematic. While Hassan (1977) has stated that permanent structures demarcate the boundary of ownership rights and are used for storage purposes and non-transportable food-processing facilities, questions arise: what about those used only seasonally but over a long-time period; what if particular structures were part of the culture, being specifically designed to be dismantled and transported to another location; and what if long-term occupation of a site occurred without the need for such architecture — all known or strongly suspected realities?

These issues can be managed by examining sites for features generally accepted as indicators of sedentism. While not considered absolute, by their number and in combination with others they are likely to attest to it, particularly over a short time span and as part of a development sequence. Accordingly, as stated earlier, the archaeological record is examined *in toto*.

11.2 ARCHAEOLOGICAL RECOGNITION OF SEDENTISM

Evidence for sedentism falls into two broad categories: that identified by scholars in this area; and those elements which might be expected as a consequence of it. It is acknowledged that there are those that would reside comfortably in both; some may be

equally provided under conditions of mobility by seasonal aggregation, and others to a greater or lesser extent on the size of the residential group.

Reference is made to studies that have explored issues fundamental to the transition to sedentism such as the social context of the processes involved and the nature of political, economic and ideoreligious practices; how these might assist in understanding some of the material and symbolic ways in which people were identified; how they are reflected through archaeological data sets; and the process by which social differentiation emerged. These include the detailed Hitchcock (1982) study of the quantitative and qualitative attributes of recent developments among the Basarwa of Eastern Botswana in their transition to sedentism; that of Edwards (1989) focusing on the Natufian period of the Levant and Anatolia in Southwest Asia; and Rafferty's (1985) paper on the recognition of sedentism in the archaeological record.

Archaeological correlates of decreasing mobility and increasing sedentism are outlined in Appendix F. As stated earlier, not all indicators listed are likely to be present at any one site or in any one settlement. No one is either sufficient or necessary for recognising sedentariness, nor is it without criticism of some sort; instead, they must be used in conjunction to build a case for the presence of settled life. Rafferty (1985:137) advised that the best procedure for identifying 'sedentism/sedentariness' is based on having available a developmental sequence so that the site characteristics can be compared over time and changes in indicators highlighted.

PART B

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DEVELOPMENT OF A GENERAL MODEL SOUTHWEST ASIA

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Chapter 12 SOUTHWEST ASIA RESEARCH SEDENTISM TRANSITIONAL PROCESS

12.1 SELECTION OF REGION

Between 13,000 and 8,000BP in the Levant, Anatolia and adjacent regions, the apparently fixed Pleistocene pattern of small camp sites lacking durable structures developed into a system featuring large nucleated settlements. The Natufian culture has assumed a pivotal role for Neolithic scholars particularly interested in sedentism. While many of its material markers for sedentism overlap with Pleistocene or recent mobile sites, to be separable as novel developments the most distinctive is the construction of aggregates of sub-circular structures and, in some cases, their successive rebuilding. The sites discussed in this Part have been selected from this broad zone as they are seen to illustrate a range of trends and developments associated with the transitional process.

Part B is not designed to identify an all-embracing progression of cultural behavioural change to produce a similarly complex universal model for the transition to sedentism: it would be too cumbersome. Its purpose is to elucidate broad trends and the nature of associated features which may differ between cultures but share the same conventions, and to develop a general model with cross-cultural applicability. A useful analogy is Hiscock's (2008:109-110) comment that field research had found the Panaramittee art of Australian prehistory to be a series of regionally distinct styles sharing conventions, not a single artistic one. To avoid acknowledged difficulties in attempting to produce such a model, consideration proceeds in terms of what is common to all people — their psychology, mental capacity, and existence within an environment.

12.2 RESEARCH OUTCOME

Data from Southwest Asia suggest that the transition to sedentism can be seen in terms of general but significant trends that represent profound departures from the sociopolitical and socioeconomic systems characterising mobile hunter-gatherers. These trends, initially demonstrating changed behaviour, quickly became legitimised by, and reconciled with, the prevailing ideology, and *vice versa*. Developments in both domestic and non-domestic spheres of behaviour are clearly evident throughout which a definite shamanistic influence can be detected, either directly or inferred, the increasing nature of this correlating with decreasing mobility and appearance of new/elaboration of existing

trends. Associated tensions are reflected in necessary sociopolitical structures such as institutions for conflict resolution and resource management in which expanding communities could proceed more effectively. Particularly obvious is the progressively more varied nature and, indeed, dominating influence of ideology, this manifest in public buildings which over time became larger, more prominent and elaborate.

Three broad developmental phases, detailed in Chapters 13-19, are identified through snapshots at significant points along the transitional process. These are presented within a framework of general trends: elaboration of pre-existing behaviour; developments associated with progress towards a more settled existence; and consequential developments. The following milieux are embraced:

- . *settlement* mobility reduction through regular, extended aggregation at particular sites
- . *ideological* spiritual and symbolic domains, particularly ‘place’ and mortuary practice
- . *political* power and authority (social control); organisation and administration
- . *social* social and scalar tension/stress; social organisation (form, structure and pattern of relationships); social differentiation (individual and group identification)
- . *economic* subsistence strategies; surplus production and storage; equipment and process innovation
- . *distant contact* alliances; ‘foreign’ people; trade and exchange in exotic objects and materials; acquisition of knowledge/ideas

The three phases comprise: (1) regular aggregation of small bands forming temporary communities for extended periods, and the emergence of particular individuals in their own right; (2) establishment of centralised authority/social control over communities operating through new institutions; and (3) heterarchical development with related implications for social control. The trends do not necessarily all become apparent from the beginning of the transition, nor occur in this order. Views of various scholars on the archaeology are considered and, as appropriate, taken further or alternative interpretations provided. Chapter 20 summarises the extent to which Phase 1-3 expectations are met by these sites and analyses data supporting the thesis, that is the key role of shamanism employed by agents of influence in the transition to sedentism.

12.3 MODEL DEVELOPMENT PHASES

The major sites discussed, not necessarily chronologically the first in the phase concerned, are: Phase 1 — Shanidar, Iraq; Phase 2 — Hayonim, Israel; Hallan Çemi, Turkey; and Wadi Hammeh 27, Jordan; Phase 3— Göbekli Tepe, Çatal Höyük and Höyücek, Turkey. They have been selected for their more comprehensive archaeological records and illustration of particular developments, permitting identification of important developments considered to reflect stages in the transitional sequence.

Interrelatedness of the specific developments embraced by the milieu framework above has made avoidance of some degree of repetition in discussion in the following chapters not possible, particularly with the same data being used for different purposes. While the type of evidence cited may vary from phase to phase and between sites, it remains consistent with developments in terms of the contextual framework presented. Points are made as a series of separate comments under the respective headings.

12.3.1 Phase 1

In Phase 1, the Shanidar Complex, comprising Shanidar Cave and Zawi Chemi Shanidar village, has Late Epipalaeolithic/Natufian (Proto-Neolithic) cultural horizons evidencing abandonment of traditional hunter-gatherer mobility.

Principal focus:

- . *developments* initiation of the transition away from a mobile existence by bands whose foraging pattern incorporated an annual round of campsites
 - regular aggregation of small dispersed bands forming temporary communities for extended periods at locations of perceived ideological (sacred) importance
- . *related features* changed ideology involving sites with particular natural features having perceived natural sacredness — ‘places’
 - objects from a wide region around sites indicating that aggregation involved people from a number of different locations
 - intensification of resource exploitation to support groups of dispersed bands aggregating for longer periods at favoured sites

elements of spatial organisation at sites

some durable construction

primary and secondary burials

new dimension of individuality with the appearance of shamans, reflected in the influencing community decision-making, their behaviour, particular artefacts and paraphernalia, and in burial and related mortuary treatment afforded some people

12.3.2 Phase 2

Natufian sites discussed represent more complex foraging societies occupying an intermediate position chronologically and developmentally between the distinct adaptive modes of mobile hunter-gatherers and sedentary farming communities. They evidence the close relationship and role of shamanistically driven ideological behaviour in the transitional process. They also mark scalar increase in the frequency and concentration of human burials. By the Late Natufian phase, increased evidence for funerary ritual suggest that ritual events were becoming increasing public, and for the first time, some sites in this region functioned primarily as cemeteries (Grosman and Munro 2007; Power, Rosen and Nadel 2014; Yeshurun, Bar-Oz, and Nadel 2013).

The Hayonim Complex, comprising Hayonim Cave and Terrace, provides a link with earlier developments at Shanidar, exemplifying the effect of extended periods of occupation by a larger number of people at a perceived natural sacred domain. This shows the appearance of a spatial dichotomy, separating the domestic terrace from the non-domestic cave. Hallan Çemi and Wadi Hammeh 27 reveal similar developments, internally within the same settlement unit; and in a nucleated open-air context with sacredness artificially introduced by means of foundation burials and/or incorporation of symbolic installations. All provide tangible evidence of social differentiation at both group and individual level, and of changed social relations.

Principal focus:

- . *developments* much extended to semi-permanent occupation of sites (base camps) in which people were adapting to changing living conditions involving large numbers and different communities

ecotony paired with perceived sacredness of sites selected for longer-term occupation to provide an adequate resource base

ideology being reflected particularly in the artificial creation of site sacredness in ecotonal, and progressively more so, open-air sites

- . *related features* combination of archaeological attributes including durable semi-subterranean dwellings and special-purpose structures; burials and cemeteries; lithic, groundstone and bone industries producing specialised tools, equipment and other objects with particular (entoptic) decoration; body ornamentation; and visual imagery and objects
- more definite spatial organisation indicating an increased level of social control and differentiation within communities
- increased social complexity evidenced in major changes in size, nature and scope of architectural and other features (private and public), with symbolic correlates (visual imagery and equipment) reflecting ideological attitudes and shamanistic behaviour

12.3.3 Phase 3

A number of well-developed sites in the time period concerned suggested that while trends and developments identified in Phases 1 and 2 continue into the next there could be variation among them as they related to sedentism. South-central Anatolia, with a wide range of Neolithic and Post-Neolithic sites for which reliable data were available, and the opportunity it provided for observations across a broad zone to establish regional similarities and differences with regard to ideological control as it related to sedentism, was chosen to pursue this. Discussion centres on Göbekli Tepe in the Urfu Region, Çatalhöyük on the Konya Plain, and Höyücek of the Lake District, with investigation broadened by referencing other settlements of the respective regions — Göbekli Tepe with Nevalı Çori and Çayönu; Çatalhöyük with Aşikli, Canhasan III and Canhasan I; and Höyücek with Hacilar particularly, and Erbaba Kuruçay and Bademağacı.

Principal focus:

- . *developments* permanent settlements of varying size exhibiting degrees of hierarchical and heterarchical development within and between and regional association

strong ideopolitical control reflected in settlement planning, construction and management
- . *related features* social complexity evident in hierarchy and heterarchy, and in the range and spatial organisation of function and architecture

social differentiation reflecting more centralised authority and operating through new institutions

intensification of shamanistic behaviour by individuals of influence, evidenced in centralised administration and social differentiation

zones of ideological focus and their importance marked by large, different or special buildings, their plans, features and function

ideological structuring, management, and social control within settlements and regionally

regional differences in settlement size, function and plan pertaining to ideological control

Chapter 13 SOUTHWEST ASIA RESEARCH DEVELOPMENT PHASE 1 SHANIDAR COMPLEX (IRAQ)

The Complex comprises Shanidar Cave and the village of Zawi Chemi Shanidar, two interrelated and juxtaposed sites four kilometres apart in the Shanidar Valley with a long history of occupation (Figs. 13.1-13.4). The village is adjacent to the Greater Zab River. There are two major stratigraphic layers (A and B) at both Zawi Chemi and the Cave, with a long period of abandonment between the two in each case. Six thousand years is given for this period in the Cave. Interpretation focuses on the Proto-Neolithic Layer B (10600BP) at both sites. Layer B in the Cave has two sublayers: Proto-Neolithic B1 with horizons B1a and B1b; and Mesolithic B2 (Fig. 13.5).

13.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

13.1.1 Settlement

Hearths in sublayer B2 of the Cave are the sole evidence of ephemeral, early band occupation. Initial occupation of Zawi Chemi followed with the single, isolated Structure 1. Solecki and colleagues (2004:115-116) considered the people to be semi-sedentary, with both sites occupied seasonally, as well as other unidentified places.

The Cave hearths indicate previous use of the site by traditionally mobile groups; but having ideologically conceptualised 'existence' both before and after life as implied by their mortuary practices, they are seen to have perceived it as a special location used for ritualised burials in sublayer B1. Expansion of occupation to include the Zawi Chemi site, the appearance of the first architecture, Structure 1 and its replacements, reflect a developing closer relationship with the site. There was also an increase in the number of people using the Cave, outgrowing its available space. The existence of one isolated structure, replaced twice, and distant from associated dwellings (particularly in the case of Structure 1), raises questions about who occupied them and why the separation.

The Zawi Chemi location would have been particularly favourable because of the resources of a major river and the Cave providing winter shelter. The site was ecotonal with merging environmental components offering a wide range of plant and animal resources. A second reason seen for its occupying is ideological, as the Cave became solely a cemetery, this located in the rear. Zawi Chemi eventually developed into the

earliest known village in the region with permanent stone structures. Structures 2 and 3, sequentially replacing and superimposed on Structure 1, are contemporary with basins nearby that may have been associated with dwellings in a concentrated grouping. The latter's lack of superstructure suggests that extended periods of group aggregation had begun but were not long enough to warrant durable structures. In the regular aggregation process, such concentration would have been preceded by a period of structured spatial organisation whereby the otherwise dispersed bands stated their independence through maintenance of social distance between themselves — this indicating lack of community cohesion at that early stage of the transition.

Occurrence of well-made, labour-intensive, prestige items, such as colourful stone beads, large decorated bone implements and symbolic material, indicates that people had settled down sufficiently to have time to devote to enhancing their ritual and personal lives, and trade opportunities (Hayden 2004:271).

architecture The earliest architecture, Structure 1 at Zawi Chemi, roughly circular and 2m in diameter, was constructed of river boulders and other stones. Together with its occupant, it constituted a single unit remote from contemporary occupation of the Cave (Fig. 13.6). Its rebuilding twice in the same position suggests that its location was perceived as 'special' ideologically. The two later structures were eventually within the occupation zone of a larger community. Their isolation was now more in terms of the constructed privacy of the durable buildings compared with the temporary dwellings in basins of the rest of the community. The latter's lack of superstructure suggests that extended periods of group aggregation had begun. In all cases, these were associated with extensive burned areas or hearths comprising charcoal, reddened earth, burned bones and fire-cracked rocks, and filled with soil, animal bone and cultural material including querns, mullers, and spall tool pieces (Solecki 1980:5), indicative of flimsy structures. This implies the beginning of regular periods of group aggregation around Structures 2 and 3, with the numerous hearths and animal remains indicating feasting.

13.1.2 Ideology

burial Given that caves are considered to represent access to the membrane of the lower cosmos, Shanidar Cave can be seen in ideological context, as a place for the dead and ancestors. Solecki and colleagues (2004:115) suggested that this may have been because the people recognised it as their ancestral home and had special socio-religious links with it, or that it afforded better protection for the dead. The latter may have played a part in the burial process, but the former is more appropriate.

Burial in cemeteries departs from traditional hunter-gatherer practice and supports a development hypothesised for the initial phase of the transition to sedentism: that particular sites utilised periodically by mobile hunter-gatherers became recognised as a special. A cave would be a logical place for the dead, even those who had died elsewhere and been brought to it for secondary burial. As such, a cemetery implies developing cohesion among the aggregating bands and their identification with it.

A number of archaeological features provide evidence for mortuary ritual. The burial zone is towards the rear of the Cave and separated from the living by a stone alignment or large wall. Graves are centrally located but away from a space containing eight distinctive paved stone clusters with large hearths, perhaps used for ritual feasting (Figs 13.7-13.9). Continued cemetery use, performance of burial rites, body decoration, prestigious grave goods, and valuable grave-marking equipment often ritually broken, all indicate organised ideology and belief in an afterlife (Solecki and Solecki 2004a: 119-120). A highly ritualised burial process is apparent in some individuals having been forced or jammed into graves (Figs 13.10-13.13). In a number of cases, especially adults, limbs were contorted into very unnatural positions and the head bent backward over the shoulders to such a degree that the neck must have snapped. Several had crushed skulls indicating a highly ritualised burial process by which bodies were forcibly jammed into graves in contorted positions, skulls smashed and weighed down with limestone blocks and broken or whole mortars (Solecki 2001:11-31; Solecki and Solecki 2004e:106-108). Such behaviour is interpreted as an attempt to injure the skeleton and/or to prevent their interference with the living. It may have been that those selected for burial were considered as needing to be so constrained.

liminality Lewis-Williams and Pearce (2005:255-256) wrote of the intermeshing of geographic and spiritual qualities in objects, in that they were considered to have come from the spirit realm, and their possession bestowed both political and spiritual power. Artefacts, termed “unique” by Solecki and Solecki (2004d:120) from Structure 1 and with features traditionally associated with shamans, are of this type, as are others recovered from the site because of their exotic provenance and probably perceived spiritual qualities:

- . quartz crystals ... are widely employed in shamanism as power objects and thought to be of supernatural origin and shamanic, as where celestial spirits with healing powers resided (Eliade 1972:124-125; Harner 1980:23, 109-112; Reynolds 2009);

- . red ochre ... within the Cave cemetery zone there is evidence of the widespread special significance attached to red ochre (Solecki 2004:63), traces of which were found on three pebble choppers and other equipment, and on skeletal remains and grave goods;
- . lustrous taconite ... an iron-bearing rock with significant features including magnetic properties (Lynch 1974:25) and the banded nature of its quartz content, which Solecki (1980:32) also noted in chlorite at the site; among hunter-gatherer groups striped stones share the shamanic context of quartz (Eliade 1972:124-125);
- . other minerals ... aragonite, sidonite and calcite at the site may well have been perceived in a similar light to the taconite;
- . fossil invertebrates ... emphasise the longevity of life in the ancestral world and are liminal in perception;
- . pieces of stalagmite/stalactite ... derived from the liminal location of the Cave; and
- . exotic greenstone and chlorite ... their 'distant' origin, accentuated by other qualities such as colour and feel, not only provides links to other places but also promotes a liminal character; and
- . exotic obsidian ... found within the Cave but not at Zawi Chemi (Solecki and Solecki 2004b:76) suggesting possible ideological use restricted to the cemetery zone, probably because of its exotic provenance and perceived 'magical' sharpness and 'dangerous' flesh-cutting qualities.

shamanism The range of objects manufactured (Figs 13.14–13.21) include a number decorated with entoptic designs: variously spaced parallel, curved and concentric lines arranged into simple geometric patterns or more complex ones such as crosshatchings, herringbones and zoning, are present.

Small snake-like end pieces of carved bone (Fig. 13.18w) were found near Structure 1. These have cosmological connotations and point to the occupant possibly being a shaman.

Evidence for shamanic behaviour at Zawi Chemi is provided by bones excavated immediately south of Structure 1 interpreted as ritual costuming and paraphernalia (Fig. 13.22). These comprise bird bones and goat skulls, deposited simultaneously. They were associated with reddened earth above and below. Their type and quantity are related to some special purpose and represent the concerted effort of the community rather than solely the occupant of Structure 1 (Solecki 1977:42, 44). The bird bone is

almost entirely composed of wings of very large raptors such as vultures and eagles that had a relationship with death, probably part of a local myth recorded later in a Çatalhöyük mural (a scene depicting a scene in which a human figure dressed in a vulture skin participates in a burial ritual); and also on Göbekli Tepe stelae. From positioning of the bones, at least some were articulated when deposited. Cut marks on the shaft and proximal ends of some humeri suggest the wings were carefully removed and not simply broken off, and that some attempt had been made to remove both skin and feathers. Although edible meat must have been present, they were not eaten as there were no teeth marks or calcination. The large amount of meat on these birds and goats could have been consumed in associated ritual feasting elsewhere within the community (Solecki 1977:42, 44; 1980:53-54).

Only the outer part of the wings where the larger feathers are attached were found and may have been utilised for personal decoration or ritual paraphernalia. It is also possible that the wing skin had been removed for some type of costume associated with the goat skulls. Furthermore, the wings continued to be articulated when discarded. Proximity of these bird and goat items to Structure 1 leads to the supposition that it may have served some special function – shamanic. Given reliance on an almost plant-based diet with less than 10% intake of animal protein, the focus on goat skulls at Zawi Chemi becomes of more significance. These features would have involved considerable thought and effort on the part of the people concerned; and for a purpose sufficiently important to have involved them in what would appear to be in a non-domestic context for a non-domestic purpose.

13.1.3 Political

Structure 1 brought people together for prolonged co-operative effort on a particular ideology-related project, while the basins of temporary dwellings and related domestic deposits near Structures 2 and 3 indicate that the latter were influential in encouraging cohesion among aggregating groups and centralisation of activity within the community. Given the three occupy the same position and display intentional isolation (actual or constructed), and obvious single-occupant size, it is reasonable to conclude the presence of an influential individual — perhaps a practising shaman — and one behind ideology-related developments evident. This view is strongly supported by the particular artefacts associated with Structure 1.

The formal cemetery within the Cave and investment in related structural features show a new perception of and relationship with the dead. Secondary burial such as practised at

Shanidar is explained by some scholars (Bar-Yosef 2001:17; 2002a:114) in terms of increased mobility; while Kuijt (1996:317) regarded ancestor worship as effecting large group aggregation, encouraged and possibly even forced. Either way, the objective might be interpreted as shamanic strategy to both enhance community cohesion and extend social control, agreeing with Hayden's view (2004:279) that secondary burial was probably related to an attempt to maximize epideictic displays of influence, the delay in burial involved and holding of reburial feasts providing time to amass the necessary resources. Similarly, he recognised that prestige objects indicate that particular individuals enjoyed some degree of economic (or other) success and political power, and were making considerable effort to impress others and broker favourable arrangements for economic security, wealth exchange, marriage and defence (Hayden 2004:271, 276).

13.1.4 Social

Shanidar conforms to what Hayden (2004:265) considered characterises complex, rather than generalised, hunter-gatherer society.

stress Despite its ecotonal location, the Shanidar Complex experienced significant environmental change during its occupation period with first-level stress on resources. Solecki and Solecki (2004c:117-118) queried why Zawi Chemi had been established away from the shelter of Shanidar Cave during the cold of the Younger Dryas and concluded that environmental pressure caused focus on the riverine resources of the Greater Zab during a period of food scarcity.

Bio-anthropological data suggest stress caused by infectious and inflammatory ear conditions, probably through exploitation of riverine resources and the cold water. Food scarcity also led to illness through changes to a diet primarily dependent on plant foods (Agelarakis 1993:253-253; Solecki and Solecki 2004c:118).

High frequencies of traumatic conditions imply stress from injuries caused by digging sticks, nullas and axes. Some may be attributable to habitual occupational stress, while fighting due to stress generated by small independent bands aggregating for longer periods. The new ideology would have exacerbated such a situation. Instances of trephination at Zawi Chemi may have been attempts to relieve depressed fractures and other trauma (Agelarakis 1993:253-253; Rathburn 1984:156; Solecki and Solecki 2004c:118).

Further evidence of stress is related to ideology: first, coping with perceptions, responsibilities and possible unwanted consequences in offending supernatural spirits

and ancestors; and second, the highly ritualised burial process ensuring the dead did not return to the world of the living.

relations The concentration of dwelling basins around Structures 2 and 3 reflects changed social relationships whereby original band independence declined with development of cohesiveness as a community.

differentiation A number of features contrast with the characteristics of a generalised egalitarian hunter-gatherer society, indicating the possibility of personal property, equipment and produce. Hayden (2004:266, 280, 292) has argued that formal cemeteries and ancestor worship implied expression of ownership of staple food resources such as nut trees and cereals, or other important rights. Furthermore, he considered personal and object decoration *per se* to indicate accepted gender, skill and status differences (Hayden 2004:265, 269-271).

The remoteness and substantial nature of Structures 1, 2 and 3 indicates the importance and influence of their occupants. Furthermore, decisions affecting the community as a whole were made, such as those relating to the establishment of the cemetery and construction of related features, and relocation of settlement to Zawi Chemi. Similarly, ritual activity required extended planning and management, and imply individuality and leadership from the Structure occupants.

A distinctive yellow loam sealed the cemetery and defined its limits. Twenty-six graves containing at least 35 individuals have been recorded as summarised in Table 13.1.

Table 13.1 SHANIDAR CEMETERY BURIALS AND FEATURES

Solecki 2004:11-31; 27-28

Burial position was either flexed or semi-flexed with no preferred body orientation

Both individual and multiple (family?) graves

More child/infant than adult or adolescent burials

Both primary and secondary burials, the former more common

Bundle burials may have been present; at least one burial seemed to have been wrapped in matting

A definite burial pit observed in only one grave

Burials laid out on a bed of ash and charcoal, and the whole cemetery sealed with a layer of yellow loam

No definite grave markers identified, but querns and fragments of these may have once served this purpose

Hearths and stone structures (clusters and pavements) built in the cemetery

Stones sometimes placed in graves set against the back, above and under the head, or above the body

Almost 50% of graves contained grave goods: most common were personal adornments, characteristically found in those of children/infants; bone and pecked/groundstone tools were occasionally present, mainly in adult graves

There were concentrations of snail shells and animal bones, possibly the remains of funerary feasting

These burials do not represent the total number of deaths at Shanidar and, together with the manner of their interment, suggest that the individuals concerned had perceived differences warranting the special mortuary treatment noted above.

Social distinction is evident in the range of grave goods, the most common being stone beads, gastropod shells, crab claws, and equipment. Some adults, both male and female, were accompanied by tools. One child had 1,500 stone beads, another in excess of 200 (Solecki 2004:11-31). Hayden (2004:276) saw the small paved units in the cemetery as possible indications of high-status individuals given privileged seating during mortuary rituals. Similar paving outside the cemetery is only found associated with Structure 1 at Zawi Chemi, probably serving the same purpose and emphasising the role and status of the occupant. Both would have 'difference' implications, particularly ideopolitical.

Only one grave has been found outside the Cave. Stone-lined and dug over 2m below the cemetery datum, it is considered specially built for the individual concerned. The body had been treated similarly to most of those in the cemetery. Under the right foot was a muller; on top of the feet was a large, broken trough quern placed upside-down. Both were coloured with red pigment ground in the quern. The pigment also stained a necklace of gastropod shell beads and parts of the skeleton. Excavators considered the grave to be that of a young adult, probably female, robust, and about 25 years old (Solecki 2004:26-27). No reason could be given by Solecki (2004:27) for the separate burial of this individual outside the cemetery. Given the nature of the grave and the range of inclusions, together with its uniqueness in being outside the Cave, she obviously had significant status. Use of red ochre in the same way as at Hilazon Tachtit suggests personal influence in possible shamanistic contexts.

The most elaborate graves with beads were those of children and multiple interments. This suggests such objects had possible social value for use as wealth exchange in marriage arrangements, or simply wealth display, along with incipient elitence, a view supported by Sidel (1993:85) who saw beads, shells and trinkets reflecting the emergence of personal wealth. Some adults were accompanied by large, well-made bone

tools, indicating social difference, while the graves of others were marked with status equipment, broken purposefully also as possible wealth display (Hayden 2004:265, 269; Solecki and Solecki 2004e:106-108). Hayden (2004:271) would interpret prestige objects in burial assemblages as evidence for higher levels of social complexity, as well the presence of aggrandisers.

organisation Social relations would need to have been carefully handled by those in control through encouragement, not coercion. Constructions in the cemetery, the nature of the bird wing and goat skull artefacts associated with early Structure 1, and later concentration of dwellings in the vicinity of Structures 2 and 3, all suggest willingness by the aggregated community to be at Shanidar and to co-operate in organised activity.

Solecki and Solecki (2004c:119) commented that there was more evidence for the social and religious life of Proto-Neolithic populations at Shanidar than for earlier periods, since a social group must have built and maintained the Zawi Chemi village and the Cave cemetery; yet they saw no evidence at either site for a socially stratified society being present at that time. Surely, however, social differentiation is clearly indicated in the first instance by the sequence of three stone structures outside the Cave: the first being the sole structure of any material, and isolated; and the subsequent two the only ones of stone.

13.1.5 Economic

People in this geographic zone depended on a broad spectrum of food resources, including wild fruits, nuts, grains, land snails, red deer, sheep and goats, and possibly crabs; and later the keeping of sheep (Solecki *et al.* 2004:116-117). Investigations of those occupying Shanidar Cave indicated reliance on an almost herbivorous, C3 plant-based diet with less than 10% intake of animal protein (Agelarakis 1993:244-245). The large number of querns and millers, and other plant-processing tools at both sites attest to the importance of plant food.

Assured food supplies needed to be addressed early in the transition to sedentism to prevent reversion to a mobile, small-band existence. The economic pattern at Zawi Chemi suggests a period of innovation and experimentation to provide a broadly based, stable food supply and permit the establishment of a semi-permanent village. Agelarakis (1993:245) noted that sheep skeletal anatomical changes at Zawi Chemi Shanidar are indicative of domestication processes, but no substantial consumption of these animals could be assumed. This is consistent with innovations that not only increased the food supply but maintained it. While evidence is lacking, food storage would have been

needed given resources exploited, and on a substantial scale given seasonal fluctuation in staples (Hayden 2004:264-265). Surplus production would have been practised as feasting depended on it. There is no evidence to suggest anything other than sharing of food resources in these communities. This, however, may not necessarily have been the case as household or communal storage facilities may not be recognisable archaeologically. Innovation signalled a new way of living, as Hayden (2004:264-265) has associated these developments with sociopolitical organisational changes and dynamics of semi-sedentism reflecting behaviour such as surplus production and storage.

Newly introduced technologies which reveal experimentation and innovation, argue for an increased specialisation in the exploitation of broad and multifaceted available resources, reflecting changes in both systems of organisation and perceived environments (Agelarakis 2004:180).

Technological developments include large and heavy groundstone equipment that was more efficient and with durable cutting edges. Small groundstone tools and ornaments included celts, grooved stones, chisels, pendants and beads. A worked-bone industry, demonstrating considerable experimentation also with antler and ivory, produced a variety of tools and ornaments including awls, spatulas, beads and small carved pieces (Figs 13.14, 13.16). Assemblages argue for increased specialisation in the exploitation of a broad range of resources, reflecting changes in both systems of organisation and perceived environments. The majority of pecked and groundstone tools and those of a rich bone industry which appear in great numbers and varieties (Fig. 13.15), are technical and related artistic innovations of the period reflecting a new way of living. The large number of plant-processing tools at both sites attest to the importance of plant food in the diet (Solecki 1980:31-43, 47-51, 67; Solecki *et al.* 2004:116-117).

The large number of mullers recovered suggest the site may have been a manufacturing centre for them with socialisation into a number of varieties (Solecki 1980:26).

Fragmentary evidence (baked and unbaked clay; lime; slag; metal) was seen by Solecki (1980:72-76) to suggest production of copper metal from its ore.

13.1.6 Distant Contact

The Greater Zab River valley was a natural route with connections into Anatolia and Mesopotamia, providing Shanidar inhabitants with access to exotic goods, as raw materials and finished products. These included obsidian; stone for beads; a copper pendant; black adhesive material, possibly bitumen; raw materials used for stone bead

production; red ochre; chlorite, the distinctive green stone used for hammerstones; and a number of exotic stones as well as naturally smoothed or polished pebbles. The closest known source area for the copper pendant is *c.*400km northwest in southeastern Anatolia. Most exotics were recovered from the cemetery (Solecki *et al.* 2004:xii; 2004b: 56, 58-59, 62-63, 77; 2004e:109-110) and could have been sourced from within a 400km radius.

Celts and grooved stones (Figs 13.20, 13.21) became popular after the Zawi Chemi culture became established. Their absence as grave goods or fill suggests that they were produced for trade as well as domestic use (Solecki and Solecki 2004b:80).

REDACTIONS

- Fig. 13.1** Locations of the Shanidar Valley, and the Shanidar Cave and Zawi Chemi Shanidar sites ref: Solecki and Solecki 2004a
- Fig. 13.2** Shanidar Cave site ref: Solecki and Solecki 2004
- Fig. 13.3** View from vicinity of Shanidar Cave to the Zawi Chemi Shanidar site on the Greater Zab River in the Shanidar Valley ref: Solecki 1971
- Fig. 13.4** Shanidar Cave: Stratigraphic cross-section of site excavation ref: Solecki 1971
- Fig. 13.5** Shanidar Complex: cave/village comparative stratigraphic diagram and interpretative framework ref: after Solecki 1971
- Fig. 13.6** Zawi Chemi Shanidar: plan of Structure 1 at Zawi Chemi Shanidar also showing location of mass of bird and animal bones found in association ref: Solecki 1980
- Fig. 13.7** Shanidar Cave: diagram of Proto-Neolithic cemetery zone showing stone-lined boundary (orange); burials (coloured dots); stone pavements (brown); hearth (H); and boulder querns (yellow) ref: Solecki and Solecki 2004a
- Fig. 13.8** Shanidar Cave: section of cemetery zone ref: Solecki and Solecki 2004a
- Fig. 13.9** Shanidar Cave: stone pavement in cemetery zone ref: Solecki and Solecki 2004a
- Fig. 13.10** Shanidar Cave: Burial 6 ref: Solecki and Solecki 2004a
- Fig. 13.11** Shanidar Cave: Burial 7 ref: Solecki and Solecki 2004a
- Fig. 13.12** Shanidar Cave: Burial 1 ref: Solecki and Solecki 2004a
- Fig. 13.13** Shanidar Cave: Burial 27 ref: Solecki and Solecki 2004a
- Fig. 13.14** Zawi Chemi Shanidar: bone, antler, horn and ivory tools and objects ref: Solecki 1980
- Fig. 13.15** Zawi Chemi Shanidar: groundstone mullers, querns, bowls and mortar ref: Solecki 1980
- Fig. 13.16** Zawi Chemi Shanidar: worked bone tools ref: Solecki 1980
- Fig. 13.17** Shanidar Cave: slate tools and decorated objects found in cemetery fill ref: Solecki and Solecki 2004b
- Fig. 13.18** Zawi Chemi Shanidar: bone objects ref: Solecki 1980
- Fig. 13.19** Zawi Chemi Shanidar: pendants, beads, discs, fossils and miscellany ref: Solecki 1980
- Fig. 13.20** Zawi Chemi Shanidar: celts at various stages of production/finish ref: Solecki 1980
- Fig. 13.21** Zawi Chemi Shanidar: grooved stones ref: Solecki 1980
- Fig. 13.22** Zawi Chemi Shanidar: mass of bird and animal bones found associated with Structure 1 ref: Solecki 1980

Chapter 14 SOUTHWEST ASIA RESEARCH DEVELOPMENT FIELD PHASE 2 HAYONIM COMPLEX (ISRAEL)

The Hayonim Complex comprises the two adjacent sites (*c.* 12000BP) of Hayonim Cave and open-air Hayonim Terrace lying at 230m AMSL in the piedmont zone of Western Galilee. It is 13km from the present-day coast (Fig. 14.1). The Cave is a chamber of *c.* 500sqm, roughly divided in half by a low stone wall separating the living zone to the front from the cemetery at the rear (Fig. 14.2). The Terrace, with artefact concentration of *c.* 600sqm (Fig. 14.3), lies 35m beneath the cave mouth on the highest of four terraces which fall to a wadi below.

The archaeological record reveals a long period of pre-Natufian occupations of the Cave followed by a move onto the more spacious fronting Terrace during the succeeding Late Kebaran, Geometric Kebaran and Natufian periods. Cave occupation was resumed during the Early Natufian, at which time a symbiotic relationship between Cave and Terrace appears to have been initiated. The Natufian, beginning *c.* 12360-1;010 calBC, contained burials, building foundations and deep deposit depths (Bar-Yosef 1991a:86; Belfer-Cohen 1991:569; Bar-Yosef and Belfer-Cohen 1999:403; Henry *et al.* 1981:35-36; Hitchcock 1987; Rafferty 1985). Within the Cave, it is marked by the oval Loci 1-11 (Fig. 14.2). These are the remains of five or six semi-subterranean, rounded and agglutinated structures, each 2-2.5m in diameter and with wall thickness of *c.* 1.0m, arranged in two parallel series. The Terrace has a large structure *c.* 6m diameter, also semi-subterranean, truncating earlier sediments. Four masonry courses in its upslope wall are internally stepped in one half (Fig. 14.4) (Henry *et al.* 1981:38; Henry and Leroi-Gourhan 1976:394). The structure stands out within the Terrace settlement in the same way as special buildings at other sites of the period and men's houses in ethnographic contexts.

14.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

14.1.1 Settlement

The long occupation of the site attests to it being a preferred location ideologically and ecotically. Natufian occupation comprised five phases in the Cave and four on the Terrace. Structures at both sites are of local undressed stones, their volume and weight reflecting investment of more energy than previously and when compared with

contemporary Levantine sites (Bar-Yosef and Goring-Morris 1973: 49; Henry *et al.* 1981:38; Henry and Leroi-Gourhan 1976:394).

A number of studies support the hypothesis that the Hayonim Complex was occupied for most of the year (e.g., Lieberman 1991; Tchernov 1984). The architectural evidence, together with varied bone tool, groundstone and lithic industries indicate a diversity of specialised tasks. This suggests considerably more intensive and permanent site use, both symbolic and physical, during the Natufian, possibly related to special activities conducted by Terrace communities (Hitchcock 1987; Rafferty 1985). Architectural remains included dwelling structures and built graves, always separately located. At the early stages of the Natufian occupation, dwellings were located at the front of the Cave and graves to the rear. Termination of Cave occupation saw graves placed in the front. While 16 graves were exposed, the numerous human bones and teeth in occupational debris indicate that there must have been a greater number. Two graves (V and IX) were constructed entirely of limestone slabs. Others were covered with these, paved with small stones or marked with stone circles (Graves I, III, IV). Stone pipe fragments suggest these may also have been used as grave markers, as in Locus 9 near Grave XVI. Some had small cup marks made in a stone above or beside them. Most artefacts found in the Cave, with the exception of personal adornments, are considered to comprise part of the grave in-filling (Belfer-Cohen 1988:297-278, 305).

14.1.2 Ideological

settlement division Relocation of the main occupation from Cave to Terrace during the latter part of the Natufian represented a repositioning of functions within the site and involved progressively larger numbers of people more permanently. Domestic activity had permanent structures and pits, while the Cave continued to be used as a cemetery and a place with clear social and ritual significance (Belfer-Cohen 1991:579; Munro 2006:66).

shamanism Natufian occupation in the Cave relates to the Loci. These have no apparent entrances (Bar-Yosef 1991a:87), suggesting that independence and privacy were important considerations. Most have sub-floor graves. Loci 1 and 2 in Zone 206 to the rear may represent a particularly numinous zone. They lie beyond the stone wall and adjacent to its internal western wall, a membrane separating the underworld and ancestors from the realm of the living. This area lacks formal features but was the location of several unusual caches including gazelle horns, ground stone pestles and *Dentalium* shells. Both Loci have compacted floors with ash concentrations, suggesting a special purpose involving fire (Munro 2006:65). Loci 8 and 9, different, and the largest

and more closely associated, are adjacent to the eastern wall. Locus 8 is immediately adjacent to Zone 206 containing the numerous segregated graves of Loci 1 and 2, and merges with it into a continuous space along the cave wall littered mainly with stone and bone tools. Locus 9 has multiple graves (Bar-Yosef 1991a:87). While these artefacts do not reflect mortuary practice, their purpose could have still been ritual related; or, if domestic, associated with those responsible for ritual and/or occupying/using adjacent Loci 10 and 11. As previously discussed, a shaman grave was discovered at Hilazon Tachtit cave site, approximately 10km to the southeast and similarly dated at 12400-12000BP (Grosman *et al.* 2008).

Locus 10 is also large and adjacent to the cave wall. It is separated from the agglutinated group by a stone wall but this is not all-enclosing, permitting physical or visual access to the interior from Locus 11 which is an extension of the open area of the cave. The Locus 10 features, together with its relative isolation, could have served a shaman in terms of its remoteness and in permitting access to the cave interior only by particular individuals who Hayden (2004:287) would interpret as a select group or “secret society”. The circuitous routeway to Locus 10 in the back of the cave would have contributed to the awe of being in the sacred zone.

In addition to the unusual caches, entoptic imagery and probable ritual equipment, two particular features of the Complex indicate shamanism. Development of a symbiotic relationship between Cave and Terrace is identified with the former considered a cosmologically charged, sacred ‘place’, occupied by shamans operating out of Locus 10 and linked to a select group associated with the large Terrace structure. A cache of lupin seeds was found in Locus IV, the significance of which has not been considered. It is known that these contain toxic alkaloids which if ingested affect the nervous, circulatory and digestive systems resulting in a range of physical conditions including dizziness, confusion, slurred speech, anxiety, nausea, tremors and loss of motoric coordination, and respiratory problems — all features of shamanic trance and transformation behaviour. Effects of the alkaloids, however, are diluted by the use of lime (BfR 2017; Evans 2009:357). Hence, strong evidence for shamanic presence in the Cave is seen in the finding of seeds together with lime in Locus IV, the latter being used in managing alkaloid toxicity to produce particular behaviour and perceptions.

ritual Some individuals from both Cave and Terrace were recovered without crania but with mandibles intact, possibly representing introduction of a skull removal custom (Belfer-Cohen 1988:300, 305; Munro 2006:66). This might suggest possible ancestor worship. In several primary Cave burials, heads were rested on stones while in others

they had been covered with stone slabs. In one grave, the bones of one individual were scattered above the skeleton of another, as well as on the top of the stone slab. There was considerable investment in grave construction: three of the sixteen tombs within the Cave were constructed entirely of limestone slabs; two were surrounded by a stone circle, paved with small stones and covered with slabs. Some display cupmarks (Belfer-Cohen 1988:300, 305). Locus 2 was abandoned when its floor was breached to introduce additional corpses to Grave VI (Bar-Yosef 1991a:87), suggesting ritual abandonment of domestic structures on the death of occupants, at which time they became numinous.

burials Of the one thousand items recovered from the Cave, a quarter are personal ornaments such as pendants and beads, and mostly from graves. Particularly notable are perforated teeth of carnivorous animals, including fox. Belfer-Cohen (1988:306) commented that it is possible that while body adornment can indicate social stratification or burial ritual, it may have had a ceremonial purpose. The ubiquity of pendants, *Dentalium*, and finely-worked stone beads, indicates elaborate costumes and suggests a continuing shamanic presence. While grave goods are limited, the individuals were buried with items similar to those in shaman graves elsewhere, including body decoration, costuming and other paraphernalia, and reference to carnivorous animals.

A 16-19 year-old female in Grave VII, in addition to a belt and bracelets of 52 bone pendants and a perforated hyena tooth, had a *Dentalium* necklace of 182 beads. A young adult male in Grave XIII had a necklace of 365 *Dentalium* beads, an armlet of 28 perforated fox teeth, and a bone 'dagger' or spatula under the right humerus (Belfer-Cohen 1988:302). In the Grave VII/IX complex of two group burials, most of the 164 shell beads were found near a 20-25 year-old male, while another of 35-45 years, had four boar tusk fragments, possibly as body decoration. Grave X contained an adult male buried with only two *Dentalium* beads and a boar tusk (Belfer-Cohen 1991b:571-573). At other sites, boar tusks are thought to have been shaman-related (Fitzpatrick 2011a, 2011b; Grosman *et al.* 2008). Other objects add to this interpretation. Perrot and Ladiray (1988:91) questioned interpretation of *Dentalium* items as grave goods, suggesting that they may be personal ornamentation indicating social status. It is possible that its acquisition would have entailed significant cost for an inland community, making it a prestigious commodity with its cost increasing with distance from the Mediterranean (Byrd and Monahan 1995:275).

artefacts A stone pebble has incisions on both surfaces and lateral edges: on one they form a haphazard, net-like entoptic pattern; on the other they are arranged along a central longitudinal axis in a fish-bone pattern and smeared with ochre. Another is a pendant

consisting of a small fossil (Bar-Yosef 1991a:87-88; Belfer-Cohen 1991:570-574), suggesting that among those selected for burial was an individual able to manage the numinous.

Four stone slabs from Locus 4 are quite different and not common in domestic structures. Two display a more complex incised net pattern (Fig. 14.5). Another exhibits a deeply incised figurative pattern considered to resemble a fish with tiny vertical incisions marking scales along the deep incisions of the contours (Fig. 14.6). The fourth is rounded, rough surfaced, elongated and circular in cross-section, and not considered part of a pavement; it has a series of parallel incisions on three sides as well as other entoptic geometric patterns (Fig. 14.7) (Belfer-Cohen 1991:578-579). While its purpose is unknown, it could imply tallying or be a mnemonic device or memory aid. As such it would represent change to a more complex form of social structure or socio-political organisation based in part on the formal recognition of individual action. Significantly, it would also represent a potential source of social power and suggest someone was wielding it.

Lime found in Locus 4 is considered to indicate the existence of a kiln, a contention supported by charring. No plastered structures, modelled skulls or figurines have been recovered from the Cave, but this does not preclude plaster production for such purposes (Bar-Yosef 1991a:89).

Basalt is exotic to the site and therefore valuable, its use restricted to items of particular importance such as those associated with feasting and other ritual behaviour. Artefacts include pieces of mortars and deep stone pipes; a decorated fragment with a goblet-type base bearing three undulating grooves; and decorated pestles with between one and four grooved bands, and one of hoof or penis shape (Figs. 14.8, 14.9). (Belfer-Cohen 1991:574-578).

Ochre-stained pestles and other items (Figs. 14.10, 14.11) were found in all phases of Natufian occupation in the Cave (Belfer-Cohen 1988:303, 305; Webb and Edwards 2002:119).

Two large unperforated plaquettes (Fig. 14.12:9) found above Grave V are similar to items used elsewhere ideologically for covering the eyes of the dead (Belfer-Cohen 1991:570-574, 1988:299-305; Campana 1991:462).

14.1.3 Political

Cave Locus 10 and the semi-subterranean Terrace structure are seen to present as a shaman-dominated pair, and incipient in terms of the Hayden (2004:287) ritual societies

comprising a corporate group of particular individuals to “control access to supernatural and clandestine political manoeuvres”. Byrd (1994:643) saw them representing suprahousehold groups controlling rights to either or both of a community’s communal lands and intellectual property. Contents indicate that Locus 10 was a private shamanic domain, while internal benching in the other suggests interaction with a larger group. The paired structures are interpreted ideopolitically.

Evidence of ritual activity indicates shamanic strategy employed to bind aggregated communities together more cohesively, with entoptic patterning on visual imagery and other artefacts containing encoded meanings to this effect.

14.1.4 Social

Henry *et al.* (1981:51) commented that marked environmental change impacted stressfully on the economies, population densities and cultural systems of hunter-gatherers.

Occupation at Hayonim saw the regional environment deteriorating through increasing aridity and forest disappearance during the Natufian. The community was confronted with reduction in exploitable territory which encouraged adoption of intensive, broad-spectrum foraging. People endured increasing stress with respect to subsistence requirements (Henry and Leroi-Gourhan 1976:403). There was also social and scalar stress associated with longer periods of large cohabitation. Elements of formal settlement planning indicates measures to deal with this, while grave concentration is seen as an expression of group cohesion.

Some bone artefacts (Figs 14.12, 14.13) suggest non-domestic uses, particularly those decorated and considered to have user evidence as social markers. Sickle hafts are the only bone implements to have decoration, possibly reflecting an ideological response to the importance of plant resources. Entoptic motifs are particularly noticeable on animal bone spatulae and ribs (Fig. 14.14). One bovine rib spatula, or broken sickle haft, has a delicately engraved net pattern described as “abstract geometry” (Fig.14 15), and is similar to one in a Locus 10 grave. On both the pattern is divided by a deep groove and an identical design repeated below (Bar-Yosef and Belfer-Cohen 1999:408; Belfer-Cohen 1991:573; Campana 1991:462).

Ethnographic evidence suggests that personal decoration is an obvious means of declaring affiliation with a specific group within a larger society. A number of different bone artefacts, particularly those decorated, appear to have been designed for public display as social markers (Bar-Yosef 1991a:87-88; Bar-Yosef and Belfer-Cohen

1999:404-407; Belfer-Cohen 1988:297, 1991:573-585; Campana 1991:462-463; Henry and Leroi-Gourhan 1976:394, 399-400; Henry *et al.*:1981:37).

Clustering of patterns and objects at certain sites might be interpreted as possibly identifying specific social units, such as bands, extended families or tribes (Bar-Yosef and Belfer-Cohen 1999:404-407). Formal cemeteries imply identification with resource locations or other similarly important rights (Hayden 2004:266). Bar-Yosef and Belfer-Cohen (1999) saw decorated artefacts, such as stone slabs and ornaments, as evidence for emerging territoriality among communities, and possibly having coded meaning for delivering cohesive messages in an orderly way. Taking this further, a regional distribution of motifs can identify social or physical ties, alliances in a number of contexts, and zones of social control. Bar-Yosef and Belfer-Cohen (1999:2) suggested that occupation of the Hayonim Cave complex may have belonged to a particular social group whose territory comprised the Mount Carmel and Western Galilee area. Henry (1989:202) read evidence of matrilocality in such artefacts. There is an element of shamanic strategy to engender community identity in pursuing sedentism as an effective means of achieving position and power.

On the basis of the occupational dichotomy between the Cave and Terrace, there would have been a distinction between individuals responsible for the conduct of sacred behaviour and those managed by it. The Cave became a totally sacred zone extending differences between those with access to it and those restricted.

14.1.7 Economic

Anderson (1991), Bar-Yosef (2002a) and Henry (1989) have argued that semi-sedentary complex hunter-gatherer communities such as these struggled to maintain resource production. Difficulties experienced as a result of seasonal and general environmental fluctuation may have led to intensification of labour, technology and transport, and storage. Evidence of feasting, however, testifies to periodic surpluses (Hayden 2004:292, 29; Odum 1988:1138).

The Hayonim base camp is ecotically located between the lowland coastal plain of both open scrub and maquis woodlands and the upland oak, pistachio and pine forests. It is thought that higher precipitation at various times in the prehistoric past would have permitted permanent occupation. In wet winters, a niche in the eastern wall of the Cave fills with water which lasts through mid-summer.

Lieberman (1991:53-54) hypothesised that, on the basis of water availability and seasonal temperature changes, mobile bands during the Epipalaeolithic probably

exploited the highlands during the spring and summer and the lowlands in autumn and winter. He considered, however, that Hayonim's location would have enabled hunter-gatherers to acquire sufficient resources throughout most of the year without seasonal relocation. Furthermore, he saw strong evidence for relatively permanent site occupation during the Natufian and regarded the Hayonim Cave materials as suggesting that at least some hunter-gatherers were relatively sedentary. It certainly indicates that site use was considerably more intensive and permanent than during earlier occupations.

The extensive faunal remains from the Natufian horizons reflect broad-spectrum exploitation of the surrounding territory. Ungulates remained prominent as a resource staple but also with high numbers of small reptiles, fish, birds (mainly raptors), and various marine and terrestrial freshwater invertebrates, probably reflecting failure of the former to meet demand. Greater dependence on small animals implies more intensive exploitation of the immediate environment in response to longer-term site occupation (Munro 2006:62-63). Pressure exerted to the point of resource depression in game species is evident in unusually high proportions of juvenile gazelles in assemblages, reflecting a significant change in procurement strategy. Intensification is further indicated by gazelle bone fragmentation indices pointing to extensive marrow extraction from bones. The numbers of specialised plant processing equipment, including sickle blades and groundstone mortars and pestles, increased. Sickle blades are at least two to three times more abundant, indicating heavy investment in labour-intensive collection and preparation of small, energy-rich foods, such as grains and nuts. These would have provided a storable resource, facilitating extended periods of semi-permanent or permanent occupation. Pit storage, basketry, and preservation by smoking are also noted (Henry 1976a:402-403; Henry *et al.* 1981:46-5; Henry and Leroi-Gourhan 1976:402; Munro 2006:60-67).

Locus 6 is unique in the Cave in that it has neither a hearth nor floor at its lowermost level. A circular fill of small stones enclosed by stone slabs could possibly have been for storage. Baskets may also have been used. It has been suggested that the cross-hatch pattern on sickles recalls baskets in which grain was stored or the cutting of reeds to make them, or both (Bar-Yosef 1991a:87; Campana 1991:463-465). A storage facility was uncovered on the Terrace, which was probably used for plant resources to augment the diet and allow permanent or semi-permanent occupation (Henry 1976a:403). Excavation in the Cave has revealed that at the beginning of the Natufian certain commensal animals (*Passer domesticus* and *Mus musculus*) appeared in large numbers, indicating change in residence pattern to one of more permanency (Henry and Leroi-Gourhan 1976:403.). It could also mean increased food storage.

Archaeological remains suggest that Cave use was more intensive than earlier. Varied and sophisticated bone tool, ground stone, and lithic industries imply a greater diversity of specialised tasks. Several new tool types, such as sickle blades and picks for the collecting and processing of cereals, appeared. The high frequency of flakes has been interpreted as reflecting an overall preference for blade/bladelet blanks for tool production. This relates to the most common tool types including microliths, geometrics, backed pieces and sickle blades. Groundstone objects include mortars, pestles, rubbing stones, mullers, hammerstones, and various heavy-duty scrapers, many made of exotic basalt. While the dominant mortar form is bowl-shaped, deep stone pipes were also present (Bar-Yosef 1991b; Belfer-Cohen 1988).

Henry (1976:399, 403) reported that the Terrace assemblage also included mortars, pestles, querns, hand stones and flint tools bearing 'sickle' sheen, and plaster-lined storage pits.

14.1.8 Distant Contact

A number of features and practices evident at Hayonim would at other sites be considered exotic but here are to be seen in the context of regional cultural traditions, and artefacts regionally available.

REDACTIONS

- Fig. 14.1** Hayonim Complex: geographic location
ref: Henry and Leroi-Gourhan 1976:92; Munro 2006:58
- Fig. 14.2** Hayonim Cave: plan of the Natufian layer/occupation showing position of loci (Loc.), graves (gr.) and the separating stone wall (coloured), part of which locus appears to have been incorporated in the Locus 8 structure ref: Munro 2006:58
- Fig. 14.3** Hayonim Terrace: plan of the Natufian layer/occupation showing position of structures, burials and other features ref: Valla *et al.* 1991:96-97
- Fig. 14.4** Hayonim Terrace: stepped/terraced rear section of Structure 1
ref: Henry and Leroi-Gourhan 1976:395
- Fig. 14.5** Hayonim Cave: front and front/side views of limestone slab (Locus 10) incised with an abstract geometrical pattern together with plan and side diagrams of the artefact ref: Bar-Yosef and Belfer-Cohen 1999:407- 408
- Fig. 14.6** Hayonim Cave: incised limestone slab (Locus 4) with figurative pattern.
ref: Belfer-Cohen 1991:579, 582
- Fig. 14.7** Hayonim Cave: incised limestone slab (Locus 4) with possible notation series
ref: Belfer-Cohen 1991:581, 582
- Fig. 14.8** Hayonim Cave: basalt groundstone items from Natufian graves ... (1, 2) mortar fragments; (3) pestle fragment (4, 5) cupholes ref: Belfer-Cohen 1988:301
- Fig. 14.9** Hayonim Cave: basalt items ... (1, 3, 4) decorated pestles; (2) wide-headed pestle; (5) hoof-shaped pestle; (6) decorated base of a bowl
ref: Belfer-Cohen 1991:577
- Fig. 14.10** Hayonim Cave: (1) ochre-stained incisions in a stone; (2, 4, 5) chalk pencils; (3) grooved pebble; (6, 7) basalt shaft straighteners ref: Belfer-Cohen 1991:576
- Fig. 14.11** Hayonim Cave: (1) clay ball; (2) incised rock with ochre; (3) pendant; (4) decorated rock fragment; (5) ochre-stained clay ball; (6) ochre-stained stone with incised net pattern ref: Belfer-Cohen 1991:577
- Fig. 14.12** Hayonim Cave: decorated bone objects ... (1) sickle haft; (2, 3) middle parts of scapulae; (4, 5, 7) large pendants; (6, 8) regular pendants; (9) plaque; (10) barrel-shaped bead; (11) grooved limb ref: Belfer-Cohen 1991:572
- Fig. 14.13** Hayonim Cave: decorated bone items ... (1) handle; (2) 'dagger'; (3, 4, 6, 7) decorated bone; (5) spatula ref: Belfer-Cohen 1991:574
- Fig. 14.14** Hayonim Cave: entoptic symbolism on objects made from animal spatulae
ref: Belfer-Cohen 1991:572; Bar-Yosef and Belfer-Cohen 1991:404, 405
- Fig. 14.15** Hayonim Cave: (a) incised bone spatula or broken sickle haft with delicately engraved design in two sections separated by a clear space; (b) incised bone spatula from Grave XVII engraved with nearly identical pattern to the previous one in two parallel columns with a space between ref: Bar-Yosef and Belfer-Cohen 1999:404- 405

Chapter 15 SOUTHWEST ASIA RESEARCH DEVELOPMENT FIELD PHASE 2 HALLAN ÇEMI (TURKEY)

Hallan Çemi (c.10200-9200 calBC) is an open-air site on a tributary of the Tigris River in eastern Anatolia (Fig. 15.1), located to exploit an ecotonal situation: riverine and riparian forest resources; surrounding hills covered with oak, pistachio and almond forest. It is a small mound c.4.3m high with an occupation area of c.5,000sqm dating to the proto-Neolithic period (latter part of the 11th millennium BP). Population was probably not much larger than a hunter-gatherer band. Despite this, certain basic socioeconomic, sociopolitical and structural elements characteristic of larger, later Neolithic sites were evident, suggesting a relatively high degree of cultural complexity including special-purpose buildings, sophisticated craft production, objects used for record keeping, trade networks, and experimentation in animal domestication (Rosenberg and Redding 2000; Peasnell 2002).

At least four building levels (BL1-4 with depth/age) are known. The uppermost three have been excavated (Fig. 15.2) in which the spatial layout comprised a variety of structures and features, mainly curvilinear stone units. Structures vary with level in construction and diameter (Level 3/ c.2m; Level 2/ c.2-4m; Level 1/ c.2.5-6m). They are arranged around an open central area over 15m in diameter (Rosenberg and Redding 2000:42-47).

BL3 This lowest building level has three stone structures, each 2m in diameter, constructed of coursed river pebbles in a mortar. All were C-shaped with unpaved floors and no hearths (Fig.15.2).

BL2 Five structures are known, of which the four excavated have walls like BL3 but paved with sandstone slabs. Three of unclear form vary in diameter from c.2-4m, and none have hearths. The largest has a small plastered basin at its centre. The fourth, C-shaped and separated from the other three, lacks a stone-paved floor but contains a raised plaster hearth (Figs.15.2, 15.3).

BL1 This consists of structures and platforms arranged around an open area over 15m in diameter (Figs 15.2, 15.4, 15.5). Of the four structures, two are circular c.5-6m in diameter, and semi-subterranean with sandstone slabs lining the pit portion and extending beyond it. They are somewhat isolated within the settlement and similar to non-domestic buildings in other sites (Byrd 1994:646). Both have

distinctive internal features including benches against walls, plastered hearths, multiple floors marked by a thin yellow sand and plaster layer above relatively sterile fill (Rosenberg and Redding 2000:44-45, 48-49). They are approximately three times larger than the other two which are surface structures, c.2.5m in diameter, and U- or C- shaped. All four are constructed of sandstone slabs.

15.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

15.1.1 Settlement

Hallan Çemi was a relatively small, probable kin-group settlement with a limited number of structures. There are no burials nor human bone, implying that the dead were disposed elsewhere, possibly in a cemetery, a regional contemporary practice (Rosenberg 1999:26; Rosenberg and Rosenberg 2000:55).

Change is exhibited by three of the five structures in BL2, of which the largest one is separated from the others and continues into BL3, where a larger pair are also isolated. They are thought to be public buildings because they are approximately three times the size of the others and have distinctive interiors including multiple reflooring and platforms or benches against walls. Plant and animal remains are scarce and there is no groundstone equipment (Rosenberg 1999:26-29; Rosenberg and Rosenberg 2000:47-54).

15.1.2 Ideological

structures The three BL3 structures are domestic in nature. The settlement pattern and associated features suggests two possibilities: either no social or functional differentiation; or an individual had isolated himself from the rest of the community.

Rosenberg (1999:27) commented that the largest BL2 structure is no different from the others, although Rosenberg and Redding (2000:44-49) suggested it was a public building used for communal activities and ritual.

functions An obsidian processing area and virtually all the obsidian and copper ore fragments, both exotic, are associated with the two large BL1 structures, one with two of the largest obsidian blade cores (Rosenberg 1999:28; Rosenberg and Redding 2000:45). They would have been perceived as numinous and with potentially 'dangerous' and/or 'magical' qualities, such as obsidian sharpness, its shiny surface and mirror-like qualities, and the brilliant metal from the copper ore. Rosenberg (1999:28) suggested that copper ore was sought solely for its pigment. The use of these materials required particular skills, which only some individuals had and who would have had access to

community resources and knowledge of trade networks to acquire them. This would have been a source of social control.

symbolism The same structure also contained a complete aurochs skull that once hung on its northern wall, facing the entrance (Fig.15.6). Rosenberg (1999:27; 2007) commented that it was unclear whether this symbolised a corporate group using the building or a more elaborate ritual meaning. He acknowledged, however, that its positioning had symbolic significance. It is noted that as bovid remains are absent among the site's faunal remains, they were rarely, if ever, used as food. Several partially preserved sheep skulls and deer antlers were found in the other large structure, but it is not clear whether they hung on walls. Besides the skull, some stone objects are miniature stylised bucrania. The size of the two structures and the associated deposits of exotic materials suggest they had a ritual or community-wide function. Rosenberg and Redding (2000:50) interpreted the paired structures as two influential suprahousehold groups, ideopolitically based and linked, and politically the most important of the site.

Three sheep crania are linearly arranged in a concentration of animal bones (Fig. 15.7) in the open central activity area of BL1 (Rosenberg and Redding 2000:44). They provide further support for symbolic implication and raise the possibility that the skull found in one of the large structures also reflects some facet of the public domain. Bone objects depicting snakes, and one a carved snake, were also recovered.

artefacts Several other site elements are also ideological, including elaborately carved and decorated stone bowls and pestles of a grey/green-black chloritic stone and white limestone. These are incised with entoptic geometric and naturalistic motifs, vipers being common (Fig. 15.8). Their frequency increased over time. The assemblage also includes a series of pestles sculpted into a variety of stylised naturalistic forms also made from chloritic stone and extensively conserved (Figs 15.9:1-7). Both artefacts were designed to be used in conjunction (Rosenberg and Redding 2000:50-52). The labour intensive production of this decoration indicates that these were valued objects, and that the motifs were of symbolic significance. Their apparent value and status suggest usage on special occasions while the density of food resource remains is indicative of ritual intensification.

shamanism The evidence for ritual activity and entoptic imagery indicates a strong shamanic presence. Similarly, shaman-sponsored feasting involving the total community is suggested by dense concentrations of animal bone, some large and articulated, and fire-cracked river pebbles in all levels of the settlement.

As noted, the largest BL2 structure has been interpreted as a public building used for communal activities and ritual. While the size of the smaller and isolated structure is within the general range, it could represent occupation by a particular type of person — a shaman. The lack of paving may have been deliberate and/or essential, permitting direct interface with the cosmological underworld; and the significance of its raised plaster hearth probably relates to the fire it contained. The nature and contents of the two large BL1 structures point to one being the private domain of a shaman; the other, with internal benching, accommodating gatherings of particular community members associated with that individual.

15.1.3 Political

BL1 has non-domestic structures serving a different function. The two smaller structures are considered domestic, while the larger ones lack food-processing equipment and are not. The latter being semi-subterranean may reflect the need for stronger walls to accommodate certain people, and/or as an additional privacy measure.

The large BL1 pair are considered to be ideopolitically based and linked. They are identified with a shaman and shaman-dominated elite group, possibly related to a strategy of the former to engender co-operation in community management, the so-called controlling ritual societies of Hayden (2004:287). Byrd (1994:643) thought them to represent suprahousehold groups controlling rights to a community's lands and/or intellectual property, its sacred and supernatural knowledge. The paired structures are interpreted politically as the most important in the site.

Conspicuous consumption involving the total community is suggested by dense concentrations of animal bone, some large and articulated, and fire-cracked river pebbles in all levels of the settlement.

Stone artefacts termed 'notched batons' with a variously spaced series of one to eight notches cut into one or both edges (Fig. 15.9:8-11) have been interpreted by Rosenberg (1999:29) as a device for noting something that was sufficiently important socially, economically or politically to be recorded permanently. As with a similar object found in Hayonim Cave, they possibly indicate development of a more complex form of socio-political organisation. Rosenberg and Redding (2000:54, 57) emphasised that whatever the meaning, formal recognition of individual action was indicated.

15.1.4 Social

Rosenberg (1999:28) suggested that feasting may have been stress related, functioning to establish and reinforce social ties in the face of tension. It was associated with the two large BL1 structures and used to counter social and scalar stress generated during the settling-down process.

Maceheads were recovered from the site. These not only are symbols of authority, but also could reflect a need to foster ties between aggregated groups. A number had broken edges leading Rosenberg and Rosenberg (2000:55-56) to comment that as latent hostility characterised the earliest stages of the shift to settled life they could also imply some degree of intercommunity conflict as groups or individuals attempted to assert claims over territory and/or resources.

The BL3 communal hearths imply change in social relationships towards increased family individuality and privacy, and masking of inequality, as evidenced by the community layout and structure entrances in all levels generally faced away from the central open area. All imply a significant departure from reciprocity to more restrictive sharing networks in response to the institutionalisation of private economic property (Rosenberg and Redding 2000:48). If so, family wealth, as stored food resources, may have varied.

15.1.5 Economic

Faunal remains are consistent with an intensified economy exploiting a wide range of wild animals: sheep, goats, deer, and bears; and a variety of small mammals, birds, fish and reptiles. Evidence such as butchering patterns and sex ratios suggests that incipient animal husbandry involved pigs, not as a staple resource but dietary insurance to protect against local resource depletion common in the vicinity of sedentary sites (Peasnell 2002; Rosenberg 1999:31).

Carbonised botanical remains indicate that nuts, including wild almond and pistachio, as well as pulses and *Gundelia* sp., an achene with seeds rich in fatty oils, were intensively collected and found in the central open area. None of the wild grass seeds have been identified as cereals, a fact consistent with the dearth of sickle blades at the site (Rosenberg 1999:30; Rosenberg *et al.* 1995:4-5).

Evidence for community-scale, conspicuous consumption implies surplus production and storage (Hayden 2004:292, 29; Odum 1988:1138). While storage pits are absent, circular stone or stone and earth-filled platforms, averaging c.40cm in height and 1-2m in

diameter, have been identified as possible above-ground storage facilities. Given the pigs' penchant for rooting around in the ground, such units would make a sensible alternative to pits (Rosenberg and Redding 2000:47).

Concentrations of wild almonds in deposits signal economic importance despite their latent toxicity and suggest processes to render them edible. Small shallow sand and gravel pits present may have been for roasting, a method used also for extracting the seeds from *Gundelia* fruit (Rosenberg *et al.* 1995:4-5).

Zarzian culture with which the site is associated extends over a wide area with distinctive chipped stone artefacts and relatively large bone button-like objects, sculpted pestles and decorated bowls, and bucrania iconography (Rosenberg 1999:29-30). At Hallan Çemi chipped stone tools are the most frequent, followed by those of groundstone grinding equipment, including handstones, pestles, querns and mortars, all considered subsistence related. Several grinding stones had been deliberately broken. Rosenberg *et al.* (1995:7) have suggested that this is related to the death of the owners. The use of obsidian, a raw material valued ideologically, status-wise, and practically in tool manufacture, would imply specialisation in the hands of a particular group, if not an individual.

15.1.6 Distance Contact

Exotic obsidian and copper ore in BL1 indicate external trade, making them a valuable acquisition. The nearest obsidian sources are *c.* 100km away to the northeast and northwest, but with material from both accounting only for 58% of debitage more distant sources were also accessed. Their association with the two large structures suggests that trade was controlled by the individuals concerned.

The presence of *Dentalium* shell also indicates distance contact as the site is 350-400km kilometres from the sea.

REDACTIONS

- Fig. 15.1** Hallan Çemi: location ref: Rosenberg and Redding 2000
- Fig. 15.2** Hallan Çemi: sketch plans of the three uppermost building levels (BL1, BL2, BL3) with structures and other features indicated ref: Rosenberg and Redding 2000:43
- Fig. 15.3** Hallan Çemi: largest of building level 2 (BL2) paved structures
ref: Rosenberg 1999: Figure 6 in Plate Document
- Fig. 15.4** Hallan Çemi: (a) small paved structure and (b) stone platform in building level 1 (BL1) ref: Rosenberg *et al.* 1995:10; Rosenberg and Redding 2000:47
- Fig. 15.5** Hallan Çemi: large semi-subterranean public buildings in level 1 (BL1) shown as A and B in the Figure 25 sketch plan ... (a) Building A; (b) Building B; (c) benching and resurfaced flooring in one of these structures
ref: Rosenberg 1999: Figures 7, 8, 13 in Plate Document
- Fig. 15.6** Hallan Çemi: aurochs skull in large structure of building level 1 (BL1)
ref: Rosenberg 1999: Figure 10 in Plate Document
- Fig. 15.7** Hallan Çemi: linear arrangement of three sheep crania in the open central zone of building level 1 (BL1) ref: Rosenberg 1999: Figure 16 in Plate Document
- Fig. 15.8** Hallan Çemi: stone bowls showing a selection of design motifs
ref: Rosenberg and Redding 2000:51
- Fig. 15.9** Hallan Çemi: sculpted stone pestles (1-7) and stone batons (8-11)
ref: Rosenberg and Redding 2000:53

Chapter 16 SOUTHWEST ASIA RESEARCH DEVELOPMENT FIELD PHASE 2 WADI HAMMEH 27 (JORDAN)

Wadi Hammeh 27 (WH27), extending over 2000sqm, is the largest and most recent in a suite of seven open-air early Epipalaeolithic sites (19500-14500BP; WH27 Phase 1/12500-12000BP) associated with Wadi al-Hammeh, a perennial stream fed by aquifers located in the surrounding highlands and by hot springs (Fig. 16.1) (Edwards 1991:123; Edwards *et al.* 1988:541-543; Edwards *et al.* 1996). It is situated at an altitude of -83.0m on the northern end of a flat-topped, steep-sided interfluvial ridge between Wadi al-Hammeh and Wadi al-Himar, which are deeply incised through Late Pleistocene sediments (Fig. 16.2). Geological evidence shows that this was marginal to ancient Lake Lisan in the Jordan Rift Valley, and that these sediments are roughly coeval with it. At some time after 11000BP an extreme drying-out phase, together with post-drying tectonics at the Rift Valley edge, caused the level of the Lake to drop and initiate progressively wadi incision. This truncated the earlier abandoned occupation layers of WH27. The eastern edge of the Rift Valley near WH27 has been tectonically active with repeated episodes of downfaulting resulting in substantial movement of the land (Edwards 1991:123-124, 128; Edwards *et al.* 1988:541; Edwards *et al.* 1996:115-117). Excavation has revealed four occupation phases, VI-I, dating to 12500-12000 calBC with stratigraphic conformity between the phases and continuity in the spatial arrangement of structures through superimposition in Phases III-I. Most hearths were located inside structures.

16.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

16.1.1 Settlement

Phase IV is represented by a primary burial (*Homo 1*) (Fig. 16.3) infilled with a dark humic deposit sprinkled with burnt stone artefacts and faunal bone fragments; and a multiple secondary burial of five individuals (*Homo 2-6*), both in pits dug into the travertine bedrock (Webb and Edwards 2002:107-108). Adjacent to *Homo 1* was a file of stones, probably marking the grave. A third pit, stone-capped, enclosed a deposit similar to the infill of the primary burial sprinkled with burnt stone artefacts and bone fragments.

Phase III had a surface of clay and detritus trampled into depressions in the bedrock to form a roughly horizontal floor. It contained a number of features dug into or on this surface, including a circular hearth bordered by stones of which one large rock provided the base for

a small stone unit that was augmented through Phases II and I. The hearth directly overlay Phase IV *Homo I* burial (Edwards 1991:125; Webb and Edwards 2002:109-110).

Phase II consisted of a grey clay floor associated with a curvilinear stone wall. A cluster of stones topped by a cup-shaped limestone mortar lay on the floor. In subsequent developments during Phase I it protruded through the overlying floor. On the external Phase II surfaces of Structures 1 and 2, the deposit was thinner than those internal which were densely packed and held a dense amalgamation of cached equipment, artefacts, and animal and human bone fragments (Edwards 1991:125; Webb and Edwards 2002:109-110).

Phase I had two large curvilinear structures of undressed stone with other remains to the north and south (Fig. 16.4). Structure 1 was horseshoe-shaped (10m diameter) built over the wall of the previous Phase and with the same curvature. It opened to the southwest and was enclosed by a line of stone-bordered postholes. Structure 2 (14m diameter) was more complex, comprising three concentric walls built into the slope incorporating internal benching (Fig. 16.5) similar to the large Hayonim Terrace structure, and circumscribing a central group of large limestone boulders. Associated with Structure 1 are caches of fine artefacts (Fig. 16.6) (Edwards 1988:311, 1991:125-128; Edwards *et al.* 1988:541-543; Webb and Edwards 2002:104-107).

WH27 grew much larger than any of the other preceding Kebaran sites of the region and became the main site at this time. Stratigraphic conformity between all phases attests to a long period of occupation on the same plan. During the latest phase, structures were free-standing (Edwards 1990:114; 1991:125; Edwards *et al.* 1996:127; Webb and Edwards 2002:104).

16.1.2 Ideological

location WH27 is endowed with natural features providing ideological advantage over other locations. It is perched on a plateau remnant on the eastern edge of the Jordan Rift Valley, a tectonically active zone that would have had worldview implications. Similarly, its two wadis, one perennially fed by hot springs, would have been ideologically significant. Worldview connotations would also have been attached to the decline in Lake Lisan, particularly its rapid nature which probably led to site abandonment *c.*12000BP (Edwards 1991:123-124; Edwards *et al.* 1996:115-116). Increased artefact range and density, evident through the occupational sequence, has been regarded as a sign of ritual intensification (Edwards 1990:112).

structures The two large Phase I structures, while differing in plan and interior are considered a related pair. Structure 2 is the more complex, with a benched section focusing on a central group of large limestone boulders, possibly an altar. It is also interpreted as a place where a select number of community members assembled with a shaman for purposes that did not involve the whole community. Structure 1 is considered a shamanic domain housing the individual who probably controlled communal activities in Structure 2. Its other major features are the small stone unit initiated in Phase III, and the distribution of cranial fragments across the floors of both structures (Fig. 16.4) probably confirm ritual behaviour.

burials The Phase IV primary burial (*Homo 1*) was tightly flexed, having been laid on its left side with head pointing to the west, feet to the east and face looking north. The pelvis and face had been crushed and a limestone block placed on the thorax before the pit was filled with a dark grey mix of burnt sediments containing flint artefacts and faunal fragments (feasting?). Treatment of the dead in this way was seen at Shanidar. While the burial sequence is not known, two features of the burial treatment are unique at the site: its primary nature; and the deliberate crushing of the skeleton. This, together with the ritualistic grave marker and its continued recognition throughout the sequence, suggests that the person may have had powers the community wanted him/her remembered for but not exercised from the realm of the dead, except in a ritually controlled way. It is possible that this was a shaman whose burial was designed to endow the WH27 site with sacredness. Alternatively, was the individual sacrificed ritualistically to establish the significance of the site? One of the lesions on the skeleton, a blow to the head with little or no healing around it, indicates injury at/or close to the time of death (Webb and Edwards 2002:110, 121).

One individual of the multiple secondary burial, *Homo 3*, fully articulated and tightly flexed, had been buried with a necklace of *Dentalium* shell fragments pressed up against the mandible, suggesting that this person was different and significant. This is the only set of artefacts clearly assigned to WH27 burials. Some of the long bones in this burial were stained with red ochre (Webb and Edwards 2002:107-108). It is clear that the *Homo 1* burial had been used to establish WH27 pre-eminence importance from the beginning; and that the majority of the individuals in the Phase IV Homo 2-6 burial had been relocated to the site for the same purpose. Such practices point to shamanism — ideology concerned with afterlife and ancestors, and the status and powers of particular individuals in both life and in death. The mortar on top of the stone unit on the Phase II floor of Structure 2 which

protruded through the overlying Phase I floor may have been intended to create ritual linkage in ancestral context between occupants of the two phases.

sacredness In addition to the burials, there are objects which may, in the same context, have been brought from another place of ideological significance for the same purpose. These include the Phase III rock within a stone circle that was augmented to continue as a pillar into Phase I, possibly acting as an *axis mundi*. Similarly, a group of three heavy siltstone slabs, engraved with a repetitive entoptic, quadrocentric motif were placed end-to-end in the western section of Wall 3 in Structure 2 of Phase 1 (Fig. 16.7) (Edwards 1991:135). Their fractured nature and the incomplete and broken motifs along edges indicate that they came from elsewhere (Edwards 1991:135), and may have been transferred sequentially through the respective Phases before finally being assembled as a wall component in Phase I. Pollard (2009:343) has noted that such translation of sacred architectural traditions from one to other locations might be accommodated within the concept of shrine franchising.

Other examples are limestone pebbles and fragments, and bone and marine shell ornaments carrying entoptic motifs (Fig. 16.8).

ritual Unusual treatment of the human skull is also seen in small clusters of burnt and calcined cranial pieces on the floors of the two Phase 1 structures (as shown by circled Cs in Fig. 16.4). Webb and Edwards (2002:118-119) stated that intentional breakage was indicated, and that their preservation and distribution pointed to dispersal from several skulls, possibly as fragments in the first place, suggesting deliberate practice. This could be interpreted as ritual commemoration of the primary burial through selective destruction of other crania. The extensive nature of burning implies association of fire with the deceased. Hayden (2004:284) regarded this as possible evidence of ritual cannibalism in the context of ostentatious display of power and prestige at group rituals or feasts. Animal bone found in the occupation deposits supports this view (Webb and Edwards 2002:109).

artefacts The Phase 1 caches of equipment included two pairs of basalt pestles and mortars; a pestle pair carefully placed over the mouth of a larger mortar (Figs. 6.11a, b); and a sickle haft carved from a caprid horn core with double row of inset Helwan bladelets surrounded by a variety of objects consisting of a translucent caramel-coloured bladelet core and twenty-one lunates from it; seven polished agate pebbles; and five gazelle podial bones (Fig. 6.11c). Another cache (Fig. 6.11d), comprising chert picks, bone tools, *Dentalium* shells, and gazelle podial bones and several articulated hooves, was recovered from the smaller and conjoined structure (Edwards 1988: 311; 1991:128-129, 136).

A number of basalt artefacts (Figs.16.9, 16.10) are termed special purpose and non-domestic, and appear to have been particularly valued because basalt is exotic to the Wadi -el-Hammeh area, the nearest possible source being on the western side of the Jordan Valley. This was obviously much preferred to the soft local limestone and siltstone for manufacturing groundstone tools (Edwards 1991:129). In contrast to the flaked chert assemblage, the lack of any large pieces and unworked fragments suggests it was the finished articles that were obtained. Pecked, ground, grooved, drilled, incised and engraved stone artefacts include pestles, fragments from large mortars or containers, miniature bowls and plates, and decorated vessels.

Edwards (1991:129) considered it difficult to reconcile the basalt equipment with apparent emphasis on potential plant processing equipment at the site. This, however, accords with a non-domestic, special purpose as suggested by pestles with phallic and zoomorphic profiles and terminations, some with traces of red and yellow ochre on the working area. Large vessels and containers indicate possible alcoholic beverage preparation for ritual and/or conspicuous consumption because of their size and the investment involved in acquiring them. Crenellated entoptic motifs on the vessel fragments (7, 8 of Fig. 16.9) suggest a shamanistic association. Miniature plates (5-9 of Fig. 16.9) were probably important for ritual purposes, such as with hallucinogenic substances. In this regard it is noted that among the botanical taxa recovered were seeds of *Aegilops sp.* and *Avena sp.*, and *Hordeum spontaneum* (Edwards 1991:145), cereals mentioned in the context of alcohol preparation.

Limestone objects also include a number of non-utilitarian types comprising pebbles and fragments incised with simple scratches and entoptic sets of grooves, curvilinear and circumscribed lines, including ones with a deep central groove flanked by lighter horizontal incisions, or with geometric and chevron designs (Fig.16.8). Of particular interest is an irregular fragment grooved by cross-hatched vertical and horizontal strokes to form six panels (Edwards 1991:133). This and other fragments (e.g., 1, 8, 13) are suggestive of a mnemonic device for tallying and something being accumulated, with someone being in control of this. Most objects of bone and teeth were found in graves of which two specimens (18 and 19 respectively of Fig. 16.14) are unusual, a stylised bird with outstretched wings and a human face in profile.

shamanism Throughout this section a number of references have been made to possible shamanistic associations. The following, however, are particular instances where the evidence strongly points to shamanic presence and behaviour:

. apparent paired relationship between Structures 1 and 2 in shamanic context;

- . treatment of the dead as with *Homo 1*, together with a ritualistic grave marker and its continued recognition throughout the sequence;
- *Homo 1* possibly being a shaman whose burial was designed to endow sacredness on the site at its establishment; or alternatively, an individual sacrificed ritualistically;
- . *Homo 3*, and red ochre staining of long bones in that burial;
- . objects in addition to the burials which may have been brought to the site for the same purpose from another place of ideological significance, and confirming ritualistic behaviour: the Phase III rock within a stone circle that was augmented to continue as a pillar into Phase I, possibly acting as an *axis mundi*; and the siltstone slabs with the repetitive entoptic motif;
- . distribution of extensively burnt cranial fragments across the floors of both Phase 1 structures; and
- . caching of objects, together with their nature, quality and value, points to ritual behaviour that was both established and directed. Similarly, the special purpose equipment; and large vessels, containers and miniature plates associated with ritual and/or conspicuous consumption.

domestication A naturalistic animal head was sculpted in limestone (Fig. 16.13). Edwards (1991:135) described a raised strip extending a short way down both sides of the face which he surmised depict eyes. He noted that the pair of grooves between this and the snout look like harness straps. This could represent a domesticated animal, ideologically indicating control of the ‘wild’.

16.1.3 Political

Structures 1 and 2 exhibit a paired relationship, similar to Hayonim and Hallan Çemi. Both size and content clearly indicate a non-domestic purpose. They are seen to be ideopolitical and shaman related in terms of Hayden’s (2004:287) ritual societies and Byrd’s (1994:643) suprahousehold groups, controlling rights to either or both of a communal and intellectual property. As already argued, one of the pair was a private shamanic domain, while the other with internal benches was for group assembly. Strong social control of the community, based on ritual ingrained from initiation of the settlement, is evident.

Edwards (1991:133) reported a pillow-shaped limestone block, a wall stone from Phase II/Structure 2 with sixty-five holes drilled in one face up to 1cm in depth in Wall 3 of Structure 2 (Fig. 16.11). Its function remains unknown but a similar object (Fig. 16.12) has been interpreted as a lunar calendar (Marshack 1972; Wolkiewicz 2007). It is seen as a mnemonic device in the same context as those found at Hayonim and Hallan Çemi, related to recording and suggestive of shamanic oversight.

Stone artefacts termed 'notched batons' with a variously spaced series of one to eight notches cut into one or both edges have been interpreted by Rosenberg (1999:29) as a device for noting something that was sufficiently important socially, economically or politically to be recorded permanently. As with a similar object found in Hayonim Cave, they possibly indicate development of a more complex form of socio-political organisation. Rosenberg and Redding (2000:54, 57) emphasised that whatever the meaning, formal recognition of individual action was indicated.

16.1.4 Social:

Skeletal trauma suffered by male *Homo 1* and minor changes to the upper spine reflect the high functional demands of male hunter-gatherer life, while the *Homo 2* burial shows evidence of anaemia (*cribra orbitalia*), indicative of a more sedentary lifestyle (Webb and Edwards 2002:120). Together with durable structures, this is further evidence that the transition was in progress.

The paired structures indicate social differentiation at three levels: shaman, select group, and community.

16.1.5 Economic

Availability of water and environmental zonation with altitude in the vicinity of WH27 made for ready access to a diverse range of both plant and animal resources. Its location is reflected in the varied diet that would generally be regarded as indicative of increased foraging intensification (Edwards 1996:117). There is a diverse range of faunal remains such as large herbivores and smaller animals; and several species of bird, but no fish. Plant taxa identified include legumes and wild barley which, together with an emphasis on plant processing tools, suggests such resources were prominent in the diet. Sedimentological and palynological records indicate continuing micro-environmental diversity over a long period.

As with Hayonim, Hallan Çemi, and other settlements in this general region, however, seasonal and environmental fluctuation would have made subsistence a continuing

concern for Wadi Hammeh 27 communities, and required intensification of labour, technology, transportation, and storage (Anderson 1991; Bar-Yosef 2002a; Henry 1989). Evidence of feasting implies periodic surpluses and/or storage (Hayden 2004:292, 29; Odum 1988:1138). Between Structures 1 and 2 (adjacent to 'B' on Fig. 16.4) and attached to them is a small enclosed area, *c.*3m in diameter; while a similar, more fragmented structure lies between Structures 2 and 3. Other small enclosures, including pits, might be related to storage. If the several articulated gazelle hooves and other faunal remains reflect ritual feasting, food resources would have needed to be accumulated, processed and stored for such occasions. Edwards (1989:26) stated that while some small, raised stone circles set in an arc may have been postholes, the larger ones associated with reaping and milling equipment might also be interpreted as storage units.

Microliths are the predominant tool and imply a preoccupation with barbing of hunting equipment and that for gathering plants; and, therefore, an intensive broad-spectrum hunting and gathering economy. Large choppers, picks and bifaces and chisel-shaped tools made from chunks and cobbles, together with sophisticated ground stone milling equipment and bone tool industries, make up a conspicuous group in the assemblage. Such artefact density is generally regarded as a sign of subsistence intensification (Edwards 1991:137-144; 1996:117).

16.1.6 Distant Contact

Exotic materials indicate the presence of individuals with knowledge of and access to regional exchange networks, and the means to acquire them. Basalt was particularly valued and preferred to the soft local limestone for special-purpose equipment, the nearest possible source being on the western side of the Jordan Valley. There being no large pieces of raw material or any unworked fragments, ready-made items were traded in from elsewhere, particularly those significantly different in terms of size, design, elaboration or sophistication.

REDACTIONS

- Fig. 16.1** Wadi Hammeh 27: geographic location and location within the Tabaqat Fahl / Wadi al-Hammeh region ref: <https://www.antiquity.ac.uk/projgall/edwards347>
- Fig. 16.2** Wadi Hammeh 27: (a) foreground location and (b) topographic setting ref: http://booksandjournals.brillonline.com/content/books/b9789004236103_003; Edwards 1991
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Chapter 17 SOUTHWEST ASIA RESEARCH DEVELOPMENT FIELD PHASE 3 GÖBEKLI TEPE AND THE URFA REGION (TURKEY)

The Urfa Region of southeastern Anatolia is bounded on the north and west by the upper Middle Euphrates which flows across the foothills of the southeastern section of the Anatolian Plateau. The region's favourable resources and positioning on the intersection of major Syro-Mesopotamian-Anatolian east-west trade routes, resulted in a settlement pattern of contemporary occupation sites from the Late Palaeolithic through the Neolithic (Hauptmann 1999:66-69). Location of the region and sites discussed is provided at Figure 17.1.

17.1 GÖBEKLI TEPE

The site is located on the highest point of a flat, barren limestone plateau over 300m above the adjacent valley floor, and with commanding views (Fig. 17.2). To the north, it is connected to a range by a narrow promontory, but elsewhere it descends steeply into slopes and cliffs with springs at the base. It is a large tell, 15m in height and 300m in diameter (c.9ha). Stratigraphy reveals repeated superimposition of massive circular stone enclosures interpreted as sanctuaries, and attests to a long period of activity with structures fanning out in all directions. More than 200 in about 20 circles are currently known through geophysical surveys (Figs. 17.3, 17.4). Klaus Schmidt, site archaeologist, believed the constructors had come great distances as pilgrims to make sacrifices of animals depicted in sculptures and reliefs (Scham 2008; Curry 2008). He saw Göbekli Tepe as a sanctuary of profound significance in the transition from tribal to regional religion, a centre of a cult of the dead with the carved animals as protection. While no burials have been found to date, he considered they remained to be discovered in niches behind enclosure walls.

There are three levels of occupation, I-III, youngest to oldest. Ritual use of the site relates to the two earlier levels: Level III, 9664-9311 calBC (PPNA) (Dietrich 2011; Dietrich *et al.* 2013); and Level II, 8280-7970 calBC and 7560-7370 calBC (Middle PPNB) (Dietrich 2011; Schmidt 2009: 291). Level III is characterised by monumental architecture, circular semi-subterranean and crypt-like enclosures ranging from 10-30m in diameter, some with polished terrazzo flooring (Fig. 17.5). They are considered not to have been roofed, but this has been challenged (Banning 2011). Stone benches for

seating are found in the interior. Massive T-shaped stone pillars, each up to 6m in height and weighing 20 tons, were erected within the enclosures, evenly set around the perimeter within thick interior walls of unworked stone. Two taller ones stand facing each other in enclosure centres. The carvings on these indicate a high degree of skill and division of labour. Generally, they have an anthropomorphic identity and show male sexuality; distinctly feminine motifs are lacking from both animal and human images. Loincloths and belts appear on the lower half of some, a horizontal stone on top thought to symbolise a human head. A number of pillars have human hybrids carved on their lower half, suggesting they represented the bodies of stylised supernatural beings, such as gods, ancestors and bird-like humans. Many are decorated with abstract pictograms and animal reliefs. Imagery also includes humanoid and animal sculptures and stone reliefs (Figs 17.5-17.20). A Level III occupation, away from the tell but associated, is an incised platform, Complex E, with two sockets to hold pillars and a surrounding flat bench. Its floor has been hewn out of the bedrock and smoothed. Immediately to the northwest are two cistern-like pits believed to be part of the Complex, as well as a staircase with five steps. The limited series of C14 data suggests that the Level III enclosures were not exactly contemporaneous. Level II occupation consists of smaller rectangular structures often with just two or one smaller pillar, or none (Schmidt 2010; Dietrich *et al* 2013). This Level contains the site's only known female representation (Fig. 17.21).

The site was visited regularly and supported by surrounding communities for a range of purposes including complex ritual (Hodder 2006:108; Lewis-Williams and Pearce 2005:32; Schmidt 2010:240). While Schmidt and others believe that it was established as a mountain sanctuary and pilgrimage, Abraham (2013) and Dietrich (2011) are of the view that current interpretations must be considered tentative since less than 10% of the site has been excavated. Similarly, the rapid backfilling of enclosures on abandonment poses a problem for radiocarbon dating as the variously sourced fill materials could be considerably older than the structures.

17.2 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

17.2.1 Settlement

Schmidt (2010) considered that Göbekli Tepe was not used for habitation but for ritual. This has been challenged by Banning (2011) who, while acknowledging the many sculptures warrant consideration for their possible role in ideology or social strategies, questioned whether the evidence justified its interpretation as a cult centre. Foremost, he saw weaknesses in the distinction between sacred and profane spaces, commenting that

insufficient attention had been given to the fact that PPN cosmology infused everyday life including its residential buildings, activities, and spaces, with meaning and spirituality such as characterised Çatalhöyük.

Alternatively, Banning suggested that the buildings may be houses, albeit ones rich in symbolic content, serving as large communal houses with the various animals in relief on pillars emblems of clans or other social units. He added the availability of water, edible wild seeds, a wide range of food animals, and high densities of lithics were not noticeably different from what might be expected in a domestic deposit. Similarity of the large plank houses of the Northwest Coast of North America was noted with their impressive decorated front spaces, house posts, memorial posts and totem poles, involving considerable investment in time and resources, as well as those of the Indonesian Toraja with fronts decorated with cattle horns. He suggested that the structures may have been roofed, pointing out that pillars by their placement, variation in size, and top angulation, may have been roof supports. He added that Level II enclosures did not depart drastically from domestic structures at some contemporary Anatolian sites (e.g., Aşikli, Canhasan III and Nevali Çori). Banning further noted that while Level III structures differ in size and elaboration from known contemporary houses at sites 50-100km away, it was conceivable, particularly as so little is known about Neolithic domestic architecture in the Urfa region, that they represented a previously undocumented house type derived from the rounded pit houses of the earlier Neolithic, but on a grander scale accommodating co-residential units larger than nuclear families.

17.2.2 Ideological

shamanism With regard to the belief system, Schmidt (2006b:216-221) assumed shamanic practices, suggesting that the visual imagery on pillars, different and new to the region, represented human forms, perhaps ancestors. Indeed, they may commemorate those individuals who visualised ideology at a new level and chose this location to develop it. Animal and other images may indicate the perceived supernatural forces with which these people contended.

The pillar carvings ignore game on which society mainly subsisted, in favour of dangerous and menacing creatures such as felines; boars; snakes; spiders; scorpions; and birds, particularly vultures. Lewis-Williams and Pearce (2005:157, 179) considered it probable that the myths of these people featured protagonists, who mediated between the hunting-farming dichotomy within a tiered cosmology. They also thought that their cosmological exploits were probably linked symbolically to the animals on the stone

pillars, myth and cosmology. Depiction of vultures and headless humans points strongly to shamanistic influence.

The backfill includes human bones that were broken into small pieces, several displaying cut marks. While cannibalism cannot be excluded, it seems probable that these attest to the treatment of the human body after death, a custom known from other PPN sites. It also seems probable that this strengthens the hypothesis that there are primary burials somewhere at Göbekli Tepe or nearby which used these rituals (Schmidt 2010:243).

People must have had a complicated mythology and ideology, including the capacity for abstraction. It is clear that the pillar statues represented very powerful beings (Schmidt 2010:254). Gheorghiu's (2015) semiotic interpretation reads the iconography of Göbekli Tepe as a cosmogonic map which would have related the local community to the surrounding landscape and the cosmos. Entoptic and other ASC imagery on pillars indicates direct shamanistic influence.

17.2.3 Political

It is believed that a class of religious leaders had supervised building of the complex and controlled activities, and that it may have been the focus of an elite group extending its influence beyond village level. Construction heralded a new phase of social organisation with such a group providing the foundation for a different type of society that involved a higher level of social discrimination, particularly for themselves. Lewis-Williams and Pearce (2005:81-82) considered that this elite controlled transition to spirit realms by means of sacrifice and had the power to send into the other world; and, by effecting such transitions, to benefit the living and themselves. Aggregation would have increased opportunities for marriage exchange and alliance, and the creation of long-term debts and obligations. It would also have allowed access, distribution and accumulation of resources to be monitored, maintained and manipulated (Curry 2008:278-280; Hodder 2006:108; Lewis-Williams and Pearce 2005:39-40, 81-82, 167).

17.2.4 Social

Establishment of the site had a significant impact on communities in the region. There was clear emphasis on the collective, with public participation as people co-operated and pursued new approaches to food production involving intensive hunting/gathering and possible cereal cultivation, and social re-organisation.

Demographic aggregation and feasting is indicated by the amount of butchered animal bones. In this context, Dietrich and colleagues (2012:687-689) presented possible evidence for the brewing of beer at the site: equipment used in the steeping, mashing and fermentation

of cereals; and a large capacity, barrel-like limestone vessel. Such occasions not only increased options with regard to marriage and other forms of exchange and alliance, but also provided leaders with tighter control of social ties (Hodder 2006:58, 108, 235; Peters and Schmidt 2004:209-212; Schmidt 2006a:193-221, 2006b).

Significant human resources would have been absorbed in construction. Furthermore, overarching control, direction and management is implied in site planning, particularly if it was effected by hunter-gatherers (Schmidt 2006a:193-194, 218; Peters and Schmidt 2004:209-212). Schmidt (2010:254) speculated that specialisation on particular tasks must have been possible in order for members of the community to be able to erect such monuments and decorate them so elaborately.

17.2.5 Economic

subsistence ___ Investigations to 1999 recovered no evidence for agriculture. Among the botanical remains are only the wild species of cereal, while the backfill animal bone smashed for meat and marrow are gazelle, aurochs and Asian wild ass. At the time of Layer III construction the surrounding country is considered to have been forested and capable of sustaining this variety of wildlife, and Göbekli Tepe would have had access to large populations (Hauptmann 1999:80). Schmidt (2010) believed that mobile groups were compelled to co-operate with each other to protect early concentrations of wild cereal from wild herds of gazelles and donkeys, and utilise the harvest more intensively for sustenance. This would have led to early socialisation of various groups in the area (Curry 2008; Dietrich *et al.* 2012:690; Linsmeier 2006).

Banning (2011:636) considered very few PPNA or Early PPNB sites show morphological evidence for domestication of either plants or animals. There was, however, the high probability that people had begun to cultivate emmer, einkorn, barley and other plants; and to manage and possibly control breeding of some animal species. Their economy mixed hunting and gathering with newer, more controlled exploitation of resources. He saw no reason to assume that the people responsible for building Göbekli Tepe were villagers.

technology Göbekli Tepe was organised into separate areas for tool production, sculpture and sanctuaries of perhaps supra-regional significance. This demonstrated progress toward a central organisation in which the trade or barter of an elite class was restricted to sites with cult facilities (Hauptmann 1999:82).

The complex opens a new perspective on the Early Neolithic: specialization in particular tasks must have been possible in order for members of the community to be able to erect the monuments and decorate them so elaborately (Schmidt 2010:254).

17.2.6 Distant Contact

The Urfa Region was part of a larger, densely inhabited zone with settlements functioning on different economic bases. Within this, Göbekli Tepe demonstrated progress toward a central organisation in which the trade or barter of an elite class was restricted to sites with cult facilities. It enjoyed a favourable resource environment, range of raw materials, and positioning with regard to major trade routes (Hauptmann 1999:66, 68-69, 82). If, as interpreted, Göbekli Tepe was a cult pilgrimage centre serving communities of a wide region, there would have been the contact with those groups; and through them contact with people, goods, raw materials, ideas from a still wider zone.

17.3 GÖBEKLI TEPE IN REGIONAL (URFA) CONTEXT

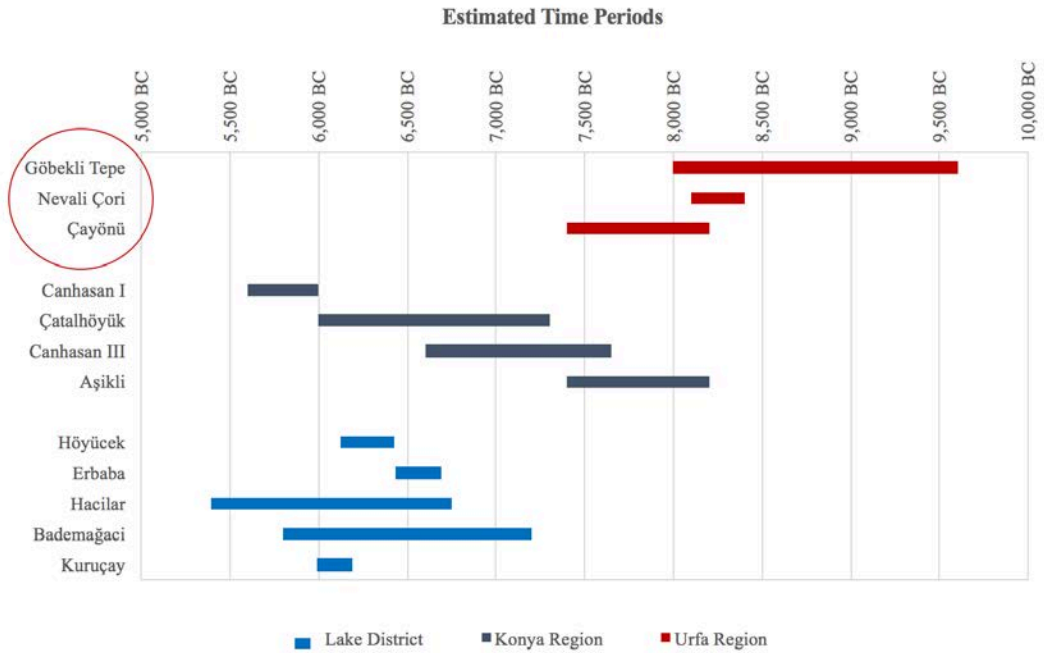
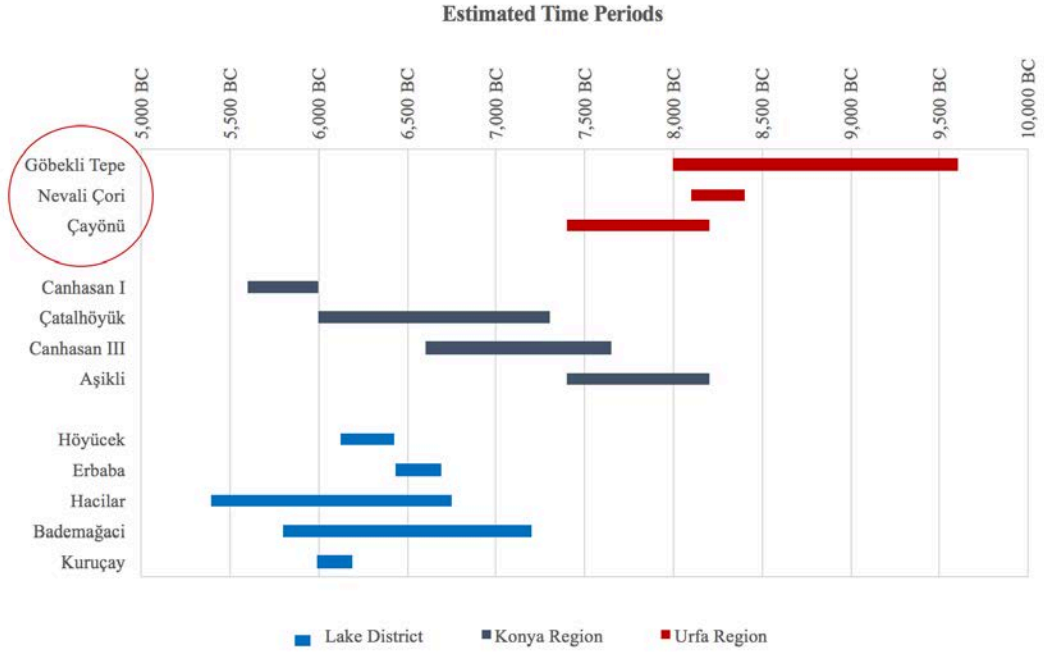
These developments are considered with those in two other sites, Nevali Çori and Çayönü, respectively 80km northwest and 250km northeast (Fig. 17.1, location; Table 17.1, relative chronology).

Nevali Çori is an Early Neolithic settlement located in the Taurus foothills on both banks of the Kantar stream. It has five architectural levels (I-V, oldest to youngest) with Level II dated 8400-8100 calBC. The basic plan of houses in Levels I-IV was that termed 'channel, type — a long freestanding flat-roofed rectangle constructed of bonded limestone blocks, with channelled foundations that may have served for drainage, aeration or cooling; and interior division into two or three parallel rooms (Fig. 17.22). A direct sequence of individual structures built in the same place as their predecessors was exhibited throughout all levels, maintaining the same NNW/SSE orientation. Most were lined up side-by-side with spaces between. Level V saw a change from the channel-type house to one with a foundation platform and eastern orientation (Hauptmann 1999).

From Level II onward, a nearly square monumental structure of 188sqm stood in the same place in the northwest of the site, having been re-built at least twice, its plan, construction and decoration underlining its importance and setting it apart from the rectangular houses of the settlement (Figs 17.22-17.24). Parallels are known from Çayönü and Göbekli Tepe. Termed Cult Building II (buried sculpture suggesting that there may have been a predecessor in Level I) its sunken interior of the latter is plastered and white-washed, with traces of black and red painting; and entrance was from the southwest,

Table 17.1 URFA REGION SITES: RELATIVE CHRONOLOGY

Göbekli Tepe c.9600-8000 calBC
Nevalı Çori c.8400-8100 calBC
Çayönü c.8200-7400 calBC



down two steps. Encircling the interior is a quarried slab bench set between 13 monolithic pillars with T-capitals. The floor is terrazzo, and two pillars are thought to have stood in the centre as with its successor, Cult Building III. The bench along the southeast wall was interrupted and set back forming a niche out of sight of the entrance (Hauptmann 1999:69-78).

Cult Building III was set directly inside the still-standing walls of its predecessor, shrinking its area to 155sqm. Its perimeter walls were again circled by stone slab benches with in-built pillars with T-capitals, two of which flanking the entrance steps. At the centre, two pillars, 3m in height with relief decoration, were placed so that the small niche in the northeast wall opposite was visible from the entrance. Displayed in the low relief on the wider pillar faces were two bent arms which joined hands under a ridge in the narrow side (Hauptmann 1999:74-75). The earlier structure's terrazzo floor was repaved. There were numerous non-stylised life-sized human stone heads, statues and smaller sculptures, including a larger bare human head with a snake-like tuft (Fig. 17.25), and a large bird (Fig. 17.26). Some pillars bore reliefs of human hands (Hauptmann 1999:74-75). One displayed a large, presumably female head in the clutches of a vulture talon, a motif known also known in sculpture from Göbekli Tepe. Limestone fragments recovered formed the upper part of a pillar decorated rather like a totem pole with a raptor bird on human heads (Fig. 17.27). A plate and bowl were engraved with theriomorphic figures (Figs 17.28, 17.29).

On the slope above Cult Building III lay the remains of a U-shaped building erected directly on bedrock. Its massive construction and eminent position indicates that it represented another sacred structure. Hauptmann (1999:75) considered these Cult Buildings to have been constructed for ritual purposes. He saw them as the cultic, hierarchic and economic pivot of the settlement. He further commented that even if the anthropomorphic pillars were seen as supporting elements of flat roofing, there remained a number of other sculptures to vouch for the special significance of the buildings; and furthermore, with one exception, all sculptures were found in secondary interments in the later Buildings. Unique figurines, including human heads with both naturalistic and strongly stylised faces, are considered to relate to the full-scale sculptures of the buildings, and have been interpreted as votive offerings (Hauptmann 1999:75-77). Collins (1989) considered the sculpted humanoid figures and carvings to depict shamanic individuals adorned in coats and head-dresses of vulture feathers.

Burials are recorded from most levels,-in houses not the special buildings. They tended to be located in foundations or below flooring and laid in foetal position. In one case, a

large round stone had been placed in position to represent the skull. In another, skulls and long bones were placed in a pit. Directly under one skull, in the region of the palate, was a long silex blade (Hauptmann 1999:71).

Artefacts recovered include fragments of polished marble rings and many different types of beads, some of the latter having multiple piercings. A winged bead was made of reduced copper ore (Hauptmann 1999:77).

Çayönü, a Neolithic settlement measuring at least 160m x 350m, is located at the foot of the Taurus Mountains near the Boğazçay River. It is dated to 8200-7400 calBC. Three phases of occupation have been defined by changes in artefactual assemblages and animal and plant exploitation. Phase I is the main prehistoric phase, with a sequence of five sub-phases in building type — Round; Grill Channelled; Cobbled Paved; Cell; and Large Room — incorporating numerous architectural levels determined by alteration in the basic building plan. While these types differ, artefactual groups indicate continuity, not breaks in occupation (Özdoğan and Özdoğan 1989:66; A. Özdoğan 1999:37-38, 72).

In the early Round Building sub-phase, one building is different in having three distinct rebuilding episodes, its floor being sunk into the ground and walls faced with stones. The following sub-phases saw at least four buildings that can be interpreted as being of special function. All differ in plan, techniques of construction, and artefacts from the domestic, but were contemporary with them during the respective sub-phases. They were also isolated in the western sector of the settlement. The Bench Building, cut into the southern slope of the tell, consisted of a single room with massive stone benches along its walls. The Flagstone Building nearby had massive walling, a floor of large stone slabs, and standing stones. The Skull Building (Figs 17.30, 17.31), with at least five major rebuilding episodes, functioned as a 'House of the Dead'. Its floor was also of large stone slabs, into which were set standing stones. Its earlier versions were used to store skulls, and skeletons or parts of approximately 400 individuals. While the latest yielded some 70 skulls. Special treatment of the dead, indicated by decorated skulls, and intramural burial are characteristic. Practices suggest the individuals concerned held particular status within their society. The Terrazzo Building, named because of its polished floor, had been constructed over two earlier special structures.

The Plaza was a large open area considered to have served some special purpose. Özdoğan (1995:87) has suggested it was an open-air equivalent of the various site buildings but on a grander scale. Two rows of standing stones varying in height from 1-2m, were set into the floor. At least one had traces of red ochre; another showed indications of modelling. In buildings on the northern side of the Plaza aligned behind

raised platforms, a number of objects considered unusual by the excavators were recovered. Among these were a clay house model and various groundstone objects, including beads and precious stone pendants. These buildings were of the same uniform plan as those domestic, but larger and with more massive walls (Özdoğan and Özdoğan 1989:68, 70-74; Özdoğan 1999:47-53).

Significant among the other artefacts were copper objects: tools, other equipment, beads and rings. The site showed the development of metallurgy from simple cold hammering to incipient pyrotechnology. Bone artefacts included notched 'tally sticks', reflecting artefacts possibly serving a similar purpose at Hayonim and Hallan Çemi. There were also basalt celts, spheres and grooved stones, some decorated. There appears to have been specialisation in ornament production for personal decoration. Artefacts recovered include fragments of polished marble rings and many different types of beads, some of the latter having multiple piercings, as at Nevalı Çori. Polished beads were produced in a wide range of shape using a variety of raw material: shell, bone, copper, and stones. Clay was modelled into many objects: female and animal figurines; tokens of various shape and size; appliqué, possibly as a decorative element. Stone was used to produce mobile containers and two groups of stone bowls: coarse; and those light, well-made, polished and decorated, displaying high quality workmanship, mainly found in the eastern sector (Özdoğan 1999:54-59). Possible social restriction with regard to their use and for particular practices associated with that zone is indicated.

In the Round Building sub-phase, burials were either in courtyard pits or below floors, generally lying N-S on their right side and tightly flexed, and some surrounded by a circle of stones. There were no grave goods except for occasional small pieces of red ochre. In the Grill Building sub-phase, there were single and multiple primary burials in courtyards, under the central room or in between walls, tightly flexed on their right side, and face downwards. These, too, were accompanied by pieces of red ochre, but also with groundstone objects or personal ornaments such as beads. In the former they lay NE-SW; in the latter, E-W. During this time the circular stone features in courtyards contained secondary burials of isolated skeletal elements, suggesting that some skulls may have been kept intramurally. In one building, a dog and a boar skull had been placed close to a male burial. Numerous burial practices were detected during the Cobble-Paved Building sub-phase. The first phase of the Skull Building displayed a different type of mortuary practice, burials in pits. One contained mostly secondary burials without skulls but accompanied by goods such as a boar tusk and stone beads or aurochs skull and horns. Aside from this building, pits of human bones or isolated

secondary burials, mainly infants or children, occurred in open areas (Özdoğan 1999:44-51).

During the Cell Building sub-phase, buildings related to cult practices lost their significance and were not reused. This continued into the Large Room sub-phase, which saw single large rooms with sunken floors taking their place. Walls in these structures were lined with deep bench-like features thought to have served as thresholds because none of the buildings had entrances. They yielded many large animal bones accompanied by various groundstone objects. The tradition of special buildings was maintained, if less significantly, and there was a sequence of consecutive structures; their location within the settlement, however, changed from isolation to integration. Considering the large extent of this sub-phase area excavated, absence of human remains both inside and outside the Large Room Buildings indicates that either extramural cemeteries had been established or there may have been another Skull Building not yet discovered (Özdoğan 1999:53-54).

17.4 KEY REGIONAL OBSERVATIONS

settlement purpose While Göbekli Tepe solely as cultic centre has been questioned, that was its main purpose. A structure similar to those at Göbekli Tepe at Nevali Çori is associated with domestic structures. On this basis it is reasonable to expect the same cultic-domestic mix of structures at Göbekli Tepe. Çayonu combined both domestic and non-domestic activity.

structures All three sites evidence continued rebuilding of structures in the same place. Göbekli Tepe repeated the same general enclosure plan and extended construction of these during its levels. Developments at Nevali Çori and Çayonu showed initial similarity in their channel and later platform units and alignments, but there was change in type during the occupational sequence, particularly at Çayonu. These suggest possible ideological development, such as regional networking, intentionally involving larger numbers of people, possibly from outside the settlement, and associated activities such as feasting and trade.

special buildings All three sites have buildings differing significantly from those considered domestic by their size, construction, positioning and content, indicating ideological behaviour and social control. Termed cult buildings, they are generally isolated on the settlement periphery and/or simply by their nature, and of size suggesting intentional bringing together communities or specific groups within them, and others external. Their nature implies the presence of particular individuals responsible for building construction, and for management of the cultic practices carried out within

them. Those at Göbekli Tepe and Nevali Çori are similar in terms of plan and construction (e.g., perimeter walls circled by stone slab benches with built-in pillars with T-capitals featuring relief decoration) suggesting the same/similar ideology and its continuation. At Çayönü, the cult building was different and took various forms during the occupational sequence, in turn suggesting a sequence of significant ideological changes. Furthermore, Çayönü, continuing after abandonment of both Nevali Çori and Göbekli Tepe, exhibits greater integration of its cultic buildings within the settlement. Reflected in this is strategising to address need for community consolidation and engendering a co-operative ethos. This trend does not appear in the other two sites.

burials While no burials have been found to date at Göbekli Tepe, pieces of human bone in backfill displaying cut marks suggests that mortuary practice was for disposal in this way. At Nevali Çori and Çayonu the number of burials is less than would be expected and a reflection of choice within households and settlements as a whole. Some individuals were selected for interment in the special buildings, implying a form of social control and related rituals. Both indicate special concern with skulls. At Nevali Çori, burials were in houses, not special buildings. Çayönü, continuing after abandonment of both Nevali Çori and Göbekli Tepe, exhibits change in the positioning of its cultic buildings from being isolated within the settlement to integration. At the same time, burials within the settlement disappear. This trend is not evident all three sites.

shamanism Between them, the three settlements provide a range of evidence for shamanistic behaviour:

- . reduced copper ore artefacts point to some individuals possessing ‘magical’ metallurgical skills;
- . symbolism
 - pillars representing human forms, perhaps mythological individuals and ancestors,
 - images possibly indicating perceived powerful supernatural forces, and
 - female and animal figurines;
- . a focus on dangerous and menacing creatures such as felines, snakes, spiders and scorpions — but particularly aurochs, boars and vultures;
- . ritual behaviour as indicated by special buildings, shrines and temples, and by the various ways the dead were treated and used; and
- . large-scale food production and feasting.

REDACTIONS

- Figure 17.1** Location of Urfu District, Anatolia, and sites discussed
- Figure 17.2** Göbekli Tepe: (a) positioning on plateau remnant summit; (b) the site
ref: Schmidt 2010:240
- Figure 17.3** Göbekli Tepe: site reconstruction
ref: <http://miscellaneous-pics.blogspot.com.au/2011/02/gobekli-tepe.html>
- Figure 17.4** Göbekli Tepe: pattern map of Layer II (rectangular units) and Layer III (circular units) ref: Schmidt 2010:240
- Figure 17.5** Göbekli Tepe: Enclosure B/Level III ref: Hodder 2006:134
- Figure 17.6** Göbekli Tepe: humanoid figure on pillar (a) side view; (b) section of front showing belt ref: National Geographic June 2100:34; Schmidt 2010:244
- Figure 17.7** Göbekli Tepe: enclosure pillar
ref: <http://thedailyjournalist.com/the-historian/gobekli-tepe-image>
- Figure 17.8** Göbekli Tepe: enclosure pillar
ref: <http://thedailyjournalist.com/the-historian/gobekli-tepe-images>
- Figure 17.9** Göbekli Tepe: enclosure pillars
ref: <https://austincoppock.com/astrology-59-515-testimony-stone/>
- Figure 17.10** Göbekli Tepe: enclosure pillar ref: <https://www.youtube.com/watch?v=QmPpsIKeru8>
- Figure 17.11** Lions Building at Göbekli Tepe: side view
ref: Tobolczk 2016:1401
- Figure 17.12** Lions Building at Göbekli Tepe: top view and Lion carving
ref: Tobolczk 2016:1401
- Figure 17.13** Göbekli Tepe: humanoid figure/male sexuality
ref: Hodder 2006:200
- Figure 17.14** Göbekli Tepe: humanoid figure
ref: Hodder 2006:24
- Figure 17.15** Göbekli Tepe: humanoid figure
ref: <https://it.pinterest.com/pin/173318285639160455/>
- Figure 17.16** Göbekli Tepe: humanoid figure
ref <https://www.pinterest.co.uk/gilliantappin/gobekli-tepe/>
- Figure 17.17** Göbekli Tepe: humanoid 'totem pole'
ref: <https://it.pinterest.com/pin/464222674060986512>
- Figure 17.18** Göbekli Tepe: humanoid figure
ref: Hauptmann 1999
- Figure 17.19** Göbekli Tepe: stone sculpture
ref: <https://museum-of-artifacts.blogspot.com.au/2017/01/gobekli-tepe-where-religion-was-born.html>
- Figure 17.20** Göbekli Tepe: stone sculpture ref: <https://sphotos-b-dfw.xx.fbcdn.net/hphotos-ak-prn1>
- Figure 17.21** Göbekli Tepe: female sexuality/*Venus accueillante* figure ref: Schmidt 2010:246
- Figure 17.22** Nevalı Çori: (a-d) Level I-IV settlement plans ref: Hauptman 1999

- Figure 17.23** Nevali Çori: axiometric reconstruction of Cult Building II and III ref: Hauptman 1999
- Figure 17.24** Nevali Çori: Cult Buildings: (a) Layer II; (b) Layer III ref: Hauptman 1999
- Figure 17.25** Nevali Çori: limestone sculpture of head with snake ref Hauptmann 1999
- Figure 17.26** Nevali Çori: limestone sculpture of large bird ref Hauptmann 1999
- Figure 17.27** Nevali Çori: limestone composite 'totem pole' figure ref Hauptmann 1999
- Figure 17.28** Nevali Çori: limestone bowl with theriomorphic figures in relief ref Hauptmann 1999
- Figure 17.29** Nevali Çori: limestone plate engraved with theriomorphic figures ref Hauptmann 1999
- Figure 17.30** Çayonu: Skull Building round plan of first structure (BM1) and rectangular second structure (BM2) ref: Özdoğan 1999
- Figure 17.31** Çayonu: Skull Building burial pit in BM1 ref: Özdoğan 1999

Chapter 18 SOUTHWEST ASIA RESEARCH DEVELOPMENT FIELD PHASE 3 ÇATALHÖYÜK AND THE KONYA DISTRICT (TURKEY)

The Konya Plain, part of the Central Anatolian Plateau, is an extensive basin at *c.*1000m altitude surrounded by mountains. Figure 18.1 shows the location of this region and the sites discussed. Alluvial fans have been formed by streams flowing in from the south and southwest. Çatalhöyük is a very large Neolithic and Chalcolithic settlement located in the centre of the large Çarşamba Fan fed by the Çarşamba River (Fig 18.2). At the time of the site's occupation, the region was dominated by a semiarid regime with moist winters and summer drought (Hodder 2006:75-82).

Çatalhöyük overlooks the Plain (Fig. 18.3) and is approximately 140km from Mount Hasan (Hasan Dağ), a volcano active during the Neolithic and which is visible from the site (Hodder 2006:163; Düring 2013:24). The settlement, extending over 13.5ha, was inhabited for about 1,400 years. There are 18 occupation levels (I-XVIII, recent to earliest), of which VI-IX are Neolithic. Revised chronology for the stratigraphical sequence is 7300-6000 calBC, subdivided as follows: pre-Level XII to Level X, 7300-6800 calBC; Levels VIII-VII, 6700-6500 calBC; Level VI, *c.*6500-6400 calBC; and Levels V-II, 6400-6000 calBC (Düring 2006:146). As less than 10% of the site has been excavated, Abraham (2013) considered current interpretations tentative.

Two adjacent sections of the site were occupied during different periods: an eastern mound, dating to the Neolithic (*c.*9400-8000BP); and a smaller western mound of the Chalcolithic (*c.*8000-7600BP) (Fig. 18.4). A channel of the Çarşamba River once flowed between the two. Regional surveys revealed that while there are earlier sites, none are clearly contemporary with its main occupation or of comparable size. It was quite isolated locally and had absorbed population from the surrounding territory (Düring 2013:36). When first occupied the settlement was located near springs adjacent to the Çarşamba channel, on a small raised area within wetlands in the fan centre (Fig. 18.5). Seasonal flooding provided alluvium and backswamp clays in close proximity. Such nutrient-rich deposits would have been annually regenerated, supporting a wide range of foraged plants. The wetlands were also the habitat of a wide range of animals, including aurochs (Abraham 2013).

Three cultural horizons are identified. Deep sounding levels pre-XII can be assigned to the final Pre-Pottery Neolithic (PPN) of Central Anatolia. Related deposits excavated are outside the settlement and no building remains have been found. While there was evidence of lime burning, floors of this material are absent from the later building levels, suggesting that its architecture differed from those of the Pottery Neolithic (PN). Levels X-VI are assigned to the Early PN which differ in many respects from Late PN Levels V-I during which changes occurred in lithic industries, figurine typology and gender, and ceramic traditions. There were also changes in wall painting motifs, moulded features and installations; configuration of settlement space; value attached to building continuity; and the way in which social collectivities were constituted (Düring 2006:146-147).

Neolithic occupation of the site relates to Levels IX-VI. As houses were abandoned, they were infilled and new ones built on top with nearly identical plans. Excavation has revealed a site densely packed with mud brick and lime plaster housing extending into the unexcavated area (Figs 18.6, 18.7). It was a very large village, but did not have any administrative buildings and elite quarters; or specialised spaces, except those on the mound edge relating to lime burning and animal pens. (Düring 2013:23, 35-36).

Architecture was segmented into major blocks termed 'neighbourhoods' — residential zones in which households were embedded, with considerable face-to-face interaction and identified by their physical and/or social characteristics (Smith 2010:139). Düring (2013:33) has noted that ethnographic studies elsewhere in the American Southwest and Mesoamerica suggest it is an advantage to form such groups for optimal social economic co-operation. He considered those at Çatalhöyük to be dynamic and performing many rituals, including burial. For the exposed area of Level VIB, the neighbourhood included at least 30 households with a total of 150-250 people; any larger in face-to face contact would have been stressful. Neighbourhoods would have been linked in marriage, as it is argued that 500 people constitute the minimum necessary for successful biological reproduction (Birdsell 1973; Düring 2013:35-36; Wobst 1974). Düring (2013:34) saw the streetlessness and spatial organisation of neighbourhoods being designed to deter non-residents from entering, making the areas communal rather than public and relatively autonomous. People would have defined themselves in corporate terms, with the behaviour of other residents being closely monitored. Neighbourhoods remained quite small to maintain social control (Düring 2013:33-35; Hodder 2006:109-140). Method of entry to the settlement is not clear, but the Level VI plan (Fig. 18.7) suggests the walls of the outermost row of buildings at the foot of the mound presented an unbroken line to someone approaching from the Plain. Hodder (2006:95) stated that no public spaces have been found, although site maps show open areas termed 'courtyards'.

The house was of central importance, incorporating in one building all the functions expected in the different parts of a town (residential, industrial, religious and burial), but separated internally. It was the focus of social life, integrating symbolic and everyday aspects including cultic practices which made it both a ritual and a production centre (Düring 2013:24; Hodder 2006:91-140, 2009:19-20). Houses were agglutinated leaving only the rooftops as streets. Each was approximately rectangular in plan depending on available space, with loose adherence of terraced buildings in rows from north-south and east-west. Interior walls, floors and roof-supporting posts were plastered. There were no windows, and access was usually down a ladder or stairs set in the south wall of the main room. Single-storeyed, flat-roofed buildings were the norm, some with lightweight shelters. The rooftop was also used for additional storage; manufacturing, facilitated by the light available; and cooking, probably in summer. Roofs, therefore, would have been like courtyards, providing access to the building but with various goods and features to enable people to carry out a range of activities during the hottest part of the year. Furthermore, as people moved across these roofs to and from their houses, it seems that interaction within neighbourhoods must have been intense at times. People probably formed a social structure grounded in face-to-face interaction with others from various social positions. Refuse areas or alleyways served mainly to differentiate neighbourhoods (Abraham 2013:23; Düring 2013:30-33).

Initial construction was carefully planned and ritually sanctioned, as seen in Building 1/Level VIB with three infant interments at the threshold to the main room, and in Building 40/Level VIII where the threshold between two rooms had been painted with red ochre. Despite agglutination, houses generally had their own walls. They were particularly standardised with a restricted size range of c.10-40sqm. The main room was used for living, craft activities, cooking, eating and sleeping (Fig. 18.8). It contained a hearth and ovens, and platforms. Several had small ancillary rooms used for food preparation and storage accessed through low openings. Variation in house size is mirrored by degrees of decoration (Düring 2013:29; Hodder 2006:109-140).

Lewis-Williams (2004:35) argued that platform construction within the 'lower level' realm of houses was a further expression of the cosmological verticality noted earlier, as well as the differentiation of males and females in mortuary practice. Moving between these sub-levels would have repeatedly reinforced social distinctions and place in that verticality, a point further emphasised by the placement of bucrania on step edges and roof columns.

Some houses had many internal spaces and special rooms with wall paintings; mouldings, installations and other visual imagery; basins, pillars, posts, and benches (Figs 18.9-18.22); and large number of subfloor and platform burials (Figs 18.23-18.26). These features all related to ritual activity, their location conforming to community practice with respect to knowledge earlier houses, which was ideologically important. Mellaart (1967:77-78) argued that many houses, because of these features, should be interpreted as shrines, as they were devoted to cultic practices and over a long period (Fig. 18.27). Building 1, for example, was elaborately decorated with bucrania, paintings, posts, number of platforms, and mouldings; while Building 89, c.51sqm in area, had an estimated sequence of over 50 floors and a life span of 55-60 years. Categorisation of particular buildings in this way was considered incorrect by Hodder and Pels (Hodder 2010a:16-17; Hodder and Pels 2010:163) as all houses provide evidence of burial, symbolism and ritual, and domestic activity — they were religious, social and practical, with some standing out within neighbourhoods as being larger and more elaborate, important and dominant. Current thinking views the latter as similar to those of house societies, symbols of group identity encompassing many households and which acquired greater ritual significance over time Hodder and Pels (2010: 163-186). These new and different high-status houses have been redefined by Hodder and Pels as ‘history houses’, accumulating more transcendent knowledge and symbolic capital than others; and may have become preferential sites for burial, leading to their dominance in relation to access to ancestors both physically and spiritually. Rebuilt at a slower rate than others, they were guardians of memory archives and responsible for establishment of long-term ancestry and routinisation of ritualistic practice.

In these houses, myths and symbolism related to ancestors were appropriated and transformed into history. Concurrently, the rate of change in symbols and meanings increased as social groups “competed” in their interpretation of it (Hodder 2006:164). The buildings represent a change in burial practice from one where interments took place within all houses and people apparently sleeping on platforms containing dead family members (Hodder 2006:24). Exteriors provide little indication of internal complexity; however, obsidian cores and finely worked pieces were concentrated in them, suggesting some preferential access to this raw material, and individuals possessing skill in working it (Abraham 2013; Bloch 2010; Düring 2013:24, 30-31; Forte 2015:8; Hodder 2005:137; Hodder and Pels 2010:163-164).

The main evidence for the ritual differentiation of history houses are numerous sub-floor burials, which are relatively abundant (Düring 2013:31). Building 1 contained 64,

whereas others had only a limited number, and about 80% none. The fact that deaths at Çatalhöyük would have exceeded known house burials, and that probably more people were buried in a neighbourhood history house than had occupied it during its life (Hodder 2006:24; 2010:2, 24) suggests that people from other houses were selected for special treatment in death. Burial practices were performed in history houses and considered appropriate for ceremonies attended by several households. Interment within these was only minimally related to biological affinity and may have been organised by 'kin' not defined in terms of genetic relationships, but rather a more fluid definition of 'family' (Düring 2013:31-32; Piloud and Larsen 2011:527-528).

In the Early Neolithic (EN), social patterning was related to neighbourhood communities in terms of co-residence and economic pooling. The site was characterised by orderliness, including the careful regulation of activities and discard directed by taboos and long-term repetition. Organisation was based on collective and long-term memories, centred on material engagement with the house. A range of signifiers, such as wall paintings and reliefs or sub-floor and platform burials, provide markers of supra-individual identities. Dissociated from their original context and deprived of the referential significance, these were given a different meaning in the Late Neolithic (LN). The significance of the house diminished during this period, its consecutive elements becoming dissociated from its original context. Houses were smaller, composed of a series of cell-like spaces surrounding a larger 'living room' lacking symbolic decoration monumental installations. Intramural burials were replaced by dedicated burial chambers with elaborate decoration constructed above the place where bodies had been interred; and the traditional spatial arrangements of the house with northern ceremonial and southern domestic zones that appear to have been strictly respected in earlier periods were abandoned. The significance of spatial repetition as a social practice was still apparent with fire installations being constructed in the same spot between a hearth and the central oven. The wall images transformed into decorative motifs on pottery and other portable objects, while bodies were also interred in extramural cemeteries (Hodder 2006:135; Marciniak *et al.* 2015:173-174).

Houses in use for many decades abutted those used for a much shorter time. This required reformulation of social, economic and ceremonial linkages between people living in buildings of different temporalities. It further required re-definition of the social fabric of life at the settlement, in particular the ways in which the inhabitants of an individual house were integrated into a broader community, such as those of neighbourhoods or extended households. As the different materialities and temporalities of individual houses manifested the character of the task-focused groups who lived there,

they also reflected the nature of rapidly changing nuclear households in terms of the regimes of acquisition, production, consumption and reproduction. The period also marked a change in regional occupation with the appearance of many smaller sites in the surrounding area (Hodder 2006:135; Marciniak *et al.* 2015:173-174).

18.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

18.1.1 Settlement

Settlement permanence is evident throughout the occupation levels, the agglutinated site pattern being maintained with durable construction, and repeated building on the same location. Banning (2003:6) associated the well-constructed houses with fully sedentary settlement. The Carşamba River ensured a reliable water supply while associated marshes gave access to a wide range of resources, including fish, waterbirds and terrestrial animals. Pockets of alluvium and backswamp clays above flood level were suitable for agriculture (Hodder (2006:77-79).

Baird (2005:67) has argued that initially Çatalhöyük represented the clustering of a group of previously dispersed small communities; and as it grew it became largely endogamous, a strategy to enhance resource control. Its population of 5,000-8,000 can be contrasted with small Neolithic sites in the wider region such as contemporary Erbaşa c.100km to the southwest with an estimated population of 190–285 (Düring 2013: 23, 36). Those communities would not have exceeded face-to-face limits whereby everybody knew each other and were similar in scale to a Çatalhöyük neighbourhood. This suggests that each of the latter was like these village communities, and that the site overall represented the concentration/implosion of a regional settlement system within a single unit. During its heyday it may have incorporated between 27 and 53 neighbourhoods (Düring 2013:36).

Formal planning is apparent in the standardisation of house construction, internal spatial use, and refuse management. Further conformity is evident in the house-floor caching of obsidian, and specific styles of its manufacture (Hodder 2006:104, 246).

18.1.2 Ideological

social control/co-operation/organisation Hodder (2006:74-75) questioned what had attracted people to create such a dense, overcrowded community in streetless conditions at Çatalhöyük; and why they were using the landscape so extensively, both symbolically and as a resource. With subsistence not being an issue, the main reason appears to have been ideological, a view to which Hodder (2010a:18-19) later subscribed. Ideology was

part of everyday life; it was domesticated. Houses were actively about imagining, remembering and interacting with previous ones in the same location (Hodder 2010a:17, 22-23, 274).

The myths of Anatolia and the Middle East were reset at Çatalhöyük, appropriated by individual history house-based groups. In this way, as these progressed toward becoming corporate bodies, they reproduced themselves through transmission of names, goods and rights, the myths and related symbolism were attached to house ancestors as well as family and clan histories. Construction of continuous memory would have had the effect of holding a house-based group together while allowing social differentiation. This suggests variation in power within the community related to ability to construct histories (Hodder 2006:164-167).

house construction This was carefully planned to a set design and ritually sanctioned to cater for ritual practice. Much centred on remodelling, repainting, and retrieval from earlier occupations, and the deposition of clay and plaster reliefs and sculpture. Thresholds were emphasised by red ochre, and both human neonates and animal parts placed as foundation deposits. Multiple replastering of walls and platforms associated with burial zones indicate ritual practice. Construction, abandonment, minor rebuilding and even the simplest action involved ritual, all activity having to be carefully managed and sanctioned (Hodder 2006:80, 109, 117-119, 127-129).

ancestor worship As mentioned, the remains of earlier occupants have been found in house sub-floor pits, particularly beneath hearths, in main room platforms and under beds. A number of graves had been disturbed and skulls removed, some being plastered and painted with ochre to recreate faces. Disarticulated bones suggest exposure in the open air before interment and/or secondary burial. Mortuary rituals, therefore, focused on honouring ancestor burial and death imagery. This is evidenced in retrieval of human skulls, their re-use and handing down through the generations in the context of ancestor linkage (Fig. 18.28). Affiliation through inheritance of such objects would have been effective in creating social units and linking neighbourhood households, but also establishing social distinctions between them. Such burials meant that ancestors were ever-present, readily identifiable, and intruded into daily life, this accentuated by visual imagery and installations. It was important to display affiliation and memory, hence the need for skulls, and the retention of objects associated with ancestors (Hodder 2006:25, 55, 58, 147, 179).

In-house burial made it possible to associate particular memories with specific people. Different categories of people were placed under specific platforms in houses, and the

distribution of art and symbolism respected those spatial divisions (Hayden 2004:265-266, Hodder 2006:17, 61,137, 249). Special treatment is evident with the arrangement of the headless body in Building 6, unusually laid out with a cloth and a plank over the torso. Items of personal identity or status recovered from graves include miniature green stone axes, polished maceheads, stamp seals, and obsidian items (blade bundles, daggers, knives, projectile points and mirrors (Figs 18.29, 18.30). Two elaborate flint daggers (Fig. 18.31) have carved bone handles, one a boar's head, the other a snake (Hodder 2006:50-52, 246). These are thought to have played a part in ritual and ceremonial confrontation of wild animals; and in the processing of human flesh, such as with skull removal (Hodder and Meskell 2011:249).

shamanistic behaviour Noting the prominence of the 'wild and the dangerous' in visual imagery and underlying ideological concerns, Hodder (2006:29-31) recalled Bataille's (1955; 1962) argument linking violence, sex and death. Bataille thought that each involved movement away from the real world of everyday experience, assisting humans in coping with the tensions of social life by creating a sense of timeless unity that could be ritually used to create social bonds and commitment. He also noted the Bloch (1992) view that ritual often involved inversion, resolving matters in some 'other world'. This was concerned particularly with initiation, the way in which symbolic 'killing' of initiates is followed by progression to a new stage of life. Such violence is considered a necessary part of the movement into another world, transcending the natural processes of birth, growth, reproduction, ageing and death. The vitality gained on return from this state is often obtained from outside beings, usually animals. Hodder considered the Bataille and Bloch arguments to fit "remarkably well" with Çatalhöyük art demonstrating definite shamanic overtones such as the killing and disarticulation of shamans during trance journeys, as well as signifying intensification of ongoing tension in worldview.

Given the importance of aurochs in the ideology of Çatalhöyük and its region, with bulls used for feasting and their skulls and horns central to symbolic house installations, Lewis-Williams (2004:51) noted that, while the location would have been attractive in terms of meat supply, supernatural power and status would have been perceived manifest in the wild herds. He pointed to the lack of symbolic use of domesticated sheep and goats in paintings, reliefs and, to some extent, feasting. The proximity of an active volcano, Hasan Dağ, to the settlement would also have been of ideological significance, as indicated by the wall mural (Fig. 18.20).

While an object accrued value through its special or exotic qualities, it could also be obtained from sub-floor burial which gave it house-based associations and 'other world'

meanings. Once retrieved, it had liminality from emergence which may have added authority to those who had hidden and revealed it. Obsidian was treated in this way; and its acquisition, circulation and knapping involved a network of material, social, symbolic and aesthetic relationships (Hodder 2006:62, 170, 175).

Many artefacts from Çatalhöyük can be considered to involve ‘technologies of enchantment’ and ‘material entrapment’ with regard to things attracting the attention of people (Gell 1998). Attraction might have been related to an object’s brightness and lustre; its ‘difference’, such as with complex geometric patterns; visual effects of refraction and reflection; colour; composition; source; shape; special functional qualities; and representation (all with shamanistic association). Gell regarded this as central to value in exchange and linked it to status and power.

Entoptic decoration continues throughout occupation in murals and on reliefs and moulded figures (Fig. 18.32), underlining its importance and suggesting strong influence of shamanism. The chronology shows a sequence of patterning with geometric decoration predominant in Early Neolithic (Levels XII-VII) and in the transition period (Levels VIA and VIB); and figurative emerging in the Late Neolithic (Levels V-I), followed by return to geometric (Forte 2015:6; Marciniak *et al.* 2015). In the later period, only houses have figurative art, others just geometrical decoration. Such diversity might suggest different narratives: mythic-historical for the figurative paintings; and magical-shamanistic for the three-dimensional features. These visual and multi-sensorial patterns are seen to stimulate the embodied mind to reconnect the affordances. Repetitiveness of these patterns across generations and in different buildings indicates the need of the community to elaborate cultural and social transmission.

There are questions, however, of why and how the figurative emerged, and why it was abandoned. The appearance of the new art form implies that the people were in a situation requiring additional ritualistic support. It is thought that while figurative art could have been introduced as a strategy for cementing corporate or neighbourhood cohesion, it probably emerged in response to competition in heterarchic context. Shamanism would have been integral to settlement establishment during the Early Neolithic, this reflected in the geometric art. Its continuation, even with necessary recourse to additional ritual behaviour associated with figurative representation, confirms the ongoing importance of shamanism; abandonment suggests that the situation for which it had been adopted probably required a more effective strategy. The return to reliance on entoptic symbolism implies employment of shamanism at a more intense level or the introduction of a new ideological dimension.

Russell and McGowan (2003) argued that the cut and wear marks on a crane's wing bones can be interpreted as its use together with feathers as part of a costume. Hodder and Meskell (2010) commented that birds may have been involved in the travels of the dead, or at least in the ascent of skulls from their bodies. While the latter is closely tied to vultures, waterbirds also seem associated (Wasson 2010:289). They are shown in the visual imagery and, as noted, for a number of reasons have given rise to a variety of myths and legends reflected in shamanistic associations.

The larger history houses had rooms with ornate murals and plaster reliefs on both interior and external walls emphasising animals, especially cattle and large felines. Symbolism was concentrated in these houses as myths related to ancestors and family and clan histories. Male sexuality played a central role in these depictions, with both men and animals shown with erect phalli. There were also hunting scenes with aurochs and stags, and vultures swooping down on headless figures. Others were more abstract and symbolic as patterns of triangles, rectangles, crosses, four-pronged flower-like symbols, horns and other motifs. Female figurines were made of marble, limestone, basalt, alabaster and clay (Fig. 18.33). These features are indicative of a symbolically rich ideology, despite the absence of identifiable temples. History houses may have been ritual meeting areas.

18.1.3 Political

social control In the earlier PPN, multiple sites existed in the region, but in the next period Catalhöyük was the only site with no apparent differentiated settlement system in which it functioned as a central place. Düring (2013:25, 36) regarded this contraction a form of place-bound ideology similar to that operating at the house level, as a corporate identity with foundation myths and the ritual interdependence of corporate groups that effected its long-term cohesion. The social focus was on symbolism and ritual concerned mainly with ancestry, hunting and exchange. Hodder (2006:57, 217-218) considered that if social power resided in an interlinked set of ideas to do with these, with society largely organised domestically, then tension would have been inevitable between control of domestic activity and the social focus at the corporate level. It follows, therefore, that political control would have rested on the latter regardless of any internal independence; and if that control related to specific knowledge about where people, heads and obsidian were buried, and the meaning of art and myth, then it probably resided with those influential in community neighbourhoods.

Hodder (2006:143) argued that people were making connections between present and past, and inventing history by linking themselves to those accounts. He considered these

to be family genealogies and the inheritance of rights and resources, manipulation of which permitted some neighbourhoods to become dominant. This would have encouraged corporate independence and heterarchy. It would also have involved ideology-based competition resulting in changed relationships with the supernatural world that decentralised ideological practice within the community. Control exercised earlier by an overarching community shaman/agent of influence would have been diffused by each neighbourhood having its own head exercising that role (Hodder 2006:56, 92).

Hayden (2004:299) has stated that in large communities such as Çatalhöyük, corporate kinship groups being the fundamental social units encouraged surplus production and promoted both corporate and elite self-interests. Two driving elements are identified: increased competition for power and wealth within communities, and alliances with other communities. If ideology remained the societal cement and wide influence the objective, it is reasonable to see it and these elements reflected in large-scale investment to establish, rejuvenate or expand regional ritual centres. Such places brought people together for ceremonial purposes, while at the same time facilitating development of alliances, marriages, exchange of information, and trade in exotic items associated with status and power.

During the earlier occupation of Çatalhöyük, emphasis was placed on the domestic sphere and its privacy, despite the importance of exchange, ancestry and community. This is indicated by all houses having storage facilities for agricultural produce; and while houses may be just a few centimetres apart, people built and maintained their own walls. Hodder (2006:58-59) considered this to suggest that individual houses were roughly equivalent and self-sufficient. The evidence suggests that the politics of history at Çatalhöyük were primarily house-based, and perhaps that dominant houses invested particularly in the construction and control of both repetitive practices and history. It is possible that some paintings, reliefs and installations in houses played a role in this scale. At the broadly contemporary site of Musular there is evidence of large-scale feasting in open areas: it is possible that the large murals at Çatalhöyük record similar events as they show large numbers of people in open areas. Furthermore, the apparent one-off mural of Hasan Dağ mural may have some historical component and concerned a group larger than that based round one house (Hodder 2006:162-163).

All activities undertaken at Çatalhöyük would have required effective community organisation. Long-term social alliances and relationships to permit access to, distribution and accumulation of resources would have needed to be maintained. In the

later part of its occupation there was decrease in emphasis on ancestry and corporate neighbourhoods, and prominence of history houses (Abraham 2013; Hodder 2006:134, 138; Hodder and Pels 2010:180). In considering this, two questions arise: was heterarchical competition of the time diffused by one history house gaining ideological domination; or did a regional ceremonial centre elsewhere achieve this? Excavation, however, has not provided evidence of any central authorities or specialised groups but, whatever form management took in its uppermost levels, it is partly manifest in the form of renewed and bigger ovens to serve groups larger than an individual house. The patterning in Level VIB of courtyards and history houses indicates corporate groupings for social and ritual purposes, and marks the introduction of hierarchy within and between groups, heterarchy and related competition. This is supported by the house in later levels and in the West Mound becoming larger, multi-roomed and multi-functional, and the settlement taking on more open patterning. At the same time there was decreasing emphasis on ancestry at the house level. This suggests that wider social aggregation was seen as an effective mechanism to monitor alliances that allowed distant, varied and dispersed resources to be obtained, accumulated and exchanged (Hodder 2004:108). It would have allowed control of a dispersed economy.

communal zones As previously mentioned, Çatalhöyük presents no evidence of communal ritual, elite quarters or a strong centralised function. Everything had been brought into the house: burial there, for example, occurred in houses more frequently than elsewhere; and art motifs found in communal buildings at the cultic centre of Göbekli Tepe are found in the Çatalhöyük house (Hodder 2006:58). There were no public spaces, administrative buildings, elite quarters or specialised functional zones; history houses dominated within neighbourhoods as the foci for burials, obsidian specialisation and higher-level ideological practice (Hodder 2006:58, 105,133, 151-153, 162-163). Communal meetings, if required, may have taken place in buildings yet be found in unexplored areas of the site, or away from the settlement.

18.1.4 Social

organisation The social organisation of Çatalhöyük can be viewed as a series of nested structures. Households appear to have been relatively autonomous in their economy, occupying discrete houses, and more or less equivalent entities with little variability in size or wealth (Düring 2013:37-38). There was ritual differentiation of houses in which some history houses functioned as an identity nexus for a larger group of households, and served as a burial location. One in six houses achieved this status, which meant there were house groups of similar sizes that might have co-operated in other aspects of social

life. The spatial layout would have created relatively intense social interaction and monitoring of co-residents, and thus compartmentalised social life. In other words, the clustered neighbourhoods reduced social interaction to an arena small enough to know everyone, making social life viable. The neighbourhood community provided a valuable means for reaching consensus, if necessary. It also made possible maintenance of social control.

Hodder (2006:107-108, 134) viewed Çatalhöyük as being organised in terms of mechanical solidarity as opposed to organic: social cohesion based on similarities among individuals rather than dependence between those performing different tasks with different values and interests; and social relations centred on kinship and descent as an effective mechanism for monitoring alliances, and facilitating resource acquisition, accumulation and exchange. Abraham (2013) challenged this by arguing that with time community organisation would either display the entrenched importance of kinship groups, or that neighbourhoods would become more independent; and at Çatalhöyük this was exhibited by increasing differences in mortuary ritual between households and a greater importance of history houses. Her study suggested change in community organisation beginning in Levels VI and VII on the West Mound, based on community ritual and identity. This involved:

- . reorganisation of house space becoming more concerned with domestic activity;
- . improved pottery firing techniques, which permitted painting and incision, suggestive of design standardisation throughout the site, thereby establishing community identity as well as ceramic exchange between houses;
- . visual imagery with increased depiction of communal hunting scenes, enhancing communal identity;
- . growing emphasis on the female 'goddess' figurine and loss of other imagery at the beginning of Level VI;
- . architectural replacement not continued after Level V, only 23% remaining in Level VI; houses spaced further apart and not in identifiable neighbourhoods, some even having exterior doors; and streets added — this interpreted as less emphasis being put on ancestry and kin groups; and
- . mortuary ritual and architecture with emphasis on community membership rather than particular households, as burial was moved to side-rooms; adults not

buried in households or history houses; and little variation in burial practice between houses.

During this time, there was also a shift in the nature and use of designs towards the depiction of the leopard on decorated pottery, and it was also sculpted. This suggests deliberate effort was being made to involve people from outside individual houses, corporate groups or other communities, in particular ideologies so as to extend influence and control (Hodder 2006:233-236).

independence Despite dense packing, each house retained its autonomy and privacy; people built and maintained their own dwellings, and party walls were few. There is a strong sense of separate identity with each house appearing to have had its own activities. All storage of agricultural produce was internal and all bins were of similar capacity (Hodder 2006: 56-57, 94-95, 115).

Hodder (2005:137; 2006) concluded that Çatalhöyük was a by-product of house status differentiation and the desire to remain close to the ancestral history house.

Neighbourhoods focused on history houses included house 'columns', a building sequence that provides evidence for micro-traditions and repetitive practices, and indicates long-term occupancy by the same family or extended family, and ancestors. The house took on a greater focus as behaviour changed and consolidated all activity represented, including ideology, burial, manufacturing, and exchange (Hodder 2006: 105; 2010).

symbolism Symbolic and ritual elaboration of the house has been seen by Hodder (2006:179-180, 183, 189) to concern control of knowledge about symbolism and beliefs, as well as the protocols of performing rituals and the depiction of scenes, myths and histories. Its possession and the ability to provide objective evidence of beliefs was possibly the basis of social difference. He speculated that variation in building elaborateness and number of burials reflected household and individual member status. This may have been related to ability to reveal what was hidden in plastered walls, beneath floors and in dark interiors, or to intercede with the supernatural realm of spirits and ancestors. Such people probably directed the painting, uncovering and replastering of walls and their content, and the excavation and re-use of skulls. Observing such activities was restricted physically by the very small rooms, but also by the eligibility to attend. It would have involved people in revelatory experiences to strengthen alliances. This is to have been central to social differentiation, exchange and alliance building (Hodder 2006:170-171). Lewis-Williams and Pearce (2005:38) have suggested contact and movement through the various zones of the built environment were probably central

to negotiation of social status, and therefore controlled. They saw this related to the tiered structure of the cosmos reproduced within houses.

embodiment Forte (2015:2-4) viewed the Çatalhöyük house as a social unit that transformed domestic into ritual space and vice-versa. Both were able to coexist in the same time and place because of the power generated by ornaments, sculptures, architectural features, burials, wall paintings, textures and colours; these were designed to create an imaginative world inside buildings. He explained that in such houses there is a repetitive emphasis on such embodiment, recognisable by several sets of affordances related to objects and meaningful elements able to generate new transmittable knowledge. These had the following characteristics:

- space was mostly organised with industrial activities in the south; and ritual platforms and their sequence of burials in the northeast corner, and associated with horn cores, pillars and bucrania; and paintings on the eastern wall;
- replastering was a recurrent activity for all walls and floors, and that done prior to house abandonment provided for neutralisation of features it contained;
- sculptures and zoomorphs are found in several buildings;
- red and white are used significantly in paintings and other decoration, possibly in particular contexts (e.g., ritual, mythological);
- orientation — houses are aligned to the cardinal points;
- ritual figurines are in the form of wild animals, or as anthropomorphic and zoomorphic hybrids; they can have detachable heads, and might have been identifiable as ‘puppets’ used during ritual performances; and
- interior vs exterior — most social, ritual, domestic, and industrial activity took place inside the buildings

The embodiment process developed a social memory of ancestors for family members, and the importance of transmitting this. Recurrent patterns were reminders of the power of all internal affordances and their potential meaning. In effect, the house connected the past, present and future, reminding occupants of the different activities and complex meanings in the same environment (Forte 2015:5, 11).

corporate identity/government The extensive and densely packed nature of the settlement created a sense of corporate identity. Despite autonomy, household success in

functioning and exploiting dispersed environments and resources necessitated considerable organisation and co-operation on a collective basis in settlement tasks such as drainage, water supply and regulation of access to land that required it. Related decisions were probably made by groups of elders; however, as noted, there is little evidence for centralised community activity (Bogaard *et al.* 2009:666; Hodder 2006:17, 56, 61, 106-107, 137, 249). Some households or neighbourhoods may have become dominant by providing more food or producing valued objects, or because of control of 'magic' and ritual (Hodder 2006:183, 189).

stress/tension If, as Hodder (2006:91-92, 204) argued, that once ideology had become materialised and could be contested and changed, any move to transform traditional behaviour would have created tension, compounding underlying stress already generated by the transition to sedentism. Addressing this would have required further ideological strategising. He described settlement life as embedded in tension between overall social balance and community and individual difference. This is reflected in visual imagery, for example, of a figurine of two women joined at the hips but only one pair of arms; and in a wall relief of a balanced pair of leopards, known to be intensely solitary animals.

Kuijt (1999) suggested that increasing compartmentalisation of the built environment created architectural buffers to social stress resulting from agglomeration by reducing social interaction. He added that burials, feasting and other rituals were also important in mitigating such stress and maintaining social cohesion.

Last (1998:360-376) noted that artistic and ritual activities ameliorate stress within an aggregated society; and that murals, such as the vultures at Çatalhöyük, may have concerned linkages between practices and concepts facilitating thoughts about resolving worldview issues. He pointed to the positioning of motifs and representations within houses to engender understanding of the cosmological relationships between life and death, landscape and settlement, and to allay stress. Last illustrated this by the Hasan Dağ mural (Fig. 18.20) with its entoptic imagery which brought the natural landscape into the house. As a source of obsidian it had a dangerous side; but it is argued that the leopard, another dangerous entity, is also manifest in the mural as the volcano is presented with spots and clawed feet, and is shown overlooking the settlement. This might have been a shamanistic strategy to keep stress at a tolerable level, symbolically recognising the worldview dangers involved while ensuring they were managed.

Physical violence is indicated in the incidence of head and arm wounds among males, probably from ritual combat (Todd 1976:74). Weapons are the most characteristic feature of the lithic industry and display the highest standard of workmanship.

identity/individuality The development of a sense of self within the house, where particular individuals might have represented the whole, is identified in burials with items of body adornment, such as necklaces, belt hooks, beads (Fig. 18.34), pendants, finger rings and bracelets; or by decoration, including stamp seals and stone colours. Some items appear to have been kept when no longer able to be worn, suggesting sentimental value and nostalgia. Plastered skulls were painted red, possibly paralleling face painting in life, while figurines show elaborate hair and head treatment. This sense is also indicated by obsidian mirrors, as people could see and identify with their own faces (Hodder 2006:229-231). There are several shamanistically significant objects associated with individuals and house: a decorated boar tusk necklace (Fig. 18.35) buried with a woman; and the two flint daggers noted above with bone handles, one in the form of boar and the other entwined snakes, found in a small room (Hodder 2006:58-59).

18.1.5 Economic

subsistence The environment was intensively exploited, and some farming probably carried out nearby on islands in the adjacent wetlands.

While wild plants were exploited, domesticated crops provided the dominant source of plant food, with stores of emmer, einkorn, pea, and both wild and domesticated vetch. History houses were concerned with this intensive production. Concentrations of wild nuts, such as almonds, hackberry and terebinth, have been recovered in houses. Stable isotopic evidence from human bones and the quantitative evidence of animal bones have confirmed the importance of plants over animal resources in the diet. Hodder (2006:56-57) emphasised that household storage was limited with no evidence of large containers. Bogaard and colleagues (2009:660-661), however, reported that in much larger structures, food could have been suspended from rafters, in which case bins would represent only a portion of potential storage capacity.

Hunting continued to be a major source of food, exploiting cattle, boar, equids, bear, birds and fish. Wild cattle were less important in terms of general food intake, a pattern seen in both quantitative evidence of bones and stable isotope evidence, but they dominated feasting. In contrast, both sheep and goat were domesticated (Ascoti and Fairbairn 2002; Fairbairn *et al.* 2005; Hodder 2006:28, 82-84). Stable isotope analysis of bone found that sheep had a wide range of carbon and nitrogen isotope values, suggesting that while some were kept at the edge of the settlement they also grazed over a much wider area than cattle or goat, or unlike cattle were traded from afar (Hodder 2006:84). There is evidence of sheep and goat herd management rather than full domestication, a common trait throughout Anatolia. Exploitation of both plant and

animal resources, wild and domesticated, supports ideological developments including the control of the wild and a closer, more direct relationship with the supernatural realm, that are reflected in house art, furnishings and wall installations.

The way the landscape was utilised gradually changed, reflecting the need to provide for a larger population. More intensive exploitation of wood for building and fires from increased distances is indicated. Parallel with this was a shift from on-site penning of animals towards wider grazing grounds. Faunal data show that people had to forage more widely for resources, perhaps an example of local resource depletion through intensive exploitation.

technology The lithic industry comprised a wide variety of equipment. Every house had a cache of obsidian pre-forms. In the upper levels, centralising tendencies were increasingly present in pottery and obsidian production within the history houses (Whitehouse and Hodder 2010:139). Given the exotic source and ‘dangerous’ nature of obsidian, and the ‘control’ of nature implied by animal and plant domestication, those involved would have been perceived as specialists producing a status product, probably in an ideological context.

The use of heated clay balls was effective in keeping food warm longer; it also reduced the need for continual supervision of cooking with open fires, assisting increased socialisation of women. Very large ovens are seen as evidence for specialisation of domestic production by women at an increased scale. This would have been reinforced by their ability to provide food for communal feasting. Similarly, with regard to pottery (Fig. 18.36), knowledge of the new types of temper and more specialised productive techniques would have had power implications for those possessing it.

The ideological shift from male figurines in lower levels to greater representation of females in the upper zones is probably associated with this (Hodder 2006:214, 254). Specialisation involved particular skills and the gaining of associated status for women both within houses and the community generally. Developments in pottery are seen to have paralleled this, further reducing the need for supervision. There may also have had significant ideological implications: by combining plant and animal products in cooking and transforming them, pottery might also have been viewed as bringing them under control (Hodder (2006:53-54, 238, 248).

Ceramics and obsidian tool making were major industries, and there is some evidence of small-scale specialisation in bead production using shell and stone. The most characteristic Neolithic ceramic wares appear for the first time in Level VIII and increase

in quantity thereafter. Firing was improved, forms became more elaborate, and painted decoration commenced in Level III. Bead and figurine manufacture was undertaken at household level. The former passed through several phases, with different houses focusing on particular types. Larger-scale, specialised production of obsidian objects, such as weapons and mirrors, took place in history houses (Hodder 2006:51, 56, 61-62, 180-182). Most other production, even where there was some specialisation, was carried out at the house level (Hodder 2006:98).

Baked clay seals (Fig. 18.37) were found in houses, mainly in the upper levels. They are round, oval or rectangular in shape with some variations. Faces are deeply incised with composite entoptic patterns, including spirals and other curvilinear motifs, meanders and diamonds, reflecting shamanistic influence. As well as possible use in the decoration of textiles and the human body, these objects may reflect an increasing concern with ideas of property and ownership.

18.1.6 Distant Contact

There is evidence for long-distance trade and exchange being an integral and important part of the economy. Apart from obsidian and flint, other items included dates from Syria, Mesopotamia or the Levant; shells from the Red Sea and Mediterranean; basketry from the Red Sea; Cappadocian obsidian; timber from the Taurus Mountains; exotic stones for beads; and basalt and andesite from volcanic sources for groundstone tools. In addition, there was exploitation of closer clay, stone and animal resources. Many items were obtained in finished form. Significant trade in both obsidian as raw material and finished items is indicated, while there was small-scale specialisation in bead production using exotic shell and exotic stones (Hodder 2006:74-75; Todd 1976:125-126).

Social alliances were developed through trade and exchange over the long term, allowing access, distribution and accumulation of resources to be monitored and maintained (Hodder 2006:56, 80, 108). Positioning with respect to the management and control of this activity was probably exploited socially for the status of individuals, their households and lineage. Others may have grazed sheep over wider areas than cattle or goat, and traded them from more distant locations.

Çatalhöyük's size and regional dominance, together with the number of exotic items recovered, leads to the conclusion that the site was a regional trade centre.

18.2 ÇATALHÖYÜK IN REGIONAL CONTEXT

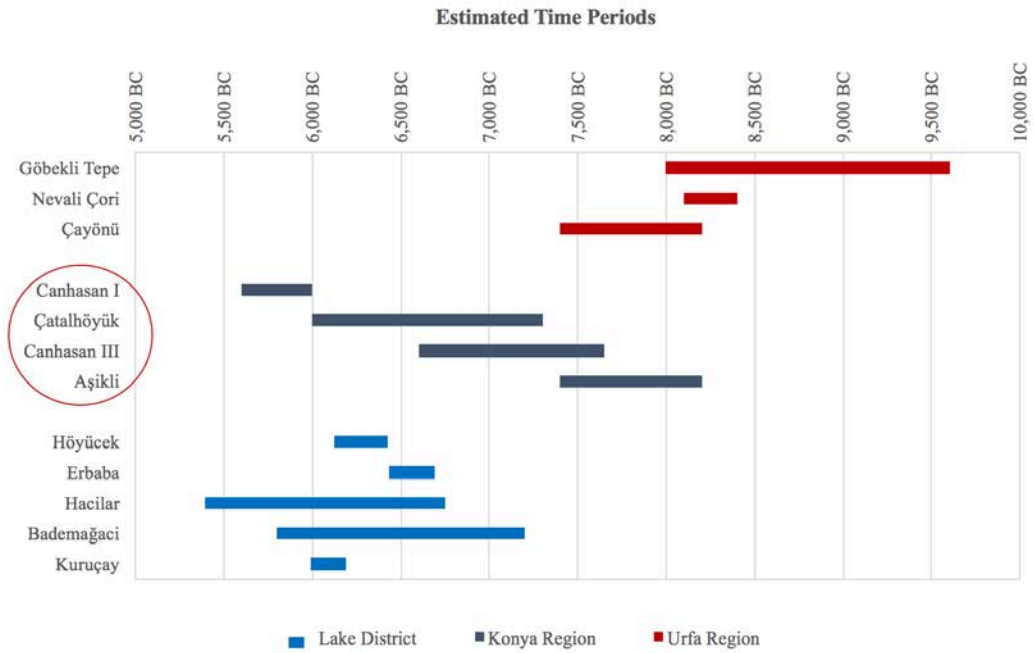
Developments at Çatalhöyük are considered with those in three other sites: Aşikli, Canhasan III and Canhasan I (Fig. 18.1). All are subdivided by large open courts and narrow alleys into a number of neighbourhood clusters of flat-topped, mud-brick buildings. Data available for these sites vary considerably.

Aşikli lies on the southwestern fringe of the Cappadocian volcanic plateau, in a landscape formed by the erosion of river valleys into tuff deposits. The Melendiz River valley in which it is located provides a favourable, fertile diverse habitat. Sited on the eastern bank of the river, the settlement measures *c.*4ha today but was probably larger during the Neolithic (Düring 2006:72), dating to 8200-7400 calBC. Three main levels are distinguished: Level 1 dated to 7500-7400 calBC; Level 2 with ten phases A-J, 8000-7500 calBC; and Level 3 with three phases A-C, 8200-8000 calBC (Düring 2006:73). Canhasan III, a small site of *c.*0.8ha, is located on the edge of an active alluvial fan. Excavation has distinguished seven occupation levels giving a range of 7650-6600 calBC, placing it within the PPNB/Early PN transition and possibly contemporary with the early levels at Çatalhöyük (Düring 2006:114-115). Canhasan I is located in the Karaman plain on the eastern bank of the former Selereki River and opposite Canhasan III. The site measures *c.*9ha, similar in size to Çatalhöyük West (8ha); 14 other sites in the surrounding region are markedly smaller, averaging 1.6ha. Eight occupational levels have been distinguished incorporating a number of building levels. Levels 7-4 have been assigned to the Late PN, and Level 3 to the Early Chalcolithic. Canhasan I may have been a central place in the larger settlement system. Radiocarbon dates, available only for Level 2Aa and 2B (the most extensive exposure), provide a range of *c.*6000-5600 calBC. The site was abandoned Middle/Late Chalcolithic (Düring 2006:260-264). Table 18.1 summarises relative chronology.

Aşikli (Fig. 18.38) had zones for bringing larger groups together: particular members of the community; individual neighbourhoods; and outside communities. The settlement plan (Fig. 18.40) shows monumental complexes, Structures HV, MI and T, differing in size and construction technique from the flat-topped, mudbrick buildings of the neighbourhood clusters within which they were located and dominated. They contained many rooms and incorporated elaborate and large internal paved courts surrounded on all sides by walls and rooms. Features not found in other buildings such as large round hearths, low benches and red-painted floors, suggest each functioned as a ritual nexus. The HV complex is at least 20 times larger than the largest building of the neighbourhood clusters within which they were located and dominated. They contained many rooms and

Table 18.1 KONYA REGION SITES: RELATIVE CHRONOLOGY

Canhasan I	c.6000-5600 calBC
Çatalhöyük	c.7300-6000 calBC
Canhasan III	c.7650-6600 calBC
Aşikli	c.8200-7400 calBC



incorporated elaborate and large internal paved courts surrounded on all sides by walls and rooms. Features not found in other buildings such as large round hearths, low benches and red-painted floors, suggest each functioned as a ritual nexus. The HV complex is at least 20 times larger than the largest building of the neighbourhood clusters. The MI complex consists of two interconnecting buildings. Other buildings could have held much smaller congregations and been used by circumscribed groups for specific purposes. The Aşikli development is paralleled by those of Musular on the opposite river bank (Düring 2006:92-104). Spatial arrangements of the complexes make it reasonable to suggest that they may have served particular neighbourhood clusters or even the community at large. Given, however, that the estimated population of Aşikli ran into thousands, it is clear that only a part of the population could have been accommodated in either of the two complexes at a time. Analogy can be drawn with public buildings of Nevalı Çori and Çayönü.

Activities in these buildings may have been performed by a secret society or other type of elite group (e.g., representatives of community artisans; neighbourhood leaders) alternatively, different groups could have used them at different times. It is plausible that formal gatherings of people from different neighbourhood clusters took place in these courts, and while they may have been more substantial in court HV than in T and MI, there do not seem to be many differences. From the fact that the courts are surrounded on all sides by walls and rooms, it could be concluded that there was an effort to restrict or control participation in activities taking place in these buildings. A variety of hypotheses may be put forward with regard the nature of these complexes, including the provision of a ritual nexus for the community as suggested above; a men's house; and a place devoted to initiation rituals. Again, analogy can be drawn with the public buildings of Çayönü and Nevalı Çori. Part of the settlement can be dated to much the same period, but at Aşikli features such as stone sculpture and sacrificial slabs are completely absent (Düring 2006:106-107).

The following features have been documented in Aşikli buildings: hearths; sub-floor primary burials, some multiple; pits; postholes; bins; benches; 'braziers'; and grinding stones embedded in some floors. Intramural burials were present in a few rooms only and may not have been general. Features relating to domestic production, consumption, and storage were also apparent in only a few buildings, as a result of which it has been argued that most domestic activity may have taken place in the open midden zones. This, in turn, implies that the production and consumption of foodstuffs and craft products occurred communally. In terms of both residence and economic pooling it appears that households were not clearly bounded groups, individual families being subsumed in a larger neighbourhood association sharing facilities and resources. Buildings may have been distributed among the members of a larger social collectivity according to the changing needs and demands of its members (Düring 2006:83-97). In addition to the complexes there is the extensive midden area (JA) towards which all neighbourhood streets and alleys open. Refuse in this space suggests that it was used for a range of domestic and craft activities (Düring 2006:92-104), but is also indicative of large-scale feasting which sits well with JA size and strategic position.

The monumental complexes and their counterparts at Musular are at present unique in the Central Anatolian Neolithic. Excavation at Canhasan III, Çatalhöyük and Canhasan I, have not uncovered similar buildings, possibly the result of excavation extent and methods. Accordingly, Düring (2006:107) sees it not unreasonable to assume that non-domestic building complexes could also have existed at the other sites; and if not found,

it should be kept in mind that they could have been placed at some distance from the settlements (Düring 2006:107).

All burials were sub-floor, occurring during occupation. Both sexes and all ages are present. They appear to have been primary and exhibit particular treatment of the dead, such as scalping immediately following death. Some graves contain two skeletons, and many with burial goods that include necklaces and bracelets of various types of beads. On the basis of 70 burials in approximately 400 rooms, it would appear that some form of selection determined who was buried at the site (Düring 2006:87).

Canhasan III reflects the other sites discussed (Fig. 18.39), but it is one in which two-storeyed buildings become the norm. Most appear to have been fairly standardised in dimension and overall form, and relatively limited in size range. They were accessed by ladders from the roof, as at Aşikli and Çatalhöyük. Floors were of hard compacted clay, in some cases mixed with small pebbles or with a red coating, and walls were also painted red. These structures, with an average size of 16sqm, occupy a middle position between the earlier building units at Aşikli of 11sqm, and those of Çatalhöyük averaging 27sqm. They have been tentatively interpreted as household residences (Düring 2006:117, 121, 128).

Three tentative neighbourhoods, A, B and C, have been distinguished (Düring 2006:117-124). While at Aşikli, large monumental complexes existed to bind the larger community together, evidence for similar structures is absent from Canhasan III; but in the words of Düring (2006:125), “[g]iven the small exposure at the site, this absence of evidence should not be taken as evidence of absence”. That said, the settlement map (Fig. 18.41) shows a very large building, Structure 7/8, over four times larger than the neighbourhood building average, divided into two similarly sized, interconnecting rooms. This would suggest that it served a special purpose, and possibly related to neighbourhood A in which it is located. There is another large complex, Structure 28/32 in neighbourhood B (Düring 2006:125). A similar structure has yet to be identified in neighbourhood C.

No sub-floor burials have been encountered at the settlement, this thought to relate to limited excavation. The nature of the open spaces cannot be determined because of the absence of data: it is not known whether they were used as refuse dumps, or for craft activities, butchering and food processing, as with Aşikli (Düring 2006:117, 125).

Canhasan I configuration (Fig. 18.40) reflects that seen in the other settlements but differs in being one in which two-storey buildings become the norm, the lower level being used

for a range of purposes (e.g., storage; craft production). No open spaces or courts, either peripheral or internal, have been found in earlier Levels but later the settlement became much more open. Rooms are much larger than at the other sites. It is considered to have had 13-26 neighbourhoods in which the upper storeys of most buildings would probably have covered ground floors completely (Düring 2006:271-274). Upper storeys were plastered and painted; and many features, such as hearths, ovens and compartments, and activities previously located on the ground floor were moved upstairs in the Early Chalcolithic. It would appear that principles operating at the other sites were also at play at Canhasan I: the neighbourhood residents would have formed a corporate group, the members of which interacting closely with one another both in daily activities and ritual (Düring 2006:280).

Twelve secondary burials consisting of infants and juveniles were found in one structure. These were accompanied by pottery and animal bones. There was also a two-dog burial in a doorway between two rooms. The site has produced a considerable amount of pottery variously decorated with red on a lighter slip, mostly in terms of entoptic chevrons applied in horizontal bands and net patterns. In Level I there was a change to red and black. Among the items recovered from the site were clay and stone figurines, and a copper mace head (Düring 2006:265, 271, 276).

Various reasons could be put forward for Canhasan I two-storey development: scarcity of good building locations for people wanting to live in a particular neighbourhood; prestige; and the need to create non-domestic spaces for storage or as workshops. Many of these factors could be associated with Canhasan I possibly being a central place in a wider network of dependent smaller settlements. Accordingly, it could be argued that the buildings became two-storey structures in response to some form of craft specialisation (Düring 2006:281). The settlement plan shows a particularly large building (Building 2) with one room surrounded on three sides by numerous small ones; another (Building 7) slightly smaller; and two large complexes (Building 1a-1b; Building 3a-3b). It is reasonable to see these as having a purpose different from the smaller, presumably domestic units which could reflect wider region networking in the context of integrated regional ritual practice and feasting, and trade.

18.3 KEY REGIONAL OBSERVATIONS

Because of limited excavation and available data, making general observations in some respects is restricted.

centrality During the early PPN, multiple sites existed in the region, but in the next period Çatalhöyük was the only site functioning with no apparent differentiated settlement system (Düring 2013:25, 36). The situation appears to have changed in its later levels with evidence of this settlement and others pursuing wider ideopolitical influence.

structures and social control At earlier Göbekli Tepe, Çayönu, Aşikli and Canhasan I, emphasis was clearly on the collective as seen in housing zones reflective of Çatalhöyük neighbourhoods, but differed in that they had special ideology-related communal buildings. Communal activity at Çatalhöyük focused on neighbourhood history houses, along with which went a particularly strong sense of collective identity, also seen at Can Hassan III (Hodder 2006:58).

burials and ancestor worship Burials with special treatment of the individuals concerned were encountered in particular contexts at all sites except Canhasan III (which may relate to limited excavation). Selection processes for this appear to have been operating.

settlement plan All sites can be seen to exhibit the Anatolian clustered neighbourhood tradition that would have been conducive to effective social control and creating corporate identity. During the Aşikli-Canhasan I sequence, however, changes within this tradition indicate settlement consolidation and complexity, this clearly reflecting intensification of ideology evidenced by special buildings which all settlement plans show. In the case of Aşikli and Canhasan III, they are monumental. Their obvious difference in size, plan, construction and content from those considered domestic suggests that while ritual/domestic relationships within the respective communities differed, these buildings were ideologically focused places of ritual nexus. If communal buildings existed at Çatalhöyük, their functions would probably have differed from those at the other sites because the relationship between domestic and ritual activities at them appears to have been organised in a completely different manner. Düring (2006:105-107) considered the apparent lack of special buildings at many Anatolian sites as being simply an artefact of limited excavation. They could have been located at some distance from the settlements, a configuration argued for the relationship between Musular and Aşikli, with the former serving as a ritual satellite of the other.

ideology While data availability and detail differ between the four sites, the features and practices they exhibit nevertheless point to an underlying common ideology variously manifest and used both communally and possibly on a restricted participation basis. Once again, given the limited extent of excavation in most cases, it is not unreasonable to expect wider representation of these ideological elements across the sites. A noticeable

trend evident in the settlement/ideology relationship is that while the underlying ideological base pertains, the role of complexes serving clustered neighbourhoods as a whole, as at Aşikli and Canhasan III, is seen at Çatalhöyük to reside in a special house within each neighbourhood. Neighbourhoods subsequently became declustered and with a number of larger buildings appearing as at Çatalhöyük and Canhasan I. These possibly had a range of ideology-integrated functions, including feasting and trade, involving large numbers or particular groups of people and designed to facilitate networking with the many contemporary settlements of the wider region (Düring 2006:281).

Canhasan I, while similar to the other sites, appears to have participated as central places in a wider network of similar small settlements at the time. Later Çatalhöyük is seen in the same context. It could be argued that buildings at the two sites became two storeyed to accommodate larger numbers of people from other sites, and to provide space for craft specialisation (Düring 2006:281). This development emerged during the Late PN when clustered neighbourhoods were replaced by an open form of settlement in which people related more directly to the houses they inhabited, and building continuity was no longer a priority. The question is, however, if these two sites were central places, where and how did they carry out this role in relation to small or large groups when neither one has open areas or buildings of sufficient size for the purpose — at least on the basis of present knowledge. As they appear to represent a new strategy for ideology-based social control, it is not unreasonable to envisage in each case a separate regional ceremonial centre to which they related.

shamanism There is a range of evidence from the three sites suggestive of this behaviour:

- investment in special buildings as ritual centres for large groups, using a range of symbolic elements (floor and wall treatment; decoration; murals sculptures; and installations) to generate and psychologically maintain shamanistic power;
- house plan control of worldview knowledge and beliefs, as well as ritual protocols connecting past, present and future;
- ideopolitical hierarchy associated with special building suggested by indications of possible elite groups and exclusion of some community members from particular zones and activities;
- continued prominence of entoptic imagery and decoration;

- a focus on menacing animals and birds; unusual animals incorporated in building structures as plastered wall features and threshold deposits;
- figurines, including those of the mother-goddess;
- the colour red appearing prominent in a number of contexts, including room and pottery decoration; and
- intramural burials, both primary and secondary, exhibiting varying treatment of the dead and some accompanied by animal remains; and
- large-scale food production and feasting.

REDACTIONS

- Figure 18.1** Location of Konya Region, Anatolia, and sites discussed
- Figure 18.2** Çatalhöyük: map of regional vegetation on the Konya Plain during the Neolithic showing the settlement located within a low-lying wetland/marshy zone subject to seasonal flooding ref Hodder 2006:77
- Figure 18.3** Çatalhöyük: aerial view ref <http://iansa.eu/papers/IANSA-2012-01-biehl-3D.pdf>
- Figure 18.4** Çatalhöyük: overall plan of the East and West Mounds and indicating main excavation areas ref Hodder 2014
- Figure 18.5** Çatalhöyük: reconstruction of the settlement and surrounding landscape during seasonal flooding ref <https://www.cinziamalaguti.it/quando-le-case-avevano-la-porta-sul-tetto/>
- Figure 18.6** Çatalhöyük: plan of Level VI-B occupation ref: Todd 1976:26
- Figure 18.7** Çatalhöyük: reconstruction of level VI-B occupation buildings ref: Todd 1976:28
- Figure 18.8** Çatalhöyük: typical house spatial organisation ref Hodder 2006:111
- Figure 18.9** Çatalhöyük: 'shrine room Level VI ref: Todd 1976:39
- Figure 18.10** Çatalhöyük: 'shrine' room Level VII ref: Todd 1976:3
- Figure 18.11** Çatalhöyük: 'shrine' room Level VII ref: Todd 1976:41
- Figure 18.12** Çatalhöyük: 'shrine room Level VII ref: Todd 1976:41
- Figure 18.13** Çatalhöyük: 'shrine room Level III ref: Todd 1976:44
- Figure 18.14** Çatalhöyük: 'shrine' room Level VII ref: Todd 1976:62
- Figure 18.15** Çatalhöyük: 'shrine' room Level VII ref: Todd 1976:62
- Figure 18.16** Çatalhöyük: artefacts found in shrine room
ref: <http://factsanddetails.com/world/cat56/sub362/item1504.html>
- Figure 18.17** Çatalhöyük: wall painting Level IV-B
ref: www.pinterest.com.au/pin/548102217132760171/?lp=true
- Figure 18.18** Çatalhöyük: wall painting Level II-B ref: <http://chicstypes.info/catal-huyuk-paintings/catal-huyuk-anatolia-catal-huyuk-and-gobekli-tepe-the-ancient-black-people>
- Figure 18.19** Çatalhöyük: wall painting Level XI-A ref: <https://jonandjude.wordpress.com/tag/catalhoyuk>
- Figure 18.20** Çatalhöyük: wall painting (Hasan Dağ mural) Level VII
ref: <https://historyofinformation.com/expanded.php?id=174>
- Figure 18.21** Çatalhöyük: wall painting Level VI-B ref: Todd 1976:
- Figure 18.22** Çatalhöyük: painted relief figure Level XIII-B ref: Todd 1976:52
- Figure 18.23** Çatalhöyük: single burial ref: <https://scotthaddow.wordpress.com/2012/06/21/catalhoyuk-2012/>
- Figure 18.24** Çatalhöyük: single burial ref: <http://www.investingbb.com/catalhoyuk.htm>

- Figure 18.25** Çatalhöyük: multiple burials ref: <https://arstechnica.com/science/2016>
- Figure 18.26** Çatalhöyük: multiple burials ref: Todd 2006:66
- Figure 18.27** Çatalhöyük: plan of Level VI-B occupation indicating buildings termed shrines (S) by Mellaart (1976) and history houses by Hodder and Pels (2010); and areas interpreted as courtyards (C) ref Hodder 2006:93
- Figure 18.28** Çatalhöyük: (a) grave containing skeleton holding a plastered skull; (b) reconstruction of grave; (c) skull coated with several layers of plaster, each of which had been painted red ref: Hodder 2006:23, 155
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ref: <https://www.biblicalarchaeology.org/daily/ancient-cultures/ancient-near-eastern-world/catalhoyuk-mural-the-earliest-representation-of-a-volcanic-eruption/>
- Figure 18.31** Çatalhöyük: flint daggers with carved bone handles in the form of (a) boar head and (b) snake ref: Hodder 2006:246
- Figure 18.32** Çatalhöyük: entoptic geometric motifs decorating (a) moulded leopards and (b) moulded splayed figure ref: Hodder 2006:153, 157
- Figure 18.33** Çatalhöyük: (a) clay mother goddess figurine from Level II 'shrine building; (b) painted clay figurine from Level VI; and (c) clay figurine in possible leopard skin top from Level II ref: Hodder 2006:160, 207; Todd 1976:93
- Figure 18.34** Çatalhöyük: beads found with a burial
ref: <https://scotthaddow.wordpress.com/2013/08/02/catalhoyuk-2013-week-6-the-end-is-near/>
- Figure 18.35** Çatalhöyük: decorated boar tusk necklace buried with a woman ref: Hodder 2006:212
- Figure 18.36** Çatalhöyük: pottery of Levels VI-III ref: Todd. 1976:87
- Figure 18.37** Çatalhöyük: baked clay stamp seals from Levels VI-II ref: Todd. 1976:80
- Figure 18.38** Aşikli: Layers 2A-C composite settlement plan ref Düring 2006:75
- Figure 18.39** Canhasan III: settlement plan (open areas in grey) ref Düring 2006:123
- Figure 18.40** Canhasan I: settlement plan of Layers 2B and 2B (in black)
ref <http://iansa.eu/papers/IANSA-2012-01-biehl-3D.pdf>

Chapter 19 SOUTHWEST ASIA RESEARCH DEVELOPMENT FIELD PHASE 3 HÖYÜCEK AND THE LAKE DISTRICT (TURKEY)

The Lake District (Fig. 19.1) is a large area in south-central Anatolia, containing numerous lakes southeast of the Mamara region, north of the Taurus Mountains and east of the Konya Plain. Höyücek, 40km southeast of Lake Burdur, is significantly different from settlements in western Anatolia discussed previously. Its occupational phases (Table 19.1) are compared with those at Hacilar and Erbaba, reference also being made to Kuruçay and Bademağacı to present settlement in regional context.

Table 19.1 HÖYÜCEK OCCUPATIONAL PHASES (ref: Duru 1999:176)

Late Neolithic/Early Chalcolithic	Mixed Layer
hiatus	
Late Neolithic	Sanctuary Phase (SP)
hiatus.....	
Early Neolithic	Shrine Phase (ShP)
hiatus.....	
Early Neolithic	Early Settlements Phase (ESP)

Duru (1999:185) stated that at the beginning of the Neolithic throughout the Lake District there was "an existence with common attributes" — simple settlements that grew into communities large enough to be called towns; and that differentiation occurred within the traditions formerly shared.

The Early Settlements Phase showed traces of burning and pottery but no remains, suggesting wood and lightweight building materials. Available calibrated C¹⁴ dates for the Shrine Phase are mid-seventh millennium BC. Although there are no absolute dates for the Sanctuaries Phase, parallel features at other local sites suggest the first half of the 6th millennium. The Mixed Layer belongs most probably to the end of the Late Neolithic or Early Chalcolithic.

The Shrine Phase levels reveal innovations in construction techniques as well as plan types that continue to the end of the Neolithic. These include use of both ordinary rectangular and newly introduced piano-convex mud bricks, storage facilities and ovens, fixed earth

staircases, and rectangular houses with doors and ovens on the central transverse axis. Following destruction of the Shrine Phase the site was abandoned for some time. Although traces of architecture were few during the Sanctuaries, numerous sacred objects were found grouped in specific locations.

19.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

19.1.1 Settlement

The Shrine Phase consisted of two mud-brick building phases: a poorly preserved early one; and five structures aligned east-west in the second (Figure 19.2). Structure 3 was rectangular with the main entrance in the southern longwall and secondary entrances in the other three. Some walls had internal niches. A large flat-topped oven and a trough in front had been installed in the northern wall opposite the main entrance. An outdoor work area lay outside a door in the eastern short wall. Artefacts have qualities suggesting a religious function.

Structure 5, apparently earlier used as a one-room unit, was divided by an interior wall. Its entry, originally at the centre of the north wall, had been sealed and its replacement was probably in the narrow eastern wall. The interior doorway was also sealed during the last phase. Only a marble basin was found inside (Duru 1999:177; Martinoli and Duru 2003:18).

Between Structures 3 and 5 was small Structure 4. A low wall across the centre bisected it, and interior walls in the northeast corner formed a small cell-like room. At its threshold were deer antlers, and the mandibles and knucklebones of ruminant animals; and against a wall was a miniature clay staircase only 80cm tall. It contained a number of clay-slab boxes, medium-sized cupboards and large storage bins. Vessels of various forms were set upon clay platforms and in wall niches. A pit in the floor behind the staircase cached flint blades. In its southern half there were five large bins or chests, in one of which was a miniature table (Duru 1999: 177).

19.1.2 Ideology/Political/Social

The Shrine Phase at Höyücek does not represent a village or town but a religious complex, perhaps the regional cult centre. Furnishings and contents of Structure 4 convinced Duru (1999:177) that it (and adjoining Structure 3) had ideological functions, ascribing it the 'adyton', the most sacred place. Its southern part separated by the low wall was probably storage space for ceremonial equipment as well as foodstuffs, while Structure 5 housed the priests or temple officials. Important small finds included marble bowls; miniature clay

tables, possibly altars; boot- and kidney-shaped vessels (Fig.19.3a-e), marble-and clay ladles; and bone spoons and chisels (Duru 1999:177).

Associated with the isolated wall sections was a concentration of baked-clay mother-goddess figurines and idols (Fig. 19.4) and others anthropomorphic and zoomorphic upon a plastered platform. These imply religious ceremonies repeated at set intervals. The more naturalistic representations appeared in one sanctuary only, whereas different types predominate in the other two, suggesting they were brought there at different times, perhaps by different peoples, most probably as votive offerings (Duru 1999:177-178).

If Höyücek does represent a site devoted specifically to ideological practice, it would mean that a kind of coterie had been established — an association that bound communities of the immediate region together through ritual (Esin 1999:20).

19.1.3 Economic

subsistence Höyücek represents a mixed economy based on agriculture and animal husbandry. Large stores of emmer, free-threshing wheat, lentils, bitter vetch and chickpea were recovered from the site (Martinole and Nesbitt 2003). While Structures 3 and 4, in particular, have been interpreted as shrines, the recovery of food stores and animal fodder indicates domestic activity. The Structure 3 oven and a group of mortars and querns outside its main entrance support this view. If these buildings were used for religious practices, it would appear the people and their animals were catered for either regularly or in periodic feasting (Martinoli and Nesbitt 2003:27). The faunal assemblage is limited but mainly included caprines, cattle and pig with some wild species (De Cupere and Duru 2003).

technology Each period yielded much pottery. Shrine Phase ceramics displayed more developed techniques as well as new forms and decoration, while red became the dominant colour. Sanctuary Phase pottery reflects a different tradition again, but of lesser quality (Duru 1999:178).

19.1.4 Distant Contact

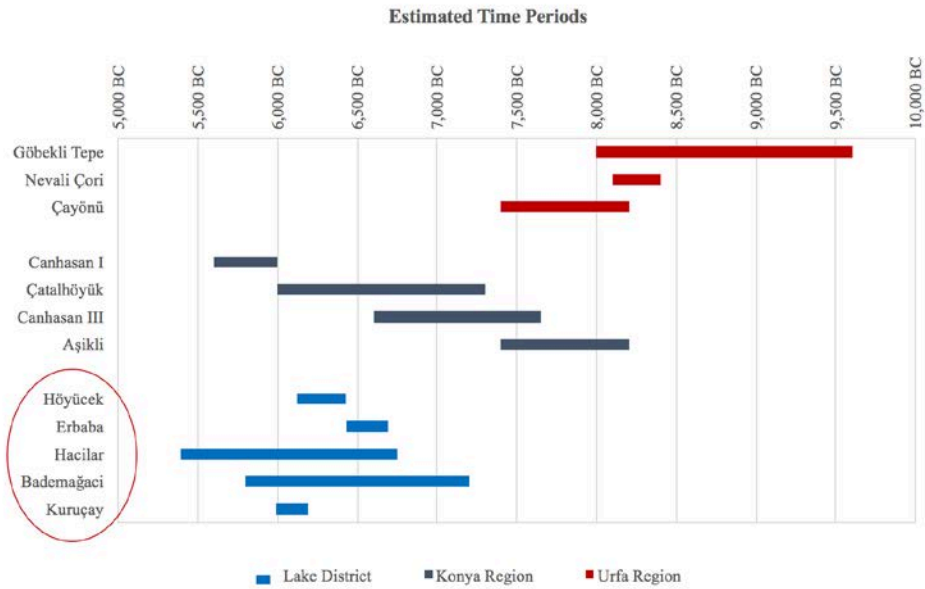
Settlement differences evident in the four occupational phases strongly suggest new groups initiating periods of occupation at the site and/or changed ideology. Other features reflect interaction within Western Anatolia, including the Konya Region to the east and Marmara to the west.

19.2 HÖYÜCEK IN REGIONAL (LAKE DISTRICT) CONTEXT

Available chronology for sites discussed in association with Höyücek (Shrine Phase) c. 6427-6122 calBC (Duru 1999; Mellaart 1961) is provided in Table 19.2 and detailed in Attachment G.

Table 19.2 LAKE DISTRICT REGION SITES: RELATIVE CHRONOLOGY
(ref: Duru 1999)

Höyücek	Shrine Phase	c.6427-6122 calBC
Erbaba	Early Neolithic	c.6690-6430 calBC
Hacilar	Early-Late Neolithic	c.6750-5393 calBC
Bademağacı	Early Neolithic	c.7200-5800 calBC
Kuruçay	Early-Late Neolithic	c.6190-5990 calBC



While excavation at the **Hacilar** has been limited, a developed architectural tradition is apparent from the earliest levels onwards and attests to a settled village life. EN houses were small with a number of regular rooms, some built adjacent to each other with courtyards used for daily tasks (Fig. 19.5). Walls were of mud brick covered with mud or lime plaster. Floors, also plastered, were stained red or yellow and burnished; occasionally red pigment was applied on cream-coloured plaster. Evidence of domestic pursuits is seen in a large communal courtyard north of the houses with grain bins, ovens, hearths and animal bones. Tools were also present including awls, axes, and sickles; and chert and obsidian blades which may have been mounted in sickles. Pottery was burnished and

well-fired. No graves were found, but human skulls, propped up with stones on the floor of many houses and at hearth comers, indicate an ancestor cult.

Its LN Inhabitants (Levels VI-IX) were more technically proficient, to the extent that Mellaart (1961:90) considered their architecture, ceramics, stone bowls, and clay statues point to techniques from elsewhere. Level VI houses were larger, consisting of an enclosed room with access through a wide doorway in the middle of the long side. Upper storeys were reached by an outside staircase. Substantial walls were carefully plastered. Each building had a raised hearth and flat-topped bread oven; a second fireplace was located near a room partition. In addition, each had at least one lean-to kitchen next to the front entrance containing platforms, grain bins, tables and a range of pounding and grinding implements. Large deposits of carbonised wheat, barley, lentils, bitter vetch and peas found in all houses indicate farming (Mellaart 1961 :90-91).

Sophisticated pottery techniques, as well as increased use, appeared first in the LN. Highly burnished products included vessels with decorative bands of red over a cream slip displaying linear entoptic designs. Mother-goddess figurines and idols of baked clay were recovered together with small white bowls in marble and ceramic. Artefacts included sickles; bone spatulas, some with carved handles of animal heads; mortars and pestles for grinding cosmetics and pigments; spindle whorls; and stone beads. One bone spatula was decorated with a theriomorphic figure in a horned headdress (Duru 1999:172-174; Mellaart 1961:88-89, 90-91).

Nearly every dwelling contained stone slabs with an incised simple outline of face-eyes, chin and hairline. Others contained doll-like clay idols. The slabs and idols provide evidence of a domestic cult which Mellaart suggested may have been related to traditional ancestor worship. A different artistic style in Level VI is a collection of mother-goddess figurines. Detail of physical features and dress indicates the importance of fertility to these early farming communities (Mellaart 1961: 91 -94).

The Early Chalcolithic Level V represents a succession of villages exhibiting steady increase in prosperity and complexity. Level II saw a small village fortified by a strong wall, openings in which gave access to courtyards surrounded by rectangular houses, each with a small anteroom and a light upper storey. New developments included a granary with bins and two large ovens. In the northwest a room near one entrance was considered a guard room. Three eastern buildings were concentrated workshops containing unused pots, red and yellow ochre and grindstones; paint pots and palettes; and tools for modelling, burnishing and polishing. In the northeast comer was a building unlike any other that preserved the LN floor plan and furnishings. In a niche stood a large stone slab

with two libation holes fronted by assorted pottery. Under the floor were two graves, each with a mother and child. No graves were uncovered in any other building. These features suggest the building to be a place of worship. While every Level VI house had cult appurtenances, in the Level II village such sacred objects were confined to this building, indicating a shift from a household-centred cult to a village one with people congregating at a communal shrine. (Mellaart saw men only being involved.) Pottery was mainly decorated brightly in red on cream with changing geometric patterns. Clay mother-goddess figurines continued, becoming conventionalised fertility symbols. The symbolism of decorated pottery of Hacilar V-II and that of its predecessor, Hacilar VI with relief vessels, and that of its successor Hacilar I with goddesses, animal heads, anthropomorphic and theriomorphic vases of all sorts and types, show that Hacilar was a centre of culture and religious authority with art and craft intimately linked to it (Mellaart 1961 :95, 1970: 148; Duru 1999).

Occupants of Level I built a roughly circular settlement, interpreted as a fortress by Mellaart, surrounded by a substantial wall, a large central courtyard. All rooms were entered from the upper storeys. There was an estimated population of 500-1,000 people, five times that of Level II. Ideology intensified and figurines became more stylised (Mellaart 1961 :94-96).

Distant contact included obsidian from central Anatolia; red and yellow ochre from Lake Egridir to the northeast; sulphur from nearby Lake Burdur; shells from the Mediterranean; and copper and various non-local stones (Mellaart 1961:91). Marble would have been imported either as raw material or finished objects.

Erbaba, c.0.5ha, is a small nucleated settlement, one of a network of similar contemporary sites on lake shores with access to several different ecological zones. While it has three occupational levels, the only reliable date is 6690-6430 calBC from Level III. The available settlement plan is for Level I (Fig 19.6). The nature of building interiors in Levels III and II situations is unknown, as with the open spaces in all three, though they may have served as courtyards. No information is available concerning burials within the settlement (Düring 2006:248, 250).

Evidence suggests that architecture was similar throughout the three levels. Level I revealed a densely built-up configuration of rectangular buildings of one to two rooms sharing the same alignment clustered in neighbourhood groupings with little sign of streets or alleys, the two components recognised being interior and open spaces. Many possibly had upper storeys above cellars. Buildings differed from those at the other sites in being constructed of limestone blocks.

Access to interiors was by ladder, there being no exterior doors. Walls, in some cases constructed on top of earlier ones in the same alignment, subdivided rooms and had internal doors and portholes. Floors were plastered and coated red. While some internal features of buildings point to domestic activity, clay benches, large ovens and painted plaster wall embellishments suggest other purposes. The Level I plan, however, shows some buildings to be larger than the rest, as in Area F and the complex in Area C. It is not unreasonable to consider these being for special purposes such as ritual and feasting involving sizeable numbers of people (local and/or from outside (Duru1999: 172; 2006:249-252, 257-259, 355)).

Dark, gritty ceramic ware, the exclusive type of pottery in Level III, continued as the dominant type in Levels II and I, but with change (possibly ideological) in temper to that of ground shell in association with new forms and appliques. Other ceramic items from the period included one male and one female figurine. The majority of tools were made from obsidian, the rest of flint. The faunal spectrum was dominated by sheep, goat and cattle. Botanical remains included emmer and einkorn wheat, free-threshing wheat, naked barley, and pea and lentil (Düring 2006:250).

Höyücek, Hacilar, Erbaba, Kuruçay and Bademağacı

Data available for some of these sites is relatively limited; however, they can be effectively considered in terms of their settlement and pottery.

settlement As already discussed, the general layout of EN Hacilar demonstrates that houses were built next to each other separated by courtyards. In contrast to Hacilar, but like Erbaba, EN Bademağacı (Fig. 19.7) and Kuruçay (Fig. 19.8) had conjoined houses.

EN Bademağacı (Fig. 19.7) and SP Höyücek exhibit similarities in construction as well as settlement plan. The two settlements, however, were very different. SP Höyücek was perhaps the regional cult centre, while Bademağacı was a large village of free-standing dwellings with street-like passages and courtyards separating groups. This broke with the tradition of contemporary EN settlements elsewhere, such as on the Konya Plain, and represented an innovation in Anatolia (Duru 1999: 174-179, 183-184).

The LN/ECh transition was significant as sites, earlier abandoned, were reoccupied after considerable time. The period witnessed the construction of walled settlements such as at Kuruçay (Fig. 19.8), a development implying effective organisation and administration and reflecting independence.

ideology/independence Despite variation between sites, elements of ideology-based social control are identified in the respective settlement plans. With Höyücek, this is obvious. Hacilar II (Fig. 19.5) shows zonation of functions — granary, guardroom, craft workshops, and shrine. There is a close relationship between the craft zone, an enclosed courtyard and the village well with the shrine complex. The settlement's enclosing wall implies strong social control and independence there also. Kuruçay evidences socio-ideological influence in houses aligned in a formal plan which, north-south, suggests ideological influence. Although conjoined, these had their own walls, implying that occupants enjoyed a degree of independence within the settlement, and also regionally by a site wall, more substantial than at Hacilar, with protected entrances. Bademağacı houses were freestanding, similarly suggestive of occupant independence. Its EN levels included three child burials, probably related to construction ritual; and the skeleton of a wild boar, possibly a sacrifice (Duru 1999: 172-188; Mellaart 1961:92).

pottery Regional pottery exhibits a range of features: red or slips; pieces more stylish and labour intensive than might be expected for ordinary domestic purposes (e.g., small flaring plates and bowls; deeper bowls with vertical walls and vessels with short necks or in curving rims displaying slight S-profiles; vertically pierced tubular lugs; and decorated with entoptic motifs and bucrania (Fig. 19.9) Duru 1999).

19.3 KEY REGIONAL OBSERVATIONS

These sites are seen as constituting a regional network with an underlying ideology while being independent units with their own particular characteristics. This may well be a result of their varying occupational trajectories and related external associations.

The five sites are seen as a group illustrating a slow and variously punctuated transition from early village to more complex settlements. This was associated with development or adoption of new skills in stone tool fabrication, part of the general cultural trend within Anatolia as a whole during later periods. Settlement data and artefacts, particularly pottery, figurines and idols, all with ideological implications, have permitted identification of sociopolitical developments progressing the transition to sedentism as well as relationships between settlements within the wider west-central region of Anatolia.

Until recently the only concrete evidence of a common tradition between the Lake District and the Konya Plain was the figurines indicating a cult of the mother goddess in both areas, and red-painted floors and walls. New indications of contact is represented by the pressure-flaked arrow and spear head of outstanding workmanship found at Kuruçay, Höyücek and Bademağacı. These points of outstanding workmanship are totally foreign to

the chipped stone industry of the Lake District; and being typical of EN phases of the Konya Plain, it would seem they came from there. A second is the stamp seal, one from Level EN Bademağacı closely resembling those from Çatalhöyük. Similarly, basket-handled pots and vessels imitative of wooden boxes found at Bademağacı are comparable to finds at Çatalhöyük (Duru 1999: 176-179). Bademağacı EN levels included three child burials, probably related to construction ritual as seen at Çatalhöyük. These artefacts and features point to the Lake District sites as a group being part of the same trade network, rather than singular in their respective landscapes. Acquisition of raw materials would have been as major element in this.

In terms of inter-regional contact Erbaba stands out particularly, reflecting a number of significant Konya developments. Its buildings are comparable to those of Çatalhöyük (Düring 2006:258-259); and the two-storeyed structure development with large storage areas under parallels Canhasan I and late Çatalhöyük (Düring 2006:258-259). Interior fittings (e.g., clay benches, painted plaster architectural embellishments and ovens) in some buildings are also similar to those of Çatalhöyük (Düring 2006:250-259).

shamanism A wide range of shamanistic behaviour is indicated within the region:

- . at Höyücek specifically
 - an adyton and ritual equipment,
 - niched walls with sculptures and vessels of various forms,
 - stylised mother-goddess figurines and more naturalistic representations,
 - large-scale food production and feasting, caching of items; and
- . generally
 - the prominence of the colour red on floors, walls and pottery,
 - ancestor worship,
 - pottery sophisticated in form and decoration,
 - entoptic motifs on visual imagery,
 - mother-goddess figurines,
 - anthropomorphic, theriomorphic and zoomorphic representations on objects,
 - large scale food production and feasting,
 - sudden change in pottery temper to ground gastropod in association with new forms, of decorative appliques,
 - ritual burial and sacrifice.

REDACTIONS

Figure 19.1 Location of Lake District, Anatolia, and sites discussed

Figure 19.2 Shrine Phase Höyücek settlement plan ref: Duru 1999

Figure 19.3 Contents of Structure 4/Shrine Phase Höyücek: (a-c) variously shaped pottery vessels; (d) marble bowl (e) miniature clay table/altar ref: Duru 1999

Figure 19.4 Höyücek: (a) Mother-goddess figurine; (b) idol ref: Duru 1999

Figure 19.5 Hacilar Level II settlement plan ref: Mellaart 1961

Figure 19.6 Erbaba Level 1 settlement plan ref: Duru 1999

Figure 19.7 Bademağacı settlement plan ref: Duru 1999

Figure 19.8 Kuruçay settlement plan: (a) Level 12; (b) Level 11 ref: Duru 1999

Figure 19.9 Kuruçay pottery decoration (a) entoptic; (b) bucrania ref: Duru 1999

Chapter 20 SOUTHWEST ASIA RESEARCH SUMMATION AND INTERPRETATION

20.1 OVERVIEW

The initiation of the transition to sedentism in Southwest Asia is reflected in developments associated with the emergence of two integrated trends: (a) ideology focussed on perceived cosmological relationships and identification of particular sites with related worldviews; and (b) growing personal and group individuality, out of which came leadership exploiting shamanism as its power base. During the transition these intensified in a series of symbiotic relationships presenting communities with situations that influential individuals within them had to address, resulting in a three-phase delineation of the transitional process. These significant behavioural changes have provided the framework of developments and expected leadership objectives encompassed in the model introduced in this study for the transitional process (Tables 20.1-20.3).

It is clear that during the transition, ideology was involved in settlement establishment; political, social and economic organisation; and the influence and pursuit of distant contact; and that shamanism underlay it. In Phase 1, individual shamans were able to reduce mobility through encouragement of regular extended periods of aggregation at certain 'places'. Phase 2 witnessed the strategic use of ideology by shamans to gain the co-operation of key individuals in their communities in achieving more effective social control and inadvertently bringing about the emergence of elites. In Phase 3 the settlements considered presented ideology in different manifestations and contexts, suggesting that its management was similarly varied — decentralisation of the earlier shamanic role and its replacement by a number of contemporary individuals and/or elite groups appropriating shamanism.

This shows that sites with the more available and detailed data are not necessarily the most typical of the region or paramount; while others, such as Cayönü (8200-7400 calBC) earlier considered unique, are representative of settlement in their wider region.

20.2 INTERPRETATION

20.2.1 Phase 1

The Shanidar Complex reveals change from ephemeral use of the Cave by mobile hunter-gatherers to more regular and extended occupation by aggregating groups

followed by base camp development at Zawi Chemi. The Cave's ideological association is confirmed by its subsequent use solely as a cemetery with specific mortuary practices. The small number of burials suggests that the individuals interred were important. With domestic activity confined to Zawi Chemi, the settlement became a pairing of the sacred and secular. Only one durable structure was built outside the Cave and subsequently twice replaced in the same place. The earliest with its occupant was physically remote from the aggregated community, but occupants of the following two used their walls to effect isolation from the temporary dwellings of the community. All three structures imply construction for and by an individual of difference in terms of status, influence, and community acceptance. Association of the first with apparent ritual paraphernalia and exotic stones suggests shamanic presence, this supported by mortuary practices within the Cave. Community participation in preparation of graves, walls and ritual imply shamanic influence.

This evidence points to increasing prominence of a new ideology and its early integration in the way of life of partially mobile people. Along with this is the developing individuality of shamans as reflected in the increased importance of their role and leadership, and evidence its acceptance. Other signs of emerging individuality include the small number of people in Cave burials. If not all had been shamans at various times, other individuals were considered sufficiently different to warrant not only burial but also special mortuary rituals. This was designed to ensure the dead would not return to interfere with the living, and points to belief in an afterlife and powerful 'living' ancestors. This would have reinforced both the shaman's leadership role and personal status as mediator with the supernatural realm.

20.2.2 Phase 2

The four sites reveal continuation of the trend in ideology but with some variation in manifestation. Two common features are perceived: site sacredness and concern for the dead. Again, the small number of burials at Hayonim and Wadi Hammeh 27 suggests only special individuals were interred. No burials were found in Hallan Çemi but may have been elsewhere.

As at Shanidar, Hayonim Cave evidences a long period of ephemeral occupation followed by use as a formal cemetery with domestic activity being deliberately relocated to a separate location, the Terrace, once the shamans had acquired the necessary social control. The Cave became a sacred zone and shamanic domain, enhancing his/her individuality in terms of mystique and remoteness, while at the same time ensuring close contact with the community. Its walled-off cemetery zone and cluster of small cells with

sub-floor burials, however, display ideology at a more intense level than at Shanidar. Close contact with the community was maintained by the pairing of the Cave shamanic domain with the large non-domestic Terrace structure considered to have been internally benched to accommodate a sizeable, but privileged, social group who may have had conditional access to the Cave precinct. This relationship suggests that the shamans now needed more effective practices and the support of influential individuals in maintaining longer periods of occupation while engendering community cohesion.

These developments are mirrored at Wadi Hammeh 27 and Hallan Çemi but in different contexts. Whereas the Hayonim Complex related to a natural 'place', they are particularly significant with regard to their artificial creation of site sacredness in an open-air context. At WH27 this was achieved by an inaugural burial, possibly a shaman, the presence of which continued to be acknowledged throughout subsequent occupations by a progressively augmented pillar. Additionally, entoptically engraved and reutilised stone slabs, perhaps sourced from elsewhere, were incorporated in Structure 2 of the most recent occupation. Such architectural re-use suggests the slabs held symbolic significance. At Hallan Çemi, sacredness was established by bucrania in one of the large buildings. In this there is the perception that a stage had been reached in people's relationship with the supernatural world that sacredness could be achieved in places not naturally endowed with it; and that this was to some extent being managed and no longer simply responded to.

The four sites exhibit increased manifestation of ideology, but variation in the way it was materialised and integrated within communities. They also show the extent to which this promoted individuality. Shamans had achieved a strong leadership role, one now only ideologically rather than physically removed from the respective communities. While, however, they may have achieved significant social control, effective management of particular situations presented by now larger communities and achievement of shamanic objectives demanded the co-operation of influential community members with whom a closer relationship was being fostered. The paired relationship of Hayonim structures is mirrored in those juxtaposed at the other two sites to the extent that the smaller one reflected shamanic occupancy and the larger being non-domestic and communal. This suggests that their shamans, as at Hayonim, were strategically managing problems of community co-operation and cohesion. Investment in paired, special-purpose structures suggests that a closer relationship with such individuals was being deliberately pursued by shamans to that end. Shamans met with the group in one structure while retaining a degree of isolation by occupying the other. Evidence indicates that this involved

inclusion of these individuals in ritual practices, which in Phase 1 would probably have been solely the prerogative of shamans.

Wadi Hammeh 27 and Hallan Çemi are particularly significant in their artificial creation of site sacredness — a built ‘place’— in open-air context. At WH27 this was achieved with an inaugural burial, possibly a shaman, the presence and influence of which continued to be acknowledged throughout subsequent occupations. Additionally, symbolically engraved stone slabs, perhaps sourced from a sacred site elsewhere, were incorporated in Structure 2 of the most recent occupation level and may have been associated with the initial occupation and recycled through those subsequent. At Hallan Çemi the same effect is achieved by bucrania in one building. Both sites represent the stage reached where sacredness could be established away from locations naturally endowed with it. The supernatural world was being managed and no longer simply responded to. All three sites of the Phase clearly show increased manifestation of ideology, but variation in the way it was integrated within communities.

20.2.3 Phase 3

Significantly increased settlement development is exhibited in terms of size, nature and organisation. While elements of the underlying ideology observed earlier continue, a new development is evidenced particularly in the perceived and accepted closer association of some individuals with the supernatural realm and humanisation of deities, making it possible for people to assume divinity. In this, Schmidt (2010:254) saw the anthropomorphic Göbekli Tepe pillars representing very powerful beings, which Lewis-Williams and Pearce (2005:20) regarded as “revolutionary”. They certainly suggest another ideological dimension and higher level of public participation in ritual behaviour.

These changes appeared in association with new and different architecture — history houses; temples; shrines; sanctuaries; and two-storeyed units — with features that stood them apart from the rest of the settlement: decoration; internal furnishing and structures; enigmatic and exotic objects; and container sealings indicative of an organised flow of goods. These buildings were designed by elites, corporate groups, and shamanistic priest-leaders to accommodate large numbers of people, possibly including some external to the settlements, for ritual and ceremony but also probably for facilitating trade and alliances. In some there is clear evidence of feasting in the form of large ovens and the remains of lavish consumption; elaborate furnishing areas apart from associated smaller ‘normal’ rooms; special purpose installations; and controlled entry. Coloured pigments on walls may have had a ritual association.

The relative chronology of the Phase 3 sites reveals the three regions sharing common ideological traits and trends but expressing them differently (Table 20.4). Göbekli Tepe and Nevali Çori, for example, show strong centralisation of ideological practice in megalithic complexes. Subsequently, as at Aşikli, Canhasan III and Cayönü, this came to take place in special ceremonial units within settlements. At Çatalhöyük, one element which mirrored developments elsewhere was representation of human-like figures interceding with animal spirits, ancestral beings and other worlds (Hodder 2006:205, 235); however, it separately developed neighbourhood clusters looking inward to a building within each — a history house — rather than to one or two special units catering for the settlement as a whole. Heterarchical organisation based on corporate grouping was clearly indicated. Toward the end of occupation it began to reflect developments in contemporary settlements, Erbaba and Canhasan I, where neighbourhoods had opened up with several large, non-domestic buildings. These appear to have been multi-purpose units with a range of ideology-integrated functions designed to facilitate networking with settlements in the surrounding territory. This introduced a definite outward-looking element to manifestation of the general underlying ideology.

The Phase 3 settlements, all firmly established in ‘places’ both sacredly and ecotonally secure, show place-within-place development of sacred temple and shrine zones. The overarching shamanic role in small communities, apparent during the previous Phases, was appropriated by other powerful agents of influence. These ranged from shaman-priest-leaders and related elites to the heterarchy of corporate households evident at Çatalhöyük, and represented decentralisation of social control. Ideology remained the most significant element in all settlements, reflected in special buildings that were different, large and elaborate. These were positioned to dominate, as the isolated temple site at Höyücek; the shrine zone of Hacilar Level II; the temple zone within Aşikli and its satellite Musular; and the history houses of Çatalhöyük. They reinforced the perception that the supernatural realm could be ritually encouraged into the real world and managed.

Social hierarchy and heterarchy both imply a concern for social power, status and wealth. The question therefore arises: if this was the goal, how could ideology be used to outdo competitors? An answer would be that if ideological practice was such that particular individuals saw themselves as capable of managing the supernatural realm and were perceived to be able to do so, the logical consequence would have been to establish ceremonial centres and proclaim equality with those spiritual entities by assuming personal divinity. Incipient development is manifest in the shrine/temple zones and centres evident in the settlements discussed. Change in settlement character noted at

Erbaba and Canhasan 1 and late Çatalhöyük suggests this type of expansionist behaviour, while the earlier large regional complex at Göbekli Tepe shows that it could be done.

In summary, an underlying commonality of ideology is evident east-west across Southern Anatolia during the transition to sedentism; however, as with other settlement elements, there is variation in its manifestation and management. Local cultural traits come to the fore in architecture, sculpture and other symbolic art forms: for example, even with the overriding emphasis on dangerous animals, one site focuses on the leopard and another on the aurochs. At the same time, parallels are evident between some sites and others in the broader region, as with mother-goddess figures and red floors, suggesting similar ideological backgrounds and underpinning. Throughout the transition, a basic ideological framework is evident on which elements reflecting particular cultural identities were superimposed by settlements.

20.3 KEY OBSERVATIONS

Progress towards sedentism was directly associated with increasing intensity of ideology.

Inherent in the transitional process is a direct symbiotic relationship between ideology, individualism and shamanism, this readily identifiable in the major social, political and economic developments.

The presence of shamans at the beginning of the transition is not unexpected, given the previously mentioned Hilazon Tachtit grave. Similar individuals remain obvious throughout, their behaviour reflecting what they did to establish, maintain and extend their social control, and ultimately to compete for it. Their continued presence was predicated on societal acceptance in a new ideological context, and depended on their ability to communicate and mediate with the supernatural world. It required perception of their personal 'difference' sufficient to convince communities of the value of going down that path. As a result, individuality emerged early, and was progressively strengthened and transformed along with increasing size of the communities they manipulated.

Implementation of the transition presented difficulties for leaders in all three Phases. The new ideology of Phase 1, which shamans promoted, placed them in a context that was also new. It involved much reduced mobility and extended periods of aggregation with other independent communities, necessitating socioeconomic reorganisation and innovation of very different regulatory mechanisms. At that point, shamans began to

gain acceptance of both the new ideology and these changed circumstances, and their related personal role and status.

As settlements increased in size, social interaction for the shaman changed from the direct association with the total group evident at Shanidar; less so at Hayonim, Hallan Çemi and Wadi Hammeh 27 with the shamans relating through select groups in special structures; and variously in Southern Anatolia utilising history houses, shrines and temples catering for particular segments of the settlement population.

While there was general commonality in basic ideology through the three Phases, sites presented idiosyncratic variations of its manifestation. In terms of intensity of ideology and related architecture, sites in Southern Anatolia, while proceeding toward the same settled existence, presented differently across this broad zone developing in their own way.

Table 20.1 PHASE 1: SIGNIFICANT BEHAVIOURAL CHANGE

emergence of detectable shamanic presence and influence

- . extended aggregation at a site with worldview context
- . clear inseparable interplay between ideological and socioeconomic change
- . ideology-related projects and expanded ritual activity
- . mystique subtly manifest in sequence of the single, isolated/private structures
- . costuming and paraphernalia; and the collection of ‘different’ stones
- . bone ornaments incorporating entoptic designs and zoomorphic features

settlement

- . reduced mobility with dispersed bands aggregating more regularly for extended periods
- . progressively larger numbers aggregating initiating open-air occupation
- . the site favoured being able to support the communities involved during occupation
- . developing close site relationship reflected in initial investment in architecture and other durable features
- . length of site occupation (extended; semi-sedentary) sufficient to encourage production of labour-intensive prestigious objects for personal decoration and trade
- . cultural deposits deeper, more extensive and culturally richer

ideological

- . ideology a strong influence in site selection
- . new collective worldview psychology embracing conceptualisation of a tiered cosmos with supernatural realms, liminality and related thresholds, new (ritualistic) responsibilities, symbolism and visual imagery possibly reflecting knowledge contemporary developments elsewhere gained through external contact
- . favouring of a site with perceived worldview/sacred association (i.e., a cave), establishment of a ‘place’
- . community participation in ceremonial and ritual behaviour both inside and outside the Cave
- . differential treatment of the dead: establishment of a cemetery, construction of related features and mortuary practices firmly establishing emergence of new collective psychology
- . belief in an after-life reflecting perception of an ‘underworld’ and related supernatural entities
- . ancestor worship; developing idea of a community past
- . new mortuary practices (grave goods; treatment of bodies)

political

- . influence/leadership required in the first place to encourage otherwise dispersed, independent bands to make the change from a mobile, annual round of sites used to regular, extended aggregation at one site
- . influence exercised in aggregating communities reflected in developing cohesion and co-operative effort
- . planning and organisation of high energetic activity on a communal level such as that necessary for cemetery related structures, and preparation (costuming and paraphernalia)
- . strategising (secondary burial events; feasting) to achieve community-wide social control
- . surplus production, storage and feasting is implied by semi-sedentism, and in turn, the introduction of basic sociopolitical organisation and related dynamics

social: stress/tension

- . engendered by changed/new ideology involving supernatural entities and ancestors
- . resulting from a progressively more settled existence and extended periods of living with non-kin groups, and requiring mechanisms for social integration

social: differentiation

- . a particular space and structures exhibiting obvious difference in function and occupant role/status
- . the small number of burials not representing the number of deaths expected over the period of Shanidar occupation and the manner of interment implies significant acknowledged social difference of the individuals concerned; and grave goods indicating difference, in turn, within these feasting associated with mortuary practice that would have required ritual specialists
- . the cemetery and wall construction within the Cave would have involved direction in planning and organisation; similarly, external contact and related networks would have been controlled
- . to avoid community fissioning, mediators would have been required to address tension as a consequence of separate bands coming together for extended periods
- . emerging but limited general individuality indicated by body ornamentation such as beads and pendants

social: relations

- . developing cohesion and co-operation in groups of traditionally dispersed bands aggregated for much extended periods – more concentrated occupation in association with Structures 2 and 3 was a distinct change from practice early in the aggregation process when individual bands would have maintained their respective identities (space) at the site
- . nucleated occupation and associated feasting is seen as strategy of the Structure 2 and 3 occupants to effect a closer social relationship with the community identification with site, resources and territory

economic: subsistence

- . intensification (i.e., broad spectrum foraging) to support larger numbers of people needing for regular, progressively extended periods – increased range and quantity of taxa
- . augmentation by innovation and experimentation indicating incipient plant and animal domestication
- . increased specialisation in the exploitation of a range of broad and multifaceted resources

economic: technology

- . experimentation and innovation in equipment and processing to facilitate changed subsistence practices
- . incipient alchemy (presence of a copper object/pendant)

distant contact

- . exotic items and resource supplementation
- . esoteric knowledge, and knowledge of ideological developments elsewhere
- . manufacturing for trade/exchange

Table 20.2 PHASE 2: SIGNIFICANT BEHAVIOURAL CHANGE**settlement**

- . particular sites favoured at the expense of others, growing to become regionally dominant
- . larger settlements ecotonally located facilitating extended periods of occupation
- . base camps at least semi-permanently occupied, and possibly permanently by some community members
- . cultural deposits deeper and more extensive, and exhibiting change in structure and site organisation
- . elements of formal planning (central open areas; close association and isolation of same-purpose units)
- . investment in durable elements (structures, sacred features; cemeteries; pits; hearths)
- . investment in more substantial structures (e.g., semi-subterranean; mortared/plastered stone slabs)
- . structures larger and freestanding, some exhibiting difference in size and shape, treatment and content
- . superimposition of structures of different occupation phases indicating identification with site/place
- . special-purpose domains (shamanic and suprahousehold) exhibiting paired relationships

ideological

- . sites naturally reflecting worldview or this being provided artificially
- . conceptualisation of 'other' supernatural and animal realms and entities; and related behaviour and concepts
- . clear influence of worldview perceptions evident in behaviour
- . distinctive special-purpose, ideology-related structures
- . increased shamanic presence and influence (e.g., shamanic domains and paraphernalia; entoptic decoration)
- . a closer site/house/community relationship
- . intensification of ancestor worship (e.g., multiple and secondary burial; skull/bone treatment; grave goods)

political

- . elements of formal settlement patterning indicative of centralised control
- . communities held together and controlled ideopolitically
- . shaman-related suprahousehold influence and incipient eliteness established to form ritual associations for consolidating/increasing power; and maximising the productive potential of labour and other crucial

resources

- paired special public-purpose administrative units: shaman-related structures distinct from others; shaman/suprahousehold meeting places; and community 'nerve centres'
- shamanic mystique maintained but with a much closer relationship and increased contact with their communities
- storage facilities larger than associated with domestic units and centrally located
- centralisation of surplus resources (storage facilities larger than those domestic)
- recurrent public activity (ritual; feasting)
- intercommunity relations (trade and exchange)

social: stress/tension

- subsistence practices indicating ongoing, underlying concern over resource availability/community survival generated by changing environmental conditions
- increased ritual behaviour indicating: continuing stress engendered in relating changed/new ideology concerned with supernatural entities and ancestors; and a progressively more settled existence and extended periods of living in larger groups involving other family/kin

social: differentiation

- large structures accommodating influential suprahousehold groups, constructed and isolated for privacy
- particular domains/structures within sites exhibiting obvious difference in purpose and occupant role/status
- emerging social stratification: recognition of shaman role/status; and incipient eliteness of some individuals
- individual and group identification; identification with location, territory and resources

social: relations

- increased community cohesion and co-operation
- movement away from egalitarian, generalised reciprocal sharing to a degree of balanced exchange, this privacy sought through semi-subterranean houses and entrances positioned away from open central areas
- increased and more definitive evidence of feasting

economic: subsistence

- foraging radiating from base camps and centrally organised
- ecotonal considerations at least equally important as those ideological in settlement location
- subsistence practice intensified with foraging extended beyond traditional staples to include minor resources
- surplus production/storage providing subsistence stability, permitting feasting and financing trade/exchange
- incipient domestication of particular resources, particularly those able to be stored
- communal sharing of resources continues but with increased domestic holdings and some central storage

economic: technology

- innovation in equipment and products (e.g., alcoholic beverage preparation and consumption vessels) and processing (drying; smoking; leaching)

distant contact

- a range of purposes involved: to transform surplus food into more durable and desirable forms/assets; to create social bonds when given to others; to validate and materialise important sociopolitical events such as marriages, alliances and funerals; to replace reciprocal exchange of human lives in revenge, compensation, and marriage; to display economic success and political power; and to underwrite competitive social agendas
- wider range of exotic items representing considerable investment in procurement
- appearance/increase in valuable, prestigious items, particularly of those esoteric in nature ('dangerous' obsidian; 'magical' shiny copper; *Dentalium* shell from 'out there; and 'wise man' knowledge)
- manufacturing for trade/exchange
- shamanic control of trade networks, acquisitions, resources required and operations
- inter-regional conflict

Table 20.3 PHASE 3: SIGNIFICANT BEHAVIOURAL CHANGE

shamanic presence and influence

- position and role of a dominant, overarching shaman as seen in Phases 1 and 2 decentralised and subsequently replaced through domestication of ideology with a significant degree of ritual activity being undertaken within houses
- settlement segmented into corporate group neighbourhoods managed focused on their respective history houses and shamans
- heterarchical development encouraging competition between neighbourhoods
- subsequent competition resulting in a new level of ideology – a regional dimension – that embraced

Çatalhöyük as one unit

settlement

- . essentially permanent villages, reflected not only in the durability and number of houses, but their rectangular shape and multicellular nature
- . sites located ecotonally and ideologically
- . structural and zonal differentiation within settlements
- . formalised construction and settlement planning reinforced by structure superimposition

ideological

- . ideology important in site location, growth and zoning
- . ideology reflected in subsistence/exploitation practice
- . ritual used to promote cohesiveness
- . domestication of ideology: complex interweaving of symbolic and practical domestic realms
- . changed relationship with the supernatural (degree of management/control of these powers)
- . intensification of ideology: mythology and ancestor worship
- . specialised megalithic materialisation of ideology and symbolism
- . ideological power: hierarchy and heterarchy

political

- . ideopolitically-based social power
- . heterarchical aggregation in corporate groups/neighbourhoods
- . competition between houses/corporate groups
- . extension of social power
- . regional domination

social: stress/tension

- . social and scalar stress associated with cultural change
- . intra- and intercommunity tension
- . ideological stress
- . pathological trauma

social: relations and differentiation

- . socially organised communities with corporate identity
- . social complexity: role, status, prestige, knowledge, skill; individuality
- . household autonomy, privacy and ownership
- . hierarchical and heterarchical development, and related competition
- . technical skill and related status

economic: subsistence

- . domestication of plants and animals
- . surplus production
- . storage of produce privately rather than communally

economic: technology

- . innovation in equipment and process
- . product specialisation

distance contact

- . linkage of trade/exchange to status and power
- . manufacturing for trade/exchange; specialised production
- . trade centres and extensive networks

Chapter 21 MODELLING THE TRANSITION

21.1 CONTEXT

Nomadic bands are socially fluid; the potential for conflict during aggregation is defused expediently by dissenting groups leaving the community. To address this during the progression towards sedentism, new conventions and regulations were introduced. The elaboration of ritual structures in Southwest Asia shows acceptance of these to have been achieved ideologically — an increased role for rituals of sanctification giving such changes an aura of necessity. Like the domestication of ritual practice, this represented a further new ideological level promoted by shamanistic leaders and upon which they depended.

While ritual involving the total community is evident throughout the Phases, ideological activity increased noticeably during the transition and became thoroughly embedded within daily life. The changes involved were characterised by special zones and/or structures within sites, such as the cemetery and isolated structures at Shanidar; the large and different ‘public’ buildings at Hayonim, Wadi Hammeh 27, and Hallan Çemi; enclosures at Göbekli Tepe and Nevalı Çori; the Çatalhöyük history houses; and two-storeyed units at Erbaba and Canhasan I.

As sedentism became more established, social systems exhibited increased complexity: specialisation in the processing of exotic materials; differences in the quantity and elaborateness of grave goods; and exchange of goods and processing of information. Social ranking emerged at both inter- and intra-settlement levels as some sites grew larger and dominated or absorbed others.

21.2 HYPOTHESES

The all-pervasive nature of ideology with regard to behaviour during the transition has encouraged the view that shamanism was the overarching, integrating force. The following hypotheses have been framed on these perceptions, and modelling based on them. It is argued that:

- a. shamanism provided the impetus for the transition, and individuals employing it were pivotal in the process;
- b. sedentism was conceived as a manipulative strategy to effect and consolidate overall social control; and

- c. this strategy was facilitated and maintained by their ongoing generation of intense, ideology-based social stress.

Perception of a dangerous supernatural realm in the context of the changed ideology, its worrying presence and placatory demands provided an opportunity for those able to mediate with it to overcome the restraints of egalitarianism and to pursue ambitions. Together with increasing symbolic activity at this time, credence is given to the view that these were shamans. Ideology would have been intensely applied by them to validate their emergence as individuals, maintain their role and status, and gain acceptance of changes they wished to introduce.

Increasing community reliance on shamans led to their more established differentiation. Supernatural mediation and problem-solving by shamans came to be seen as a permanent necessity, at which time they ceased to be productive members of their communities and became totally supported. Such a development would have required validation by some form of authority. Its continuance and enhancement were achieved through ritual reinforced by prestige-creating activities, such as resource redistribution, feasting and gift-giving; and, as necessary, sanctification. Ultimately, shamanism was appropriated by other ambitious individuals as a major element of their power base in establishing and maintaining ideopolitical leadership, with traditional shamans probably operating peripatetically at a lower and much less influential level.

21.3 ASSUMPTIONS

21.3.1 General

The following general assumptions are made:

- . that all human societies act on the basis of cognised models of the way the world is put together (Flannery 1976:331)
 - prehistoric people, regardless of geographic location, pursued an understanding of the world (universe) and their place in it;
 - the understanding reached has been one involving powerful supernatural entities;
 - shamans, and subsequently individuals having appropriated shamanism, were accepted as being the sole point of direct contact/mediation with the supernatural;

- . that an archaeological record reflects in a sufficiently useful way the behaviour of the people responsible for it, and that behaviour conforms to cross-cultural human norms;
- . that, as well as reflecting the people's perception of their place in cultural systems, statements made by or through the built forms of a settlement express social, political, and economic elements of the larger cultural milieu; and
- . that sedentarisation can be viewed as the first step toward political constraints without which a fully developed form of exploitation cannot be realised.

21.3.2 Specific

The General Model is predicated on:

- . cultural development – a new collective psychology and change brought about by the built environment associated with a more sedentary way of life; and
- . a direct relationship between progress towards sedentism and shamanism of an increasing intensity.

21.4 THE MODEL

21.4.1 Structure

The Southwest Asia data provided an insight into the transitional process in a region of primary development, and permit identification of elements of human behaviour that can be accepted as non-culturally specific. The apparent all-pervasive nature of ideology with regard to cultural behaviour during the transition has encouraged the firm view that shamanism was the overarching and integrating force behind the process. Features, trends and developments identified suggested that three phases were involved:

- Phase 1 rise to prominence of shamans as individuals in their own right
- Phase 2 establishment and expansion of shamanic control over communities
- Phase 3 competition for leadership between shamans and influential individuals employing shamanism resulting in a hybridised shaman — the shaman-priest-leader.

The basic equation of the Model is: *shamanism + new ideology = sedentism*. Specific behavioural trends, such as those related to ritual and 'place', commence or are further developed in Phase 1, being facilitated by decreasing mobility. These extend into Phase

2, joined by those consequential, both expected and unintended, as a result of manipulated aggregation of dispersed bands of people into larger communities for extended periods. These issues relate, in particular, to subsistence, group cohesion and emerging personal and group individuality. It is a period during which shamans establish and extend their position in terms of status and social power, but at a cost — permitting individuals, whose co-operation they needed, to achieve a degree of importance and influence within communities. Phase 3 sees further elaboration of these trends: in particular, developments — ideological practice, leadership, and social control — occurring within heterarchical corporate context. The major feature of the Phase is competition between shamans and other influential individuals for social control and leadership within settlements and regionally.

21.4.2 Model Expectations

Expectations for the respective phases are set out at Tables 21.1-21.3 against which to consider behaviour and developments in each of the case study regions selected for Model validation. Some are so intricately related that comment on one cannot be provided without dealing with another. It is not envisaged that a region progressing toward sedentism would meet all expectations; rather, it is a matter of looking for the general drift reflected in the cultural trajectories concerned.

Such expectations relate to developments identified as being the result of deliberate intention and/or significant involvement by leaders exploiting shamanism. They are based on the assumption that cultural behavior identified in each Phase reflects, directly or indirectly, the presence, action and influence of such individuals, facilitated by the ideological tension/stress they engendered against a background of an increasing sedentary way of life. Expectations are framed as follows: *settlement*: nature/pattern; *ideological*: nature/manifestation; *political*: nature/social control/organisation/administration; *social*: tension/stress/differentiation/relations; *economic*: nature/subsistence/technology; and *distant contact*: nature/purpose/management.

**Table 21.1 MODEL PHASE 1 EXPECTATIONS
DEVELOPMENTS AND SHAMANISTIC OBJECTIVES**

- BD** Expected broad development
SD Expected specific development
BSO Broad shamanistic objective
sso Specific shamanistic objective

BD: Incipient change in behaviour and significant elaboration of that pre-existing across the spectrum of cultural behaviour in the context of decreasing mobility in the way of life and intensification of ideology.

a. Settlement: Nature and Pattern

- (SD) extended aggregation of dispersed independent bands identifying as such
- (SD) decreased mobility reflected in particular sites within former pattern of numerous small ephemeral ones being favoured becoming larger
- (SD) favoured sites being ecotonally located; having deposits deeper, more extensive and culturally richer; exhibiting a wider range of activity; and showing limited investment in durable structures and other features

(BSO) extended aggregation of otherwise dispersed and independent bands

- (sso) bring together independent bands for more effective influencing and manipulation
- (sso) encourage more regular aggregation at particular sites and engender a close association with them
- (sso) establish perception that particular sites/locations are significant in supernatural context

b. Ideological: Nature and Manifestation of Worldview

- (SD) subtle shamanic presence and influence
- (SD) a new/changed understanding of the world and the universe (shamanic tiered cosmos), their place within it, and responsibilities: perception of a potent and animate realm inhabited by spirits and diverse non-human agents
- (SD) ideology a consideration in site selection
- (SD) concern for liminal elements in the environment, especially the dead whose remains begin to appear on sites
- (SD) ritualistic behaviour ongoing relationship with sites
- (SD) worldview understandings reflected in behaviour and symbolically

(BSO) establishment of the ideological basis for progressive domination/control

- (sso) establish the role and importance of shamans/shamanism in the ideological scheme of things (i.e., life)
- (sso) initiate new ideology by promoting conceptualisation of the idea of 'controlling' supernatural powers

- (sso) establish importance of worldview in site selection
- (sso) encourage revisitation of 'places' for ritual practice
- (sso) ingrain understanding and acceptance that there are essential community responsibilities of great consequence in worldview context concerning the supernatural, these to be shamanically facilitated
- (sso) initiate regular ritual behaviour and establishing its importance as a responsibility in worldview context
- (sso) integrate ideology in all aspects of community life as a strategy to facilitate manipulation

c. Political: Community Control, Organisation and Administration

- (SD) emerging shamanic presence, influence and leadership
- (SD) decision-making continues on the basis of consensus but shaman-related ideological considerations coming to be reflected in significant change to traditional behaviour
- (SD) effort to establish/impose community cohesion and co-operation
- (BSO) ideopolitical influence**
- (sso) achieve a closer involvement in community decision-making processes

d. Social

tension/stress

- (SD) ongoing, underlying concern over resource availability with periods of extended aggregation
- (SD) ongoing tension/stress engendered by changed/new ideology involving 'controlling' supernatural entities and ancestors
- (SD) social and scalar stress resulting from a progressively more settled existence and extended periods of living in larger groups
- (SD) stress associated with pathological and traumatic conditions

(BSO) engendering and maintaining a level of tension

- (sso) encourage and exacerbate tension between people and the supernatural world as a basis for ideological manipulation of communities

(BSO) community stability and harmony

- (sso) intensify ritual activity to assuage tension

relations and differentiation

- (SD) limited/subtle leadership/controlling elements but with shamans emerging as individuals in their own right and with influence
- (SD) aggregation sites occupied by larger numbers of people made up of independent groups (families/extended families) showing limited cohesion
- (SD) appearance of spaces/structures within sites exhibiting difference in function and occupant
- (SD) stress/tension arising from extended periods of social contact

(BSO) acceptance of the shaman role in worldview context of promotion of a cohesive community

- (sso) have shamans accepted by communities most necessary individuals
- (sso) self-impose remoteness
- (sso) reduce mobility and have people come together as a community regularly for extended periods
- (sso) achieve community cohesion and engender co-operation
- (sso) introduce a community *modus operandi*

e. Subsistence: Nature, Objectives and Equipment

- (SD) intensification of subsistence practice: broad spectrum; incipient agriculture
- (SD) innovation in equipment and processing to facilitate/complement changed subsistence practices
- (SD) communal sharing of resources
- (SD) investment in pits and hearths; caching/incipient storage
- (BSO) provide subsistence necessary to support groups at particular sites for progressively longer periods**
 - (sso) increase resources to support extended aggregation by larger groups longer at favoured sites
 - (sso) encourage continuation of traditional sharing as an important element of the subsistence strategy

f. Distant Contact: Nature, Purpose and Management

- (SD) subsistence resource supplementation
- (SD) introduced knowledge and practice
- (SD) exotic objects of supernatural connotation
- (BSO) enhance personal role, status and position**
 - (sso) acquire prestigious exotic and esoteric items/knowledge/ideas for status display and community manipulation
 - (sso) acquire additional food resources to maintain community cohesion, stability and harmony

**Table 21.2 MODEL PHASE 2 EXPECTATIONS
DEVELOPMENTS AND SHAMANISTIC OBJECTIVES**

- BD** Expected broad development
SD Expected specific development
BSO Broad shamanistic objective
ssO Specific shamanistic objective

BD: Incipient change in behaviour and significant elaboration of that pre-existing across the spectrum of cultural behaviour in the context of much reduced mobility in the way of life and intensification of ideology.

a. Settlement: Nature and Pattern

- (SD) people occupying sites at least semi-permanently in villages/base camps
- (SD) larger sites becoming dominant at the expense of others
- (SD) elements of formal planning of sites
- (SD) permanent structures (dwellings, storage and other features)
- (SD) sequential superimposition of structures
- (SD) special purpose public/person structures
- (BSO) significantly reduced mobility**
 - (ssO) encourage investment in durable domestic structures and other features as a means of extending periods of aggregation
 - (ssO) encourage extended occupation at selected sites

b. Ideological: Nature and Manifestation of Worldview

- (SD) definite shamanic presence and influence
- (SD) worldview pervades all behaviour; ritual used to promote cohesion and co-operation
- (SD) sacredness is either natural and/or artificially created
- (SD) more pronounced concern for liminal and numinous elements
- (SD) symbolism: visual imagery, objects, caching
- (BSO) effect seamless integration of sacred (ideology) and secular (domestic activity) as the strategy for community manipulation**
 - (ssO) ritualise landscapes and provide particular locations with supernatural context (i.e., create 'places')
 - (ssO) encourage reoccupation of sites for ritual practice
 - (ssO) reinforce worldview understandings by integrating ideological practice with secular aspects of community life
 - (ssO) encourage a sense of permanence in the developing way of life
 - (ssO) establish a new and closer relationship with territory (i.e., ownership)

c. Political: Community Control, Organisation and Administration

- (SD) shamans exploiting suprahousehold influence
- (SD) centralised control evident in settlement plan: cohesion and co-operation being imposed/established
- (SD) centralisation of resources: storage facilities larger than those domestic
- (SD) special 'public' purpose, non-domestic domains
- (SD) recurrent public activity (e.g., feasting; ritual/ceremony)
- (SD) intercommunity relations

(BSO) ideopolitical domination and control

- (sso) firmly establish dominating shamanic role and status
- (sso) influence decision-making
- (sso) establish administration/control through influential community members

d. Social

tension/stress

- (SD) concern for survival exacerbated by subsistence affected by reduced mobility
- (SD) stress a result of groups living in semi-sedentary context
- (SD) hostility, both intra- and intercommunity
- (SD) environment-related stress
- (SD) pathological trauma

(BSO) engendering and maintaining a level of tension

- (sso) encourage and exacerbate tension between people and the supernatural world as a basis for ideological manipulation of communities

(BSO) community stability and harmony

- (sso) intensify ritual activity to assuage tension

relations and differentiation

- (SD) shaman role and status established
- (SD) site pattern indicating increasing cohesion and stability, but still tendency for privacy with respect to belongings (wealth) and particular aspects of behaviour
- (SD) recurrent social activity (e.g., feasting/conspicuous consumption; ritual/ceremony)
- (SD) developing but limited individuality and group identification
- (SD) relationship between shamans and influential individuals within communities
- (SD) particular spaces/structures within sites indicating differences in function and occupant (role/status)
- (SD) very obvious inclusive/exclusive contexts reflected in stated boundaries/thresholds and zones
- (SD) sense of site/territory/resource ownership
- (SD) socially valued items

(BSO) promote shamanic status and power (i.e., shaman difference), and community understanding and acceptance of responsibilities vis-à-vis the supernatural realm

(sso) establish and emphasise the importance of shamans and the necessarily restricted nature of their practices and equipment

(sso) exploit the role and position of people of some influence in communities as a strategy for achieving particular objectives (incipient eliteness)

(sso) reinforce cohesion with strategic institutions to counter consequences of semi-sedentism (e.g., internal disputes; conflict with other communities)

e. Subsistence: Nature, Objectives and Equipment

(SD) change from circulatory foraging to base camp radiation

(SD) resource availability crucial to site selection: ecotonal locations

(SD) intensification of food production to support semi-sedentary communities in one location

(SD) equipment and process innovation

(SD) some community sharing but emerging private storage

(SD) incipient surplus production

(SD) some centralised storage of resources

(SD) economies becoming based on a particular resource/set of resources over which communities claim ownership

(SD) incipient animal and/or plant domestication

(BSO) increased production and surpluses

(sso) pursue subsistence stability for now larger and semi-sedentary communities

(sso) encourage surpluses to be appropriated for personal gain

f. Distant Contact: Nature, Purpose and Management

(SD) controlled trade networks

(SD) exotic items, both utilitarian and non-domestic

(SD) esoteric knowledge and behaviour

(BSO) ongoing contact with the world 'outside' for the power, prestige and status this provides

(sso) acquire esoteric knowledge (facts and ideas) and 'special'/'dangerous'/'magical' exotic objects

(sso) maintain and control trade networks and necessary territorial relationships/alliances

**Table 21.3 MODEL PHASE 3 EXPECTATIONS
DEVELOPMENTS AND SHAMANISTIC OBJECTIVES**

BD	Expected broad development
SD	Expected specific development
BSO	Broad shamanistic objective
sso	Specific shamanistic objective

BD: Incipient change in behaviour and significant elaboration of that pre-existing across the spectrum of cultural behaviour in the context of decreasing mobility in the way of life and intensification of ideology.

a. Settlement: Nature and Pattern

- (SD) large sites essentially permanently occupied
- (SD) structure superimposition
- (SD) sites ecotonally located
- (SD) settlement plans showing zonation
- (SD) structures much larger, some being public and of new and specialised purposes
- (SD) formalised construction and settlement planning reinforced by rebuilding (superimposition of structures in the same position)
- (SD) regional settlement patterns show central-place influence
- (SD) impressive, monumental architecture as foci for periodic aggregation on a massive new scale
- (BSO) regional sedentism**
 - (sso) achieve sedentism in context appropriate to the nature of now permanent lifeways

b. Ideological: Nature and Manifestation of Worldview

- (SD) control by dominant shamans under challenge in two ways: a significant degree of ideology domestication within houses/households involving a changed relationship with the supernatural (management of supernatural powers rather than being controlled by them) and a significant level of ritual behaviour being carried on independently of the shaman,; and by influential community members and other shamans necessitating new/changed ideology as competitive strategy
- (SD) new ideological dimension: appearance of a 'hybridised' shaman-priest-chieftain leaders assuming divinity and mythological/ancestor association, this representing intentional fusion of sacred and secular attributes and establishing a hierarchy of ideological power
- (SD) new ideology manifest in the form of architectural complexes as temples and ceremonial centres with exclusive zones of controlled space and specialised functions
- (SD) ideology integral to complex location with paramount sites isolated from communities
- (SD) complexes being the physical manifestation of cosmology/cosmological understandings to which ancestor/the dead were central; strong symbolism
- (SD) large areas controlled ideologically on a regional basis

(SD) evidence of external ideological influence (knowledge, architecture, objects and behaviour)

(BSO) introduce a measure of extreme ideological significance – a new level and dimension to the ideological framework for everyday life – to confirm shaman status and power to meet challenge to regional leadership from other shamans and influential individuals/households

(sso) promote and consolidate a new elevated status of shaman-priest

(sso) strategically manage growing widespread independence of houses generally

(sso) accept the domestication of ideology (i.e., increased ritual activity at household level) while gaining acceptance that the more significant aspects or higher end of the ideological spectrum of such practice remained the exclusive domain of shamans

(sso) elaborate and raise the concept of 'sanctification' to a further ideological dimension in association with the temple town/ceremonial centre

(sso) encourage a sense of belonging and greater cohesion within and between communities of the settlement hierarchy

(sso) intensively exploit territories and regions socially, economically and politically

c. Political: Community Control, Organisation and Administration

(SD) strong, effective shamanic leadership in sociopolitical context

(SD) zones appearing as apexes of ideopolitical hierarchies extending control/manipulation regionally

(SD) paramount, politically dominant settlements/centres representing new measures for social integration and control

(SD) competition among individuals of influence and other shamans for domination

(SD) effective strategising on an extreme scale to engender group co-operation and facilitate control over extensive areas

(BSO) spheres of influence expanded

(sso) achieve and consolidate sociopolitical power on an extended regional scale

(sso) introduce new measures to ensure leadership success and maintain paramount position

d. Social

tension/stress

(SD) concern for community survival exacerbated by subsistence economies affected by reduced mobility

(SD) stress a result of groups large groups living together for extended periods; hostility

(SD) environment-related stress

(SD) pathological trauma

(BSO) social control in face of strong competition and domestication of ideology

(sso) maintain ongoing tension between people and the supernatural world, even though this has been reduced by domestication of ideology while referencing essential

shamanic control at the highest and most effective level with respect to contact with the controlling supernatural entities and ancestors

(sso) assume divinity

relations and differentiation

(SD) socially organised communities with pronounced hierarchical individual and corporate identity

(SD) house and household independence, with privacy and ownership replacing communal endeavour and sharing

(SD) social complexity increased by task specialisation

(SD) shamans face competition from other shamans and influential individuals for social control in a competitive heterarchical environment

(SD) emergence of hybrid shaman-priest-chiefs made unassailable by assumption of divinity; and associated elites controlling regional temple/ceremonial centres

(SD) social inclusion/exclusion in relation to particular places and (esoteric) knowledge

(BSO) design and implement strategies to overcome competition for social control

(sso) introduce, assume and promote a shaman-priest-chief role to meet challenge to shaman domination by influential individuals and other regional shamans

(sso) put in place support structure (elites) necessary for control of corporate groups and communities on a regional basis

(BSO) engender support for the new centres and administrative structures (elites) put in place for their imangement; and promote cohesiveness among regional communities concerned

(sso) emphasise the unassailable nature of hybrid shaman-priests (divinity) and associated elites

(sso) promote paramount centre power and related new/changed ideology

(sso) implement regionally focused ideological activity (particularly large-scale projects) to bring and hold people together through a binding sense of shared experience and continuing association

e. Subsistence: Nature, Objectives and Equipment

(SD) production beyond subsistence needs involving labour-intensive practices, innovation, significant processing and storage

(SD) some production continues on a communal basis but with a significant degree of independent activity

(SD) privacy with respect to wealth (resource accumulation) maintains the semblance of egalitarianism, masking the reality of varying house status, wealth and influence

(BSO) firmly establish status in the face of competition for social control

(sso) achieve exploitable surpluses for a range of purposes: trade for resources not locally available, and exotic and esoteric items of status and ideological importance; for use strategically in terms of politics (e.g., alliance establishment, and involving others in manipulative debt)

(sso) counter competition and potential threat to shamanic leadership/domination

f. Distant Contact: Nature, Purpose and Management

(SD) task specialisation

(SD) manufacturing for trade, exchange and extension of influence

(SD) intra- and inter-regional exchange networks, with some sites being trading nodes

(SD) appearance and effect of new ideas, concepts, attitudes and behaviour

(BSO) control of trade and related networks, and resources underpinning them

(sso) enhance ideological power base in terms of exotic items

(sso) access esoteric knowledge/ideas

(sso) produce items that accrue ideological significance and extend social power

PART C

**CASE STUDY VALIDATION OF
GENERAL MODEL
BRITISH ISLES**

- C1 Introduction**
- C2 Model Phase 1**
- C3 Model Phase 2**
- C4 Model Phase 3**
- C5 Results**

Chapter 22 BRITISH NEOLITHISATION VIEWS, DEFINITIONS AND PROCESSES

The transition to sedentism in the British Isles occurred during Mesolithic-to-Neolithic times — Phase 1 of the general model presented. This was not necessarily a period dictated by issues of absolute chronology.

22.1 ‘MESOLITHIC’ and ‘NEOLITHIC’

Sedentism in the British Isles emerged during the Neolithic within a context of significant diversity among the agencies involved. Being progressively established across the country from a number of locations, it developed its own regional diversity — socially, economically, politically and ideologically — albeit from what might be seen as a somewhat common range of basic elements termed the ‘Neolithic package’, things and practices seen to have originated in the Continent — different combinations of which appear to have been adopted by communities of the time and variously developed.

Consequently, there were differences between their appearance in south-east England and those across a wide swathe of western and northern Britain and in Ireland.

Additionally, the package was an accretive one, appearance of its elements being staggered for a period before it manifested as such with the general trajectory of change across Britain possibly concealing a more complicated process. On the other hand, some lasted longer than others in the cultural repertoire (Whittle *et al.* 2011a: 840-845). A key factor in this diversity at any particular time is seen to have been regions progressing at differing rates toward sedentism.

The Mesolithic and the Neolithic have often been conceptualized as being different in terms of the temporality of occupation within each period. Some scholars, however would argue against seeing the Late Mesolithic and Early Neolithic of the 5th and 4th millennia BC in black and white terms. Whittle (2007:390-394), for example, does not view the British Neolithic as between alternatives, but a question of the degree and manner in which each contributed. In this context, it is noted that while farming, pastoralism, and settled life appeared during the Neolithic and Early Bronze Age, the transition from hunting and gathering commenced earlier in the Late Mesolithic during which there was interplay between defined foraging territory, networks of favoured locales, and repeated use of particular sites.

Bradley (2008:46-47) stated that recent radiocarbon dating had permitted greater chronological precision with regard to developments at the beginning of the Neolithic period: sedentary settlement associated with sustained forest clearance and cereal cultivation. It was no longer appropriate to draw close comparisons with south Scandinavia, as the evidence for long-term contact was very slight with little to suggest a prolonged period of acculturation. Furthermore, expansion of settlement that had commenced *c.*4000 calBC appeared to have been curtailed after approximately three hundred years, the result of a number of factors affecting the initial impetus of the new economy. This, and the fact that there was an interval before others could extend their distribution from the Continent, pointed to a Mesolithic background to the insular Neolithic. Bradley considered social factors may have been equally significant. If the earliest Neolithic was a time of rapid expansion, that process could have led to conflict over territory and resources between new settlers and the indigenous population, and within the latter. Collective tombs and bones showing signs of injuries caused by arrows and clubs point to this.

Thomas (2013:425-427) is of the view that the Neolithic should not be identified exclusively as a set of material things but as something that was performed, and has suggested its beginning saw a change in the character of social bonds. The incorporation of artefacts, architecture and animals stabilised social relations, extending their duration while enhancing separation between different social units. He argued that a significant development was the transformation of relatively acephalous and amorphous communities of hunter-gatherers into more tightly defined territorially-based groups, facilitating both the accumulation of livestock and other forms of wealth. Middens associated with this process were seen as new locations for social aggregation and the assembling of material things. They contained the durable traces of the past, and also served as reminders of previous shared activities. Thomas argued for subtle appreciation of the temporality of change in the Mesolithic-Neolithic transition: different aspects of transformation proceeded at different velocities and degrees of acceptance, with initial Neolithic innovations being followed by a series of unintended consequences played out over a long time.

During the Early Neolithic, if different animal species were introduced into different landscapes, cereals gardened and wild plants gathered, Thomas (2013:426-430) thought it probable that these activities were undertaken by task groups integrated at a higher level, the social group being much larger than the nuclear hunter-gatherer family of the Late Mesolithic. Of the new places established, timber halls are significant because they arguably relate to new social entities. He noted that their construction began a generation

or so after the first appearance of Neolithic artefacts; and drawing on the concept of the house societies which tend to form at times of rapid social and economic change, he considered it possible to identify a widespread pattern in which they coincided with the formation of corporate social units. It was argued that their establishment provided a means by which livestock, cereals, prestige goods, and other valuables could be accumulated without being depleted by the demands of generalized reciprocity. Substantial middens with cereals and domesticated animals were built up (Bradley 2008:45). In many cases, these new developments occurred at Late Mesolithic sites with long histories of occupation, such as Dorstone Hill (Thomas 2017).

To Tilley (1994) it had become increasingly clear that the terms ‘Mesolithic’ and ‘Neolithic’ as a means of characterizing different economies and social relations of production had outlived their usefulness in archaeological discourse. The apparent hiatus between the final Mesolithic and Early Neolithic was a product of these terms — “all kinds of ‘transitions’ now seem required to provide mediations between them from supposedly highly mobile ‘simple’ hunter-gatherers to ‘complex’ settled farmers”. He noted general acceptance that British Mesolithic communities were in no sense less ‘complex’ than those in the Neolithic, and that the range of variation between social groups — economic, social and ritual — was equally great. Furthermore, there was no reason to link the building of monuments with settled life and production of an agricultural surplus; a pastoral surplus which does not require being settled is “perfectly possible”.

Garrow (2010) saw recent debates concerning mobile or permanent occupation within the Neolithic as unnecessarily polarised; and argued that the issue should be considered with respect to the degrees and qualities of sedentism in evidence during the transitional period. Marshall (2006:158) agreed, adding that sedentism should not be measured in terms of presence or absence. Boyd (2006:164-178) suggested it productive to view sedentism as a relationship between human communities and landscape use — one with “many dimensions and qualities, which can change in a variety of ways over time”. Cummings (2010) saw Neolithic farmers having particular views not radically different from those of the preceding Mesolithic hunter-gatherers, and that it was in the nature of the evidence that contrast between them was created.

22.2 INDEPENDENT, ADOPTED, TRANSPLANTED OR MIXED

There are three main groups of theories as to process: (1) ‘population influx’ involving colonisation from the Continent by farmers whose lifestyle is seen as responsible for most, if not all, of the changes in subsistence and material culture (Sheridan 2000, 2007,

2010); (2) 'population continuum' involving the adoption of a Neolithic farming way of life by indigenous hunter-gatherers without any significant influx of Continental incomers (Armit and Finlayson 1992; Thomas 2004, 2013); and (3) 'population co-existence', the presence of both incoming farming and indigenous hunter-gatherer communities participating in the transition through interaction and competition (Mithen *et al.* 2007; Cummings and Harris 2011; Robb and Miracle 2007). To some extent different processes have been sought in Britain and Ireland, acculturation having been the more favoured interpretation in Britain and colonisation in Ireland (Cooney 2001). Debate remains active; and the style and character of the arguments of the leading protagonists have been rather different (Whittle *et al.* 2011a:849).

The general view appears to be a combination of these: that package elements were introduced to Britain through contact with Continental communities, and by colonists; though in this context, Richards and R. Jones (2016:5) have commented with respect to the Orkney archipelago, "(w)ithout doubt the first agriculturalists had to arrive by boat ... however, was the 'Neolithic' really brought ... by 'colonists'?" When presented, the package elements appear to have undergone a process of varying selection and adaptation by the insular communities who themselves would have exhibited degrees of diversity. While the playing out of these eventualities is reflected in the archaeological record, what is less obvious is the complexion of the people in the ongoing process: how did indigenes change? how did colonists change? and what of integrated groups? A further dimension is provided by Sturt (2010:32) who has argued that archaeology needs to appreciate change in the Neolithic at a variety of different rates and scales, and within a number of different mediums. He saw this demonstrated particularly in the Fenland Basin between 6000 and 3000 calBC where, at one level, new cultural elements arrived, changing people's lives quickly but with apparent subtle difference from that of the wider East Anglia and further afield. In his view, once this is accepted, "it becomes possible to see that not all Neolithics need be the same, but that it is possible for them all to be Neolithic".

The Neolithic is considered by Thomas (2013) to have been the outcome of an encounter between two quite different social traditions: the insular Mesolithic and the continental Neolithic, both dynamic entities carried forward by the practical activities of human beings. He has argued that the innovations people in Britain first experienced at the end of the 5th millennium calBC were the outcome of a long sequence of earlier change and structural transformation generated in a series of different Continental contexts; and that it was entirely possible that in Britain the Neolithic came to spread as more or less integrated and 'package-like' in different chronological and geographic settings. As

Bayliss and colleagues (2011:840) have commented, not all elements were adopted simultaneously in all regions: for example, in some areas but not others there appears to have been a ‘pre-monumental’ Neolithic, with earthwork enclosures appearing later. This study adds that within the various geographic settings, elements of the package changed significantly both in themselves and their relationships.

22.3 NEOLITHIC ‘PACKAGE’ OF PRACTICES AND THINGS UPTAKE AND LIFESTYLE

A number of elements seen to have originated in the Continent constitute on a part of the ‘package’. In the archaeological record, arrival of the Neolithic is marked by the near simultaneous change in diet from one based on hunting and gathering to mixed farming of domesticated livestock and cereals associated with increased forest clearance and a more sedentary way of life. There appeared substantial structures of wood, earth and stone; ceramics; flint mining; and range of groundstone tools including polished stone axe-heads. With regard the latter, however, the existence of an established tradition of ground axe-head manufacture within the British Mesolithic challenges the view that that the polished axe-head *per se* was one of the instruments of Neolithic conversion; rather, it would appear that was taken up was an ideology embracing the nature of the rocks, such as jadeite, omphacite and eclogite with their green colouring and banding from distant Alpine sources (Walker 2015).

The initial phase lasted approximately three hundred years before monument construction and the widespread utilisation of local axe factories; therefore, as many as twelve generations of people lived in a landscape which, in archaeological terms at least was very similar to that of the Late Mesolithic. In coastal areas there is evidence for reduction in fishing and greater use of terrestrial resources, Cramp *et al.* (2014) referring to research showing this to have been an “immediate replacement”. Domestic livestock were raised on the hoof, and wild plants appear to have made a considerable contribution to food supply. Procurement, preparation, serving, consumption and disposal continued to demonstrate different identities and the creation, maintenance and further development of social order (Bradley 2008:43-45; Brown 2007:1048; Cummings 2010:118; Pollard 2008:7; Schulting 2008:90; Thomas 2013:418).

The other part of the package concerned practices associated with a number of the material elements (e.g., pit deposition, timber halls, long barrows and enclosures) connected to transformations of ideology, personhood, and social relations. The potential symbolic significance of cattle can be traced back to at least the 38th century

calBC, in the form of the cattle skull laid on the old land surface below the Ascott-under-Wychwood long barrow during construction (Whittle *et al.* 2011a:868).

Population movement is not considered extensive. It has been assumed theoretically that hunter-gatherers needed to have been semi-sedentary and semi-complex before adopting new ways; and Early Neolithic populations in southern Britain are regarded to have been sparse and 'relatively' mobile (Whittle and Pollard 1998:231-232). However, ethnographic evidence suggests that mobile hunter-gatherers can be receptive to new ideas and techniques, and flexible in resource procurement. The issue, therefore, is the signature that sedentism might take in terms of site nature and settlement pattern.

The categories of evidence for examining settlement and subsistence in the Early Neolithic are houses and other timber structures; pits and middens; faunal and plant assemblages; suites of environmental data; and more recently, isotopic analyses. There are, however, differences of opinion on specific features: between those who tend to see houses and other timber structures as the permanent residences of sedentary people (e.g., Sheridan 2010) and those who interpret the same features as constructions of people still in the process of transition, seeking to create places of assembly and new foci of emergent identity (e.g., Brophy 2007); between those who see pits as potentially the enduring residue of prolonged tenure of place, marking the comings and goings of a population recurrently and to varying degrees on the move (e.g., Garrow 2010; Pollard 1999); and between those who see the presence of mixed farmers from the outset and those who claim much more gradual change. Subsistence activity and related settlement implications reflected the adoption of agriculture and pastoralism and their requirements. At least some of the community would have been restricted in their mobility by the demands of cereal production, and to some extent pig keeping. Such clues to changes through time, however, are scattered. On present evidence, the scale of activity in the landscape was probably quite small in the period before the late 38th century calBC. Even the 20m-long timber halls could have been erected by quite small workforces, or short-term aggregation if more hands were required (Whittle *et al.* 2011:867-868).

Chapter 23 BRITAIN AND CONTINENT REGIONAL DEVELOPMENTS

From the late 5th millennium calBC and well into the 4th, Whittle and colleagues (2011: 4-5) have identified two principal and entwined cultural “threads”: Mesolithic hunter-gatherers in Britain and adjacent parts of continental Europe; and settled Neolithic farmers who appeared in central and western Europe as the LBK (Linearbandkeramik) by the middle of the 6th millennium calBC. In the latter region, while the LBK was associated with profound cultural change in terms of new practices and ways of thinking, the Mesolithic communities already there were part of the change processes involved, resisting, delaying, adopting and altering slowly or quickly according to local circumstances. Accordingly, within the context of shared culture, as well as wide-scale differences, there would have been regional divergence, further complicated by the fact that the new cultural identities overlapped geographically with areas of primary (or LBK and post-LBK) and secondary Neolithic settlement. This constituted the LBK world, one focused on the rectangular timber longhouse (Fig. 23.1)—a ritually constituted structure with both domestic and ritual functions, designed to unify communities or social units. Settlements already included ditched enclosures, the shape of circuits governed by the objective to enclose, or ‘wrap’, a particular area. They can be entirely enclosed by earthworks, or instead be formed with the aid of steep slopes, watercourses, and/or palisaded with post-built fences. Through a combination of such elements, they could assume the form of a circle, oval, spiral, triangle, large D-shape, or keyhole (Fig. 23.2). There were also differences in the manner of ditching associated with circuits and the nature of causeways (Andersen 2015:797).

Around the middle 5th millennium calBC a different pattern appeared over a wider area — north into Scandinavia, and west into Britany and central-west France — one of dispersed settlements or occupations that did not include the timber longhouses, and with many more enclosures and a range of constructions containing the remains of the dead. Varied interaction between newcomers and the people continued, constituting the developments of much of the mid- and later 5th millennium calBC, further complicated by the fact that the new cultural identities overlapped geographically with areas of primary and post-LBK development and secondary Neolithic settlement. This was the time the British Isles were drawn into wider processes of change with hunter-gatherer lifeways being replaced by those Neolithic, but circumstances differing greatly within its own borders (Whittle *et al.* 2011: 4-5).

23.1 CONTINENTAL EUROPE

As noted, settling down occurred initially in the LBK (Late Mesolithic/Early Neolithic) characterised by timber longhouses and evolving into other structural settlements with enclosures. These times saw not only diverse cultural shifts but also significant processual change characterised in some cases by stylistic unification through interaction, this being effected within a few centuries. Demise of nucleated longhouse settlements was followed by a scarcity of identifiable house structures; by other markers of residence or marking of place, often characterised by aggregations of pits and enclosures; and by settlement more extensively distributed across the landscape. Subsistence changes, especially with respect to the location and intensity of cereal cultivation, would have differed from area to area but with cattle remaining important. As a consequence, there was considerable variation in settlement histories of the continental foreground to the British Isles.

In Lower Saxony and central Germany, Michelsberg communities expanding north, west and south out of the Paris Basin (c.4200-3500 calBC) had already produced enclosures. From c.4000 calBC, clearance and monument building began in the Netherlands (Whittle *et al.* 2011a:854-855), and in southern Scandinavia, Neolithic settlement was gradually established. More intense clearance and more frequent monument building belong to the end of the Early Neolithic and beginning of the Middle Neolithic c.3500 calBC, megalithic long barrows having been constructed since c.3800 calBC. Enclosures appeared in the northern TRB Funnel Beaker communities contemporary with these.

This period saw society restructured with basic units shifting from the village in a segmentary society towards groups for which supra-local enclosures had a central function, a development seen over wider tracts of western and northern Europe. Wide spaces between restricted Neolithic enclaves in Belgium were filled in by farming communities, and all final Mesolithic groups transformed into the Michelsberg way of life (Louwe Kooijmans 2007:297). It is likely that these hunter-gatherer societies were diverse: many being relatively egalitarian and strongly averse to the acquisition of wealth; others having different degrees of social differentiation. The proximity of Neolithic societies is likely to have been corrosive of such arrangements, implanting the desire for goods and prestige through various forms of contact. It was the social transformation that this engendered, towards bounded wealth-holding groups, which enabled Mesolithic communities to adopt agriculture. It is clear, however, that they sometimes chose to combine wild and domesticated resources rather than become entirely dependent on cultivation and herding (Thomas 2013:420).

Michelsberg communities evidence significant genetic discontinuity with the preceding Middle Neolithic cultures of eastern France. DNA markers indicate few LBK-derived maternal lineages, but rather a combination of farming communities in southwestern France together with an introduced hunter-gatherer legacy (Beau *et al.* 2017). Expansion of this cultural complex meant a shift of the earlier agricultural frontier which would have had its effect on local communities. Evidence suggests some cultivation, hunter-gathering and husbandry, especially of pig. Flint mines and enclosures appear to have been foci in a 'hierarchised' settlement pattern. Regions to the south show many of the same post-longhouse changes. Post-defined residential or domestic structures become much rarer; ditched and palisaded enclosures are a recurrent feature. In loess areas previously occupied by the LBK and successors, both pit sites and enclosures can be both substantial and locally abundant. Some sites are in the valley bottoms, like earlier longhouse settlement, and others on the valley sides or plateau edges, indicating more extensive use of the landscape than the longhouse system, and in part the possibility that some of these sites had a defensive role. Uninterrupted change or expansion, however, may not have characterised all regions (Sheridan 2010; Whittle *et al.* 2011a:857).

23.1.1 Continental Michelsberg Culture

Towards the end of the 5th millennium BC, a period of both diverse cultural shifts and significant change as noted, Michelsberg communities occupied an extensive band of territory along the continental coastline immediately adjacent to Britain. The nature of their settlement types, apart from pits and enclosures, remains unclear. Expansion of communities possibly dictated by subsistence requirements (location and intensity of cultivation) and/or change (increased importance of pastoralism) may account for the demise of nucleated longhouse settlements and scarcity of identifiable house structures. Burnt daub with wood imprints provides evidence for structures which, in contrast to the earlier large-dwelling LBK tradition, left almost no trace. They may have been smaller, implying another form of residential sharing and possibly signalling a more mobile system.

Michelsberg farmers cultivated a less diverse crop spectrum than those of contemporary cultures and the preceding Bischheim groups, and were concerned with stock breeding. Four cereals were grown: emmer, einkorn, naked wheat and barley, supplemented by wild plants: hazel, crab apple and sloe. While poppy and flax clearly played a major role in the agricultural systems of contemporaneous neighbours, there is no Michelsberg evidence for cultivation of these oil- or fibre plants. Poppy seed has been found at a number of earlier, c.5500 calBC, LBK communities in the Rhineland; and in southern

Iberia c.4000 calBC, grass bags of poppy seed capsules accompanied the dead. Apparent absence of poppy at Michelsberg sites could be of significance, possibly indicating shamanistically restricted access due to its medicinal, intoxicating and ASC-invoking qualities; and fibre needs could have been met by wool-sheep and possibly the wool-pig. Charred wild plant species, representing potential field weeds, are extremely rare from Michelsberg sites compared with the preceding LBK phases. This may be the result of 'slash and burn' cultivation necessary to achieve satisfactory yields on the loess soils by reducing weeds; if so, there would have been a constant demand for new land as fields shifted regularly (Katzman 2011; Kreuz *et al.* 2014:83-95).

Cattle, pig, sheep, goat and dog are the domesticated animals regularly found at Michelsberg sites, cattle often dominating and a tendency for more sheep than goat. Horse appears to have been an innovative element of Michelsberg stock farming. Wild animals were exploited and included deer and fox. Palynological and archaeozoological data indicate opening up of forest and increased emphasis on pastoralism. This would explain a reduced crop spectrum compared with the preceding Bischheim culture as well as with contemporaneous cultures of the general region. In this context, a model proposed for the Michelsberg envisages two groups of people: sedentary farmers on the one hand; and, on the other, itinerant herdsman practising transhumance with large herds, both groups returning to enclosures for seasonal communal feasting, marketing and related social activities (Kreuz *et al.* 2014:91-95)

Graves, with rare exceptions, are also almost unknown; however, major changes occurred during the Michelsberg in funerary practices involving inhumation of complete human skeletons as well as parts of one or several individuals in enclosure ditches and circular pits. Two distinct inhumation positions are described: "conventional", where the subject is placed on its side, both superior and inferior members folded up against the chest; and "non-conventional", the bodies appearing to have been thrown into pits without any particular treatment. Two separate systems of selection are evident: juveniles buried to accompany the main deceased; and adults (mostly women) buried in isolation, several having suffered a peri-mortem act of violence, body parts having been removed or placed in a non-anatomical position. A pit at Rosheim (France), for example, contained the crouched remains of an adult woman whose death had been caused by a blunt impact to the skull. She appeared to have been laid onto a carefully placed packing of clay, pottery and animal bones, with her legs against a quern. Differences were noted in the maternal gene pool of individuals buried in the two burial positions. The relative genetic isolation of these sub-groups echoes social distinction and also sacrifice — the

ritual murder of individuals outside of any funerary framework, in which the victim is the vehicle of a supernatural transaction that establishes a direct link between men and some deities or spirits (Beau *et al.* 2017; Kreuz *et al.* 2014:73-75; Vanmount 2007:111; Whittle *et al.* 2011a:854-855).

Enclosure construction represents co-operative, communal effort. These monuments are also considered in the context of 'ritual co-operation' and 'ritual collectivity' as an expression of cultural identity, and may have functioned as ritual centres for sustaining social cohesion. Association with ritual is evidenced by deposition of deer heads, aurochs horns, whole vessels, querns, human bones or skeletons, and articulated parts of animal carcasses, all of possible symbolic significance. In many cases, consecutive ditches were dug for this purpose before sealing the first. Occasionally, they contain more structured deposits of human bone such as adult skeletons surrounded by those of children, considered connected with cult or ritual practices. At the time of their construction, the remains of the rarer, earlier Neolithic earthworks or structures (houses?) may still have been visible within enclosures. This would have referenced ancestral occupation of the locations concerned, creating and enforcing a sense of group identity within the Michelsberg region (Kreuz *et al.* 2014:91-95).

During the Michelsberg, there were several changes in material culture, one of which is reflected in the appearance of flat-bottomed carinated pottery and that with decorative barbotine moulding. Groundstone equipment indicates production of flour from cereals and pulses. Sites have produced flint tools of larger dimensions than in the Earlier or Middle Neolithic, so that for the first time the raw material had to be obtained from flint mines with shafts and gallery complexes over ten metres below the surface. The flint industry was no longer concerned with blade production; instead, expedient flake-based common-tool production can be distinguished from that of specialised standardized objects. Leaf-shaped arrowheads predominated. Flake axes were a typical element of the lithic assemblage (Vanmount 2007:112). Another specialty were tools made of mountain crystal (clear quartz) considered prehistorically (and ethnographically) to have healing and magical qualities. As such tools are not particularly functional, in Michelsberg context it has been suggested that they were employed metaphorically in symbolic and ritual contexts, readily recognised as such and distributed by inter-elite exchange. Finds of long, polished jadeite axes (Fig. 23.3) appear to have had a similar purpose as they are not found as lost objects or in settlement waste but mostly as hoards. The raw material came from extraction sites in the Alpine foreland to the east between 1500 and 2400m above sea level. Difficult access of this, the time-consuming tool

production involved and hoard deposition, as well as rareness, supports interpretation of these objects as signs of a conceptual value within the ritual beliefs and practices of Michelsberg society. In these axes and quartz tools, long-distance transfer and supra-regional trade networks are implied. Trade routes accessing northern regions are evidenced by antler tools. In contrast to the cultures of Southern Europe and the Alpine region, copper finds are very rare at Michelsberg sites, suggesting existence of ‘cultural borders’ of exchange in terms of particular objects, resources and practices, or restricted access in these regards (Kreuz *et al.* 2014:75-76).

In summary, settling down occurs initially in the Late Mesolithic/Neolithic (LBK), characterised by timber longhouses, evolving into other types of settlement incorporating causewayed enclosures, but involving a variety of trajectories from Spain to Denmark, slightly different timeframes, and with some Mesolithic features being retained.

23.2 BRITAIN

A longstanding tendency among archaeologists to treat the Neolithic as a coherent entity defined across the whole of Britain by a fixed set of criteria was criticised by Thomas (1993c:390) who argued that the period was marked by considerable regional variation — the period had to be “broken down, and recognised as something fragmented and dispersed, localised in its effects”. Subsequently, he identified a broad spectrum of diversity in what he termed the Mesolithic Prelude to neolithisation (Thomas 2013): the mesh of relations between people and places, in some cases making durable marks on the landscape, whether leaving a trace of their presence, or simply as a token of their relationship with the non-human agencies of the place (e.g., deliberately-dug and backfilled pits, and tree-throw holes, filled with hearth scrapings, flint waste, charcoal and animal bones); settlement and patterns of mobility; economic/exploitation strategies involving varying degrees of delayed-return; diet; and possibly a range of social structures and cosmologies. This made it unlikely that the indigenous communities would have ever been forced during a short period of time into any shared pattern of economic change; and for many with sharing central to the way of life, there would have been a built-in resistance to adoption of an alternative based on domesticated plants and animals. Thomas saw these mechanisms as possibly not indefinitely resistant to external pressures, but noted that while Mesolithic societies in Britain do not appear to have exchanged exotic items among themselves, once fine goods of continental origin began to circulate, tensions between egalitarian traditions and growing acquisitiveness would have developed. Similarly, once the implications of amassing herds of animals that could be converted into gifts and feasts began to be appreciated, there would have been

“growing incompatibility between the imperative to share and the desire to accumulate”. These frictions may have taken generations to work themselves out, always against the background of continental developments and changing conditions of contact, but not necessarily gradual in the sense that individual communities shifted imperceptibly from Mesolithic to Neolithic (Thomas 2013:213-214).

Emergence of the Neolithic had features in common with Continental developments, the initial phase lasting approximately three hundred years before monument construction and the widespread utilisation of local axe factories. As many as twelve generations of people, therefore, lived in a landscape which, in archaeological terms at least seems to have been very similar to that of the Late Mesolithic. During this early period, if different animal species (e.g., cattle, sheep and goats, pigs) were introduced into different landscapes, cereals gardened and wild plants gathered, these activities were probably undertaken by task groups integrated at a higher level, and the social group much larger than the nuclear hunter-gatherer family of the Late Mesolithic (Thomas 2013:430). Domestic livestock were raised in a settlement pattern based on mobility. Wild plants appear to have made a considerable contribution to food supply. Evidence is lacking for significant cereal production; radiocarbon data suggest limited cultivation at c.3950-3800 calBC, with the majority between 3800-3000 calBC followed by noticeable reduction during the Later Neolithic as noted (Bradley 2008:44-45; Brown 2007:1048; Cummings 2010:118).

REDACTIONS

Figure 23.1 Neolithic longhouses (a) Hrdlovka, Czech Republic; (b) Olszanica, Poland; and (c) reconstruction refs: Beneš *et al.* 20; Bradley 1996:243; Beneš *et al.* 2014b

Figure 23.2 Varied nature of causewayed enclosure in Northern and Western Europe
ref: Andersen 2015:798

Figure 23.3 Neolithic jadeite polished axes ref: Google images

Chapter 24 BRITAIN EARLY NEOLITHIC ARCHAEOLOGY

Phase 1 is one of extreme diversity in the context of the coming together of people from two very different cultures which themselves internally exhibited further diversity. The Continental communities originated from a range of physical environments along the coast of Northwest Europe where variously selected Neolithic elements had earlier been adapted and integrated. Similarly, environmental variation was reflected in the diets, mobility, skills and economic practices of the British Mesolithic people. Accordingly, it is expected that developments along the path to sedentism in Britain would reflect similar diversity, not only in the combination of elements retained from the respective cultures and their adaptations, but also in stage of development from region to region. With regard to worldview and related behaviour, both groups would have had their own; yet, given the Mesolithic origin of the LBK and ongoing interaction with such groups, there may well have been some degree of underlying commonality.

The approach taken in presenting Phase 1 is to discuss generally the features — themes and motifs — of this early period considered to reflect the respective milieux, to identify possible underlying continuities in practice. In doing so, kept in mind as noted previously, is that while settled life emerged variously in Britain during the Neolithic and Early Bronze Age, the transitional process from hunting, gathering and fishing to farming, pastoralism and sedentism was set in train earlier, during the preceding Late Mesolithic. Scholastic opinions are provided and sites illustrating specific developments referenced. As explained earlier, ‘place’ is considered to embrace a site, a locale or a lived-in territory, and discussed in the context of degrees of settled life at the beginning of the sedentism continuum.

Contact between the two cultures during the immediate pre-BI Neolithic period would have been at least sporadic and a two-way process, significantly increasing afterwards (Thomas 2013:42). Particular attention is paid to expected effects of this — social, ideological and political — on the indigenous British: initially, with respect to (a) the small number who would have had direct contact with Continental communities; and (b) the majority, for whom contact would have been second-hand through them; and subsequently (c) arrival of the Continentals in large numbers. There would also have been effects on the migrants themselves. Account is taken of the Kotsakis (2005:13) view that the Neolithic be considered in terms of a dynamic place of mutual exchange,

where fluidity must have been prevalent, and where identities and accompanying material culture were constantly reformulated. Instead of a Neolithic culture winning over the Mesolithic, the process might well have happened in a fluid landscape with multiple frontiers and conflicting hybrid identities. This study considers this to have been the case in Britain. Furthermore, it is expected that the hybrid identities would have emerged at varying pace, very much dependent on the individuals driving take-up or rejection of 'package' elements; and resulting, at any one time, in differences in both the nature/mix of those elements and their stage of development within the overall process of neolithisation, despite the time that had elapsed since its initiation. This is certainly evident in the case study sites used to illustrate the three phases of the thesis model.

24.1 SETTLEMENT

Two views would appear to typify settlement during this early period: that both sedentary and mobile people use many different sites or locations in the landscape for many different reasons (Milner 2005:35); and that sedentism may not preclude a significant degree of mobility. There is a range of mobilities (daily, seasonal, inter-annual, generational and longer-term), and different temporal and spatial scales of mobility can characterise sedentary settlements (Halstead 2005:38-39). When examined in detail, evidence from Late Mesolithic and Early Neolithic sites suggests mixed processes of cultural transformations and significant variability. As Borić (2005:27) noted, the break with the past in the Early Neolithic can be less sharp than usually assumed and may relate to the importance of local knowledge and cultural memory in particular locales and practices. This, in turn, would suggest that between differing communities there could also be commonality of views with respect to 'knowledge', and similarity of memories associated with particular types of places.

occupation sites The density of Late Mesolithic flint scatters in an area indicates the sites may have been visited repeatedly and/or quite intensively used (Oswald *et al.* 2001:107; Thomas 2017). Places in the landscape were also marked in other ways such as with the erection of posts, highlighting their continuing importance. Cummings (2010:115-116) considered there to have been ongoing reaction to internal social politics or ways of doing things during the transitional process; and for some hunter-gatherers, return to place may have been a way of emphasising social identity in a time of change, firming connection with specific places of long-time significance, and maintaining or establishing their place in the cosmos. Substantial Early Neolithic midden development associated with cereals and the bones of domesticated animals are recorded from the Thames valley and its hinterland, such as at Horton and Yarden (Bradley 2008:45).

Sherratt (2005:141) would see in this a recording of activity foci that created fixity within what was a fluid series of movements. In this context he has suggested that the longhouse may have simply been one such focus within Neolithic settlement broadly defined, the calorific input of associated cultivated cereals to diet compared with wild resources possibly being quite modest and primarily of ideological significance.

Late Mesolithic structures The apparent enduring importance of some Late Mesolithic locations into the Early Neolithic may have related to their multi-purpose use, as implied by the number of different site types associated with diverse patterns of habitation, task grouping and artefacts. Substantial post-built houses in widely distributed locations — Barnes (Lothian), Newton (Islay), and Mount Sandel (Co. Derry) — may have been seasonally occupied. Late Mesolithic structures at these sites, several with sunken floors containing midden deposits and hearths, suggest repeated occupation over long periods, to the point of creating continuity across generations (Tilley 1994:198; Warren 2007:316). Hence, elements of what was occurring in Late Mesolithic Britain were in line with what was to happen next in that structures with associated ideology were present and, while not substantial, prepared the way for incoming ideas and practices. In fact, these developments can be seen much earlier in the Mesolithic at sites such as Star Carr, North Yorkshire (c.9000 calBC) and Howick, Northumberland (c.8240-7450 calBC). At Star Carr there was a wooden structure approximately 4m wide for which radiocarbon dating indicates an intermittent use-life of over 200-500 years. This site is over 80 times larger than the small sites considered typical of the period (Conneller *et al.* 2012; YAHs 2017). Howick revealed evidence of a large circular wooden structure with associated pits. The complexity of the site, its robust structural form, successive rebuilding and lack of any observable stratigraphic hiatus strongly suggest permanent or semi-permanent occupation over many years (Waddington *et al.* 2003).

Within the network of places, natural topographic features probably formed anchors or landmarks around which familiarity could develop. Durable marks were left on the landscape, including deliberately-dug and back-filled pits; and natural tree-throw holes, containing cultural fill (Chatterton 2006:116; Tilley 1994:199; Tolan-Smith 2008:149). Midden material represented a deliberately positioned trace of such human occupation, and thus a means of establishing connections between separate episodes of activity on the site (Thomas 2013:231). In aggregation around critical resources such as those associated with shell middens, Sherratt (2005:143) saw a Mesolithic story of “settling down”.

Continuity of place, however, does not depend on regular repeated use. The apparent enduring importance of some locations may have related to their multi-purpose use, as implied by the number of different site types associated with diverse patterns of inhabitation and task grouping. Two large Mesolithic flint scatters at Macharioch and Machribeg on southern Kintyre, for example, represent either episodes of intense and concentrated activity, or repeated visits over time (Cummings 2010:117). The Downton site in Wiltshire exhibits strong evidence not only for repeated use but also for occupation: a series of 23 stake holes in two discrete areas defining semi-circular or oval areas, which may be the remains of light shelters with supporting stakes driven into the ground, together with concentrations of charcoal, worked flints and cooking holes (Higgs 1959:231).

Mesolithic-Neolithic continuity of site occupation Major flint scatters in three areas studied by Tilley (1994) — southwest Wales and the Black Mountains of the southeast, and Cranborne Chase in Wiltshire — indicating repeated use of the sites concerned from the earlier to the later Mesolithic, also contain Neolithic material and/or exhibit Neolithic presence in the same locale. In Wales, the Gwernvale chambered monument was constructed in a location occupied repeatedly during the Mesolithic, which Tilley (1994:113) considered “suggests strongly something more than chance”; while Mesolithic stone artefacts at Cefn Glas were found just to the south of a Neolithic hut. The spatial distribution of the Cranborne Chase locales is mostly clustered in a broad NE-SW band running across the centre of the Chase just north of the Dorset Cursus and main concentration of long barrows, suggesting they mark an important axis of movement across the landscape which later, in the early Neolithic, became formalised and culturally embedded by monument construction. The overall evidence of Mesolithic and early Neolithic locales here suggests continuity of both settlement and patterns of exploitation of animal and plant food resources (Tilley 1994:145-147). Care (1979:100) has noted that Mesolithic activity may have substantially affected the forest cover, creating regions of more open country on the chalk downland attractive to later Neolithic occupation. Late Mesolithic structures together with Neolithic activity has been identified at Belderrig, Ireland (Warren and Rice 2007). A number of sites throughout the British Isles evidence such continuity of occupation into the Early Neolithic with associated longhouse and long barrow structures: Balbridie, Claish, Warren Field and Isle of Islay, Scotland; Lismore Fields, Yarnton, White Horse Stone and Pilgrim’s Way, England; Llandegai, North Wales; Wideford Hill, Orkney (Davies 2009; Maričević and Mithen 2016; Richards and Jones 2016). At Wideford Hill and Yarnton both timber and

stone structures occur together, a co-existence recorded throughout Britain and Ireland during the Early Neolithic (Richards and A. Jones 2016:16).

A rich assemblage of primary Neolithic material, principally lithic tools and waste, was identified in the buried soil sealed beneath the megalithic long barrow of Ascott-under-Wychwood in the Cotswolds. It produced evidence of occupation during both the Early and Late Mesolithic as well as the Neolithic, though the precise foci of activity were not consistent throughout suggesting this was recurrent and episodic. Later Mesolithic material was also concentrated in an adjacent tree throw, perhaps a landmark or meeting place, or a feature of some symbolic significance. Subsequently, a timber structure composed of a line of five posts with one offset outlier was set up in roughly the same location. Dated to the last quarter of the 5th millennium calBC, its construction was possibly prior to the arrival of Neolithic material, but while occupation was intermittent and discontinuous, there were elements of continuity into Neolithic (Thomas 2013:230). A second small timber structure with six postholes was built to the north of the first. In the space between the two was a hearth and adjacent pit. The latter was backfilled with ash from the hearth, burnt pig bones, burnt flint flakes and unburnt sherds from at least eight pottery vessels. Thomas (2013:231) commented that it was hard to identify these structures as exclusively 'domestic' or 'ritual' in character: the southern one might be described as a windbreak, small palisade, façade or screen, or one side of a hut, while that to the north appeared too irregular to constitute either a hut or an avenue. Together, however, he considered they created a durable arrangement of space, lending a particular framework to the discontinuous activities performed in their vicinity, and that these included ritualised elements.

At Dorstone Hill (Herefordshire) there is similar Late Mesolithic-to-Neolithic continuity. Three long mounds arranged end-to-end included a mass of burnt clay and timber sealed within a layer of turf revetted by a timber palisade over which was a stone cairn. They appear to have been constructed over the *in situ* remains of one or more timber buildings: postholes and stakeholes were found beneath the central mound, while burned structural timbers have been identified in several locations. The density of associated Mesolithic flints indicates that the site may have been visited repeatedly or quite intensively used, and possibly extensively deforested prior to construction of the monument (Oswald *et al.* 2001:107; Thomas 2017). Places in the landscape were also marked out in other ways, such as the erection of posts as at Stonehenge (Cummings 2010:115-116).

Loveday (2006), suggested that while there was an overwhelming presence of woodland in lowland Britain that would have readily furnished material for house building, turf

may have been used instead. It was available, easily obtained and readily prepared. Furthermore, the speed at which houses could be constructed with it fitted well with a pattern of small, localised and often non-permanent clearances of a population involved in a subsistence strategy of shifting agriculture. The earliest houses, in fact, did not appear to employ earth-fast posts, and the presence of these structures is indicated by gaps in the distribution of excavated pits (Bradley 2008:45). Later, however, four substantial timber houses appeared at Horton (Berkshire) displaying two different construction styles: two survive as groups of post-holes; the others with trenched foundations indicating the external wall, and an internal partition dividing both buildings into two rooms. All four are roughly based around six posts (Appendix H refers). Associated artefacts included: pottery sherds and fired clay; charred plant seeds; animal bone fragments; polished bone points, a fragment of a Langdale axe; decorated pottery; and evidence of feasting (Barclay *et al.* 2012:1-2; Barclay and Chaffey 2014:24-30).

Early Neolithic monuments The Neolithic package included long barrows/mounds, large monuments representing major components of the landscape, which had their LBK origin c.5500-4000 calBC, many having been built later associated with the TRB and the Michelsberg traditions, probably during the 4th millennium BC. In plan, these structures reflect the traditional segmented form of the LBK longhouse (Bradley 1996). While there is a range of views as to their purpose (e.g., Hodder 1990; Sherratt 1990), in Britain they also functioned as chambered tombs. Flints mines on the Sussex Downs have been assigned to the beginning of the Neolithic (Bradley 2008:45).

24.2 IDEOLOGICAL

worldview While Mesolithic people may have understood animals to be human-like, and their relations with them social, they remained separate from human communities. Neolithic societies in Europe, on the other hand, though extremely diverse, were generally characterised by a new kind of relationship with non-human realms. Socialisation with elements of the material world (e.g., plants and animals) as supernatural entities could become integral to social formation; and there was qualitative difference in the ways these were used to articulate social relationships, to extend human presence, and to frame and channel social interaction. Neolithic societies are consequently more visible, manifesting themselves materially in structures and their material component manifests itself as tell mounds, longhouse settlements, ceramic assemblages, and monumental structures. Neolithic societies ‘made themselves at home’ in the world through construction and use of material things — assemblages of buildings

and artefacts provided the framework for integrating what may have been otherwise very diverse human populations (Thomas 2013:421-422).

The Continental communities contributing to the BI Neolithic were placed (at that time) at the end of a long process worldview development that had originated in Southwest Asia together with an agricultural way of life and progressively brought to Europe, though no doubt with adaptive transformation along the way. Those communities would have taken such ideology with them as part of their package, and as Bradley (2008:43) noted, rituals of Continental inspiration assumed a growing significance in Britain. The indigenous communities certainly had their own, and very early, as evidenced by the range of activity identified at Star Carr, Howick and Cnoc Coig. This is not to be unexpected, given that the British communities grew out of earlier continental groups recolonising more permanently the region following the Last Glacial Maximum whose ideology may well have had underpinning similar to that of the incoming ideas and practices of the Mesolithic-Neolithic transition.

At Star Carr, two particular finds were barbed points made of red deer antler and antler frontlets are made from skulls with the antlers still attached sewn into leather. Many of the barbed points and antler frontlets appear to have been deliberately broken. The antler frontlets are made from red deer stag (male) skulls with the antlers still attached. Two holes were perforated through the skull, the inside of the skull cap smoothed, and the antlers carefully trimmed, perhaps to reduce weight. It appears the frontlets may have been used as headgear by shamans, providing evidence for symbolism and ritual (Conneller *et al.* 2012). The Bad Dürrenberg shaman burial is recalled. A number of the Howick pits contained ochre. One with a clay-lined base was clearly associated with intense fire-based activity (Waddington *et al.* 2003:2-5).

Stratigraphy at Cnoc Coig, an extensive shell midden on Oronsay (*c.*4700-4000 calBC) reflects a long succession of closely spaced occupations centred on a large hearth and associated hut-like structure. Several groups of small human bone, with hand and foot bones predominating, were found. An isolated find included three teeth none of which had apparent anatomical partners, a distribution similar to tooth-dominant bone assemblage of roughly contemporary early Neolithic Dutch sites. Human bone deposition in one bone group was depositionally contemporaneous with seal bones of similar anatomical area, the antithesis of a random taphonomic process and signifying a purposeful cultural act. There were also issues concerning the source of the human bones, and the location of other bones of the skeletons concerned. Possible ties were seen to the ritualistic practice of some bones being recovered (in enchainment or

fragmentation context) for interment in middens after body decay elsewhere (Meiklejohn *et al.* 2005:88-90,102). These features argue for ritual continuity across the Mesolithic-Neolithic transition.

At the Balfarg Riding School, Fife, two adjacent, unroofed structures were both enclosed by a possible fence supported by light posts and had interior timber structures. They are considered to have been used for corpse excarnation. Structures at Littleour and Carsie Mains, lying close to each other and the Cleaven Dyke cursus, could be interpreted as ceremonial enclosures. All are considered to have been constructed 3500-3000 calBC (Brophy 2007: 85-86).

Ralston described the internal appearance of the Balbridie, Aberdeenshire, structure of the same general period as possibly 'like a forest with a roof' with a 'clearance' in the central area, perhaps a symbolically charged metaphor for a community reshaping their world and the ancient woodland around them (Barclay *et al.* 2002:126). The replication of architectural features such as multiple internal timbers and open spaces at more than one site strengthens the possibility that these were values shared across a wider community. They were not farmhouses nor isolated ritual structures; rather they may have been central to everything people did in the Early Neolithic. One recurring feature of the architecture of roofed timber halls in Scotland is an association with mortuary structures, through the mimicking of architectural motifs common in timber structures within long barrows. Ralston notes the similarity between the northern end of Balbridie with the façade of the timber mortuary structure at Loghill, Dumfries and Galloway (Barclay *et al.* 2002:122). The presence of entrances on the short sides of the buildings also has resonance with a variety of early Neolithic burial monuments (Brophy 2007:9-91).

The 'house' standing in isolation may have accommodated an extended family group or a community in partitioned-off kin areas; however, the architecture of the building also structured movement and social and gender relationships and metaphorically represented group mythologies and the cosmos. Internal divisions controlled movement, visibility, and participation in different activities, imposing the rules for everyday life and social structures; timber halls, therefore, may have embodied the ordering principles of Early Neolithic communities (Brophy 2007:92). They were used for permanent or cyclical habitation, as well as offering an arena for various ritual and ritualized activities to be carried out correctly by the correct people. These would have been governed by the clear demarcation of space within the building. The similar subdivision of space, the overall shape of the buildings, and other recurring features suggest that these buildings embodied

a shared cosmology for the people. The close similarities in principles that underlie these timber buildings also point to some kind of regional connection between these structures. At the end of their life the structures were burnt down and apparently abandoned, suggesting that some kind of ‘architectural vocabulary’ may have been in operation. The adoption of the timber hall form may have extended to still larger forms in the centuries around 3000 calBC. Pit-defined ‘cursus’ sites such as Douglasmuir could be interpreted as consisting of two equally sized enclosures defined by timber posts as enlarged ‘timber halls’ with no roof (Brophy 2007:92).

landscape Cummings (2010:115-116) is of the view that the significance of landscapes to hunter-gatherer groups cannot be overstated. Considerable symbolism has been invested in landscape as part of myth creation, the embodiment of founder ancestors and beings, and the medium of knowledge, stories and morality tales. In the context of repeated occupation of places, Thomas (2013:202-203) noted that hunter-gatherers often understand particular places “to preferentially embody vital forces of non-human agencies, making them especially suitable for transformative practices”.

Ethnographic examples show that incoming populations to territory can adopt the myths, stories and histories of its landscape, as well as patterns of land use, instead of creating new understandings of and engagements. The Sundstrom (1996) study found that when people entered a new territory they can gradually adapt their belief systems to the physical environment. Involved was adoption of many ideological traditions of the earlier occupants of the area with whom they were now in contact, as well as transference of elements of their own worldview to the new location. This appears to be reflected in the BI transition as sites of the indigenous groups continued to be used in the similar contexts.

Tilley (1994:202-203) has argued that during the Late Mesolithic, ancestral connections between living populations and the past were embodied in the ‘being of the landscape’ and an emotional attachment to place that had generalized power and significance in relation to human activity as a series of known, named and significant places linked by paths of movement to which populations repeatedly returned during their seasonal rounds. They made relatively little impact on the land apart from establishing clearings around campsites and burning-off areas of woodland to stimulate browse. In the Early Neolithic the relationship between people and the landscape became restructured and took on a different form. Ancestral powers and meanings in the landscape became actively appropriated by individuals and groups through barrow construction, the latter serving to fix and visually draw out for perception the connections between people and

the land. Tombs positioned the bones of the ancestral dead in the landscape, and in doing so visibly brought the presence of the ancestral past to consciousness. The specific morphological characteristics of their landscape settings also served to relate the bones of previous generations to a more generalized ancestral power embodied in the topography and symbolic geography of place and paths of movement which had already been constituted in the Mesolithic. In the Black Mountains the long axis of the chambered cairn was of paramount significance. It imposed form, a line across the topography directing vision in a prescribed direction outward from the monument itself and pointing towards escarpment spurs or along prescribed routes of movements along the Usk and Wye valleys. On Cranborne Chase, the long barrows, rather than directing vision beyond themselves, outwards towards landscape features, have been built into the topography (Tilley 1994:202-203). In this, he saw the significance of place understood during the Mesolithic in terms of setting in the landscape, being reversed in the Neolithic to be in terms of its relationship to the positioning of monuments. It would appear, however, that rather than this being the case, monuments were in fact being oriented to emphasise recognised important topographical markers.

deposition The range of lithics and organic material in middens provides clear evidence for the repeated domestic and ritually votive disposal, both enmeshed within the same conceptual understanding of the world. Middens, therefore, would have been places repeatedly visited, probably in a ritualised fashion. Cummings (2010:115-116) considered it to have everything to do with identity and an acute attention to detail with regard to people's place in the cosmos.

There is growing evidence for structured deposition in the Mesolithic. That from Britain and Ireland emphasises votive, particularly riverine, deposits of material culture and bodies, as well as pit deposition. There seems to have been deliberate selection of particular materials at different sites, as well as the movement of certain types of raw and worked material. The treatment of human remains — disarticulated human bone — demonstrates the careful working and reworking of bodies in a Late Mesolithic context. People, therefore, had a suite of different materials to draw on (Cummings 2010:115-116).

Pits were dug and material culture deposited. Lithics and organics were left at dwelling sites. Cummins (2010:117-118) considered one contrast between the Mesolithic and Neolithic to be that, overall, fewer lithics were deposited in the Neolithic than at Mesolithic sites, suggesting that at some point it was no longer appropriate to leave large quantities of lithic material in the landscape.

24.3 SOCIAL

Where there is evidence for Neolithic migration it tends to have been preceded by protracted contact with local groups. Relocation of Continental groups to Britain may therefore have involved advanced planning, negotiation, co-operation, and the exchange of information and goods with indigenous communities (Thomas 2013:420-421). Initially the proximity of Continental societies and subsequently their arrival would have provided a range of attractive opportunities for British communities as a whole (e.g., by providing their labour in exchange for goods; and joining communities with more reliable food sources) and individuals within them. This would have been a two-way process in many respects.

Continental migrant relations with indigenous groups must have included a spectrum of possibilities: avoidance, complementarity, absorption, replacement — depending on relative demographic strengths. Conflict between the inherited values and practices of hunter-gatherer society and the allure of new foods, artefacts, and species would have gathered force as people and goods moved back and forth across the Channel, in visiting, exchange, marriage, apprenticeship, and clientage relations (Sherratt 2005:145; Thomas 2013:423).

Arrival of Continentals with a Neolithic way of life would have been sequenced, and as they became the majority the nature of interaction would have shifted. Conversion of whole areas would have become increasingly possible as indigenous groups became exposed to the new lifestyle and their cultural elements were increasingly diluted. Carrying their crops and livestock with them to replicate the conditions of their previous homes, Neolithic populations were in the sense more mobile than their Mesolithic neighbours, tied to static resources of hunted or foraged food, and this gave farmers an opportunistic edge. Together with their inherent unstable democracy, this would have resulted in a constant probing for opportunities to expand (Sherratt 2005:145). Similarly, among the particularly diverse ways of life in Late Mesolithic Britain, people who built sea-going vessels and used them to acquire food, maintain far-flung farming contacts, and exchange information, may have had different objectives to those of their land-based contemporaries. Travelling to the Continent and having direct contact with communities — i.e., experiencing the ‘out there’ — engendered significant status for those individuals concerned that was significantly enhanced when associated with ideology, new ideas and acquired skills, and objects of prestige both known or new. For them, their experience would have translated into degree of social control, particularly the ability to influence decision-making. Thomas (2013:423) is of the view that among the first indigenous

people to encounter domesticates and Neolithic material culture might have been those who were already developing an interest in the accumulation of collective property. Interaction with continental Neolithic groups may have further stimulated these tendencies in indigenous society. Conflict between the inherited values and practices of hunter-gatherer society and the allure of new foods, artefacts, and species would have gathered force as people and goods moved back and forth across the Channel, in visiting, exchange, marriage, apprenticeship, and clientage relations.

This development is possibly seen in social organisation reflected at Stonehall Knoll, one of three elements of the Early Neolithic settlement of Stonehall on Orkney, where elevation appears to have an important social structuring principle between those occupying different topographic positions. Occupation of the knoll summit incorporated distinctive practices embracing stone tools and possibly diet that suggest difference from that of the lower zones. Site aggregation also suggests a 'neighbourhood' with all the implications concerning accrual of social capital by living adjacent to those of higher status (Richards, Brophy *et al.* 2016:110-111, 125)

British communities Neolithic technologies constantly produced innovation by crossover, and their products became increasingly attractive to neighbouring groups. Large pottery containers, for example, made possible slow cooking over direct fire, creating new possibilities for cuisine and diet: milk products could be heated and stored. New and different raw materials and prestigious objects would also have been involved (Sherratt 2005:144; Thomas 2103:420). Implanting desire for such goods during the period of early contact could have been corrosive of indigenous egalitarian traditions. This possibly precipitated a protracted internal debate between traditional social norms and a growing desire for prestigious objects, and the enhancement of social standing (Thomas 2013:422-423). It is also likely to have engendered social transformation towards bounded wealth-holding groups by encouraging adoption of mixed farming. Some, however, may have chosen to combine wild and domesticated resources rather than become entirely dependent on cultivation and herding; and there may well have been ongoing reaction to developing social politics or new ways of doing things.

The first Neolithic objects acquired are likely to have been of great cultural value and significance, which may have been important for securing trans-marine alliances and agreements to the benefit of continental Neolithic communities seeking marriage partners, wild animal products, and raw materials. The meaning of such objects, however, is likely to have been transformed as they were incorporated into a different value system. Their circulation and increasing familiarity of a minority of people with

Neolithic skills and practices will have had a subtly erosive effect on established tradition and forms of authority in Britain (Thomas 2013:423). With indigenous communities being neither sedentary nor strongly hierarchical, and no demographic pressure forcing economic change such as adoption of domesticates at the first possible opportunity, this would have exacerbated difficult sociopolitical situations. The earliest contact with Continental communities probably precipitated protracted internal debate concerning traditional social norms and incoming new and different ideas, things and practices, and a growing desire for prestigious items such as cattle, cereals and pottery (Cummings 2010:115-116; Thomas 2013:422-423). Such situations may be reflected in settlement plans evidencing distinctly separate concentrations of dwellings at sites, such as at Early Neolithic Horton, Berkshire, 3750 calBC (Barclay and Chaffey 2014:28; Wessex Archaeology 2013). Spikins (2008) stated that these tensions could have made such patterns more permanent and widespread; and that the unique position as ritual specialists and agents of change, possibly shamans, may have allowed them to adopt a particularly dominant stance.

With indigenous communities being neither sedentary nor strongly hierarchical, and no demographic pressure forcing economic change such as adoption of domesticates at the first possible opportunity, this would have exacerbated difficult sociopolitical situations. The earliest contact with Continental communities probably precipitated protracted internal debate concerning traditional social norms and incoming new and different ideas, things and practices; as well as a growing desire for prestigious items such as cattle and cereals that in addition to increased subsistence security would have allowed for wealth accumulation (Cummings 2010:115-116; Thomas 2013:422-423). These situations may be reflected in settlement plans evidencing distinctly separate concentrations of dwellings at sites, such as at Horton (Barclay and Chaffey 2014:28; Wessex Archaeology 2013).

Continental individuals and subsequent migrant groups Both would have been viewed in the same different ‘out there’ context, and while some elements of their culture/s would have been attractive to indigenous communities there would have been resistance to introduction of others, particularly when the effort required and/or the outcome appeared not to represent a desirable improvement on existing practices. In some cases, however, for example with subsistence, the proportion of wild animal and plant resources in the migrant economy may have been familiar, sufficient to permit acceptance of the relatively small amount of cereal production thought to be associated with them. If so, this would tend to be reflected in site midden, woodland clearance for animal pasturing,

and artefactual evidence of ‘desirable’ elements such as leaf-shaped projectile points and groundstone equipment, and valued items such as polished stone axes.

Taking their crops and livestock with them to replicate conditions of their previous homes, the migrant groups were in a sense more mobile than indigenous communities tied to static resources of hunted or foraged food, and this gave them an opportunistic edge. Together with their inherent unstable democracy and outward orientation with respect to raw material acquisition and trading, this resulted in a constant probing for opportunities to expand (Sherratt 2005:144).

24.4 DISTANT CONTACT

While agreeing with Sheridan with respect a many-stranded Early British Neolithic, Thomas sees instead of series of separate groups arriving from different parts of the Continent, skills, artefacts, ideas, resources, and practices being acquired through a complex and overlapping web of innumerable contacts between British people and populations dispersed from Armorica to Jutland and Scania. The dominant cultural process at work is considered to have been one of selection, filtering, and recombination (bricolage) — people in Britain were taking distinctively Neolithic cultural resources and practices, and combining them in ways that were insular, bringing new identities into being. In the case of pottery, the restricted range of vessel forms used in the 40th and 39th centuries BC was eventually broadened as ceramics began to be used in larger numbers and a wider range of practices. The plurality of the contacts involved in the inception of the British Neolithic is evident in the range of pottery and architectural diversity evident in the scale or complexity of the earliest monuments which often combined elements from different areas (Thomas 2013:424).

Mesolithic people in Britain were routine users of boats moved large cargoes around the coasts and acquired raw materials by crossing the sea. Some individuals involved probably achieved distinction by undertaking perilous long-distance voyages (Thomas 2013:423).

The external contacts needed by Continentals to acquire particular objects and raw materials gave them an outward orientation. This in itself involved knowledge of sources (Sherratt 2005:145).

Chapter 25 MODEL PHASE 1: KNAP OF HOWAR & OTHER ORKNEY SITES

Early Neolithic Orcadian settlement (Fig. 25.1) exhibited varied spatial and material forms of dwellings. Timber houses were in use in the latter half of the 4th millennium calBC, contemporary with stone structures having opposed orthostats segmenting internal space. Middens at Knap of Howar and Wideford Hill are associated with sub-circular and rectilinear timber and stone structures and open communal areas. While these reflect ephemeral occupation, they also support contemporaneity of early stalled chambered tombs as dominant foci, possibly as a strategy to effect social aggregation and cohesion (Carey 2012:8; Richards, Downes *et al.* 2016). Analysis of human bone from Quanterness implies that tomb architecture began in Orkney *c.*3400 calBC (Bayliss *et al.* 2017:1178, 1184). It is assumed that a relationship existed between settlements and the nearest tomb.

Knap of Howar is located on the west coast of Papa Westray. It consists of two adjacent elongated structures, House 1 and House 2, connected by a passage (Figs 25.2 -25.6). Both are stone-built, formed of double-skinned walling with midden core, rectangular with rounded corners, and internally segmented by opposed orthostats set into the 'pinched' wall form. Evidence suggests that House 1 was built before House 2, but with little chronological gap in construction (Carey 2012:8-10; Miller *et al.* 2016:497; Childe 1931:93; Griffiths 2016:291; Richards 2005a:15; Ritchie 1983: 40-48; Whittle *et al.* 2011:4). Bayesian modelling suggests construction of House 1 in the latter part of the Early Neolithic at 3345–3020 calBC (Bayliss *et al.* Supplementary Data 2017). Other such conjoined structures on Mainland at Howe, Knowes of Trotty and Stonehall Meadow have produced similar dates, suggesting contemporaneous occupation across the archipelago (Carey 2012:8).

The site had long occupation with a primary midden dating to the Mesolithic underlying that of the Early Neolithic. Material content of both is virtually identical and considered by Ritchie (1983:40-48) to indicate no change in lifestyle, this also found at Pool. Adjacent to Knap of Howar is fragmentary paving, upright stones of another structure, and grooves left by stone removal (Richards and A. Jones 2016:16, 21, 38), additional indicators of long-term site occupation.

House 1 is the main dwelling, divided into two rooms by four upright slabs. The outer room is paved and furnished with a low stone bench along the southern wall which also

has the connecting passage to House 2; the inner one contained a number of querns. Its double-faced walls would have contributed to a stable and weatherproof structure. The roof was supported by two timber posts. House 2 is constructed similarly but smaller and less regular in plan, and vertical stone partitions divide it into three rooms, the innermost possibly being the most important. There are two entrances, one to the outside and the other via the connecting passage into House 1, both of which had been deliberately blocked in antiquity. It probably had a different function. The two houses exhibit an internal cruciform plan with a long, narrow entrance, right- and left-hand stone box 'beds', a rear 'dresser', and a centrally placed square hearth (Downes *et al.* 2016:50; Ritchie 1983:40-48). The associated tomb was either of those of Holm of Papa Westray.

25.1 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

25.1.1 Settlement

In Orkney, a difficult environment presented certain dimensions to Phase 1, particularly the need for substantial shelter as evidenced by both the timber and stone structures. Living adjacent to readily available marine and terrestrial resources at Knap of Howar probably removed the need for mobility.

While Knap of Howar is an isolated settlement, other contemporary 4th millennium sites such as Pool, Knowes of Trotty, Wideford Hill, Stonehall, Smerquoy, Crossiecrown and Rinyo developed into a more clustered pattern (Carey 2012:10; Richards, R. Jones *et al.* 2016:128). As noted, this period saw considerable variance in domestic architecture with use of both wood and stone (Carey 2012:6). The primary timber construction phase is evidenced at Wideford Hill where three post-built structures were recorded, two sub-circular and one rectilinear, on top of which was built a stone longhouse. A sequence of building replacement and continuity of occupation is revealed spanning 3350-2920 calBC, with complex interplay between construction materials. Similar development is seen at Braes of Ha'Breck where a timber house was replaced by two conjoined stone ones. Stonehall is another variation, having a more clustered arrangement where the remains of up to seven houses have been recorded within an area of 150sqm, with a rapid sequence of rebuilding (Carey 2013:10-11; Richards and A. Jones 2016:16-40). This probably happened across the archipelago, indicating marked differences in the size of social units. Developments at Wideford Hill also suggest a fairly rapid succession of occupation from timber to stone (Bayliss *et al.* 2017:1184; Richards and A. Jones 2016:21, 38).

25.1.2 Ideological

architecture Influence of ideology can be seen instances of continuity in practice and ideas from both pre- and initial post-Neolithic arrival contexts. The architecture of the stone house references the materiality and architecture of the stalled chambered tomb, and in doing so the ideology is to live within the ‘tomb’ and the past. In both, large upright orthostats were used as subdivisions. Similarities extend to house furnishings of low stone benches and shelves, possibly used for displaying valued or prestigious items (Ritchie 1983:58). Ancestors were thus accommodated in the present with the living: the dwelling becoming the ‘house of the dead’, a place where past and present generations fused, powerfully articulating a merging of ancestry with origins. Richards and A. Jones (2016:40) see this having mediated social relations within the context of developing house societies.

At Knap of Howar, house entrances continue the linear form, and the impression on entering is of a large interior with space graduated to the rear by orthostat partitions to create linearly ordered compartments. Entrances along the main axis reinforces the idea of progression that ‘weighs’ interior space. Reaching the innermost area involves movement through different zones with paired orthostats creating narrow doorways between them. Located here was a slab-covered pit, containing bones, possibly human (Richards 1993a: 91-96). The conjoining passage is associated with the outer compartment in both cases, ensuring that access between the two structures did not contravene the linear organisation of either and what this served to create. Given the house-tomb relationship and the perceived weighting of internal space indicating degrees of sanctity and privacy, House 2 may have had ancestral associations. Also implied are practices and occupancy of a particular type of individual, such as indicated in several Phase 2 sites in Southwest Asia. At some stage, both entrances to House 2 at Knap of Howar had been deliberately sealed, implying that something special needed to be contained. Similar blocking has been found in several tombs such as Bigland Round, also a tripartite structure (Ritchie 1985:50). Accordingly, its context is interpreted as ideological, not domestic.

building replacement/continuity/middens The concept of ‘place’ and determined maintenance of association with the past is implied in repeated rebuilding of structures on the same location. Village units sited within a closely defined small area and on midden is characteristic of Knap of Howar, Wideford Hill and Stonehall. The apparent deliberate build-up of extensive middens for this purpose is seen in past-present context, their material composition serving to reinforce such association by recalling particular

events. At Knap of Howar the content of both primary and contemporary midden is virtually identical, implying that the change from periodic occupation to permanency occurred with the same people. Its use in construction probably reflected this, reinforcing both long-term site association, feelings of ownership, and memories of particular individuals and events. Jones (1998:310) suggested that animal bones had been incorporated to concretise and affirm specific ideas of 'place', and to reinforce ideological relationships between people and the animals on which they depended. The symbolism of digging pits (breaking into the earth) and in-filling them is recognised as ritualised Neolithic behaviour (e.g., Chapman 2000a; Cooney 2000; Lewis-Williams and Pearce 2005; Thomas 1999). Excavation of foundation trenches into natural earth was probably also ascribed a special significance (Smyth 2010:8).

The sequence of building replacement indicates that material selection, timber or stone, relied on a series of socially embedded decisions (Carey 2012:11). It also suggests that considerations of ideological appropriateness were involved, possibly in terms of what the two materials were seen to represent: the timelessness of stone and its earthly origin (an ancestral connotation) in contrast to the more ephemeral nature of timber, though trees living longer than humans can be considered ancestral as well. Ideology is seen to have been at work recalling and maintaining contact with ancestors and origins.

hydrology During the 4th millennium Knap of Howar was located inland at the foot of a gentle slope, positioning reflected by the majority of contemporary settlements. The corollary of this is the requirement to deal with water ingress to houses. As evidenced at a number of Bay of Firth sites, such as with Smerquoy Hoose (Fig. 25.7), water was run through houses by means of a system of covered stone-lined drains, seen as a deliberate intention and considered by Downes and colleagues (2016:62-63) to demonstrate the "ingenious and sophisticated technology of the hydrology". This appears to have had two functions: to provide water for domestic purposes, as indicated internal basins fed by them (e.g., feature 115/Fig. 25.7) and remove waste to outside drains; and to have the house act as a conduit for a flow of substances regarded as being purer at the point of entry. With regard to the latter, it may have been viewed by households in the context of "life blood ... providing the material metaphors of unity through alliance and descent".

ritual and ceremony The Unstan Ware bowls at Knap of Howar are both funerary pottery and fine tableware (Fig. 25.8). Ritchie (1985: 48-50) considered they provided a distinctive cultural context, in contrast to the plainer domestic wares. In them she saw ideological connotations. Similarly, Richards (1993a:98) regarded this ware as having special functions that did not involve daily use and 'high breakage'. Given its

predominance in mortuary assemblages, the few at Knap of Howar suggest its use to have been ritualistic. This implies the presence of a ‘particular’ individual, as does the obvious ‘difference’ of House 2. Furthermore, in House 2 there is evidence of extensive knapping of flint, a relatively scarce commodity in Orkney, essentially exotic, and requiring skill to work it. In some cultures, those with that skill have been recognised as experts and respected as such (Spikins 2008).

The rear wall of the innermost compartment of House 2 has a series of projecting stones making up five ‘cupboards’ at ground level, while in its southern wall three further recesses are interpreted as storage facilities (Ritchie 1985:51). Given that this furniture is located in the deepest zone within the house, its purpose may have been ideological as a safe repository of objects with ‘special’ qualities, such as exotic raw materials and objects and ritualistic paraphernalia.

No place within Mainland is particularly distant from another. Isolated farmsteads and communities may have been periodically brought together at nearby tombs constructed for ritual as well as mortuary purposes, obviating the need for long-term aggregation.

visual imagery While no decoration appears to have been found on the two Houses at Knap of Howar, contemporary stone structures at other sites carry it, in many cases originally missed because of positioning and inconspicuousness. The abstract entoptic nature of motifs involved is clear (Fig. 25.9). There is evidence that construction involved incorporation of materials of primary or preceding houses, this thought to include deployment of decorated stones (Richards, Downes *et al* 2016:229). Patterning on Unstan Ware (and the suite of Grooved Ware vessels that followed) is entoptic (Figs 25.8). Heavy eyes/eyebrows appear to have been ideologically significant, as seen featuring among entoptic motifs on the ‘Orkney Venus’, a figurine recovered from that island, on the Papa Westray South tomb (Fig. 25.10a, b), and on decorated stones (Orkneyjar 13).

burial The stalled burial cairns of Papa Westray North and Papa Westray North South are on an island adjacent to Westray and near Knap of Howar. These contained not only human remains but a variety of animal and bird bones, particularly fish and deer antlers, suggesting totemistic ideas underlay tomb use. As noted, it is considered that each settlement was related to a single chambered tomb as the final resting place for its people (Bradley *et al.* 2000:60). Richards (1999), however, has questioned this, as the whole population is not represented within the tombs, but only particular human body parts and/or substantial numbers of animal bones, and saw people expressing and constructing identities of both themselves and their community differently. They were, however, bound by the ideology, and probably shamanistic influence.

plant domestication Landscape alteration was taking place agriculturally involving a different relationship between people and the world around them, and replacement of natural vegetation with introduced species. This would have been of symbolic importance, cereal production and consumption pivotal in expressing metaphorical contrasts and comparisons with the role of wild plants. It would have had ceremonial context (Fairbairn 2000:110-111; Cooney 2000:35-41; Thomas 1991). Such developments are possibly demonstrated in House 2 where the three stone grinders were found. Dinely (2004) has interpreted it as the food-processing unit of the settlement and noted features suitable for the preparation of ale. Such production may have been restricted to particular individuals with knowledge to create the 'magical' intoxicating brew.

particular artefacts A polished stone axe recovered from the settlement is made of fine-grained dolomite from a Papa Westray source which could have been an ideologically significant 'place'. Similar axes have been found in stalled tombs. Such objects suggest Knap of Howar people embraced this ideology.

25.1.3 Political

There are two strong lines of evidence for political direction operating across the archipelago during this Phase, irrespective of whether settlements were isolated or clustered. If settlements related to a particular tomb, for Knap of Howar mortuary ritual would have provided opportunity for dispersed groups to be aggregated and their decision-making strategically influenced. Tomb platforms, artwork and the remains of feasting attest to this. The focus on 'heavy' eyes in the imagery points to political organisation possibly being ideology-based and pan archipelagic.

The clustered patterning of Bay of Firth villages, such as with Stonehall Knoll, Stonehall Meadow and Stonehall Farm on Cuween Hill, and their internal organisation indicate response to sociopolitical guidelines. These would have been introduced and maintained by some overarching control in which the ideological attachment to 'place' appears to have been significant. Both whalebone and antler were used to make mallets with perforated heads, possibly mace prototypes. As these are regarded as symbols of power (Caza 2003), there were probably individuals wielding it.

With clustered settlements, Richards and R. Jones (2016:7-8) consider household organisation to have been in terms of independent 'house societies' rather than kin-based, the house representing operation of a process articulated through social choices, strategies and practices employed by competing groups, legitimising identities under

ever-shifting social conditions. It also suggests that particular members of the community were strong enough politically and/or ideologically for others to want to be associated. Settlement plans support this in showing groups of structures tending to maintain the same general positioning and respective communal activity.

25.1.4 Social

structure and composition Renfrew (1979) argued for a segmented society composed of individual groups which were clearly defined, independent and exercised control over their own resources. Reappraisal of research results from Pool, Wideford, Stonehall and Crossietown, however, challenges this: it is clear that a variety of settlement forms, architecture and material culture characterised this period. Characterising the Early Neolithic as a single ‘farmstead’ form is not that suggested by Rinyo, a substantial ‘village’ with a long occupation. Similarly, Pool and Stonehall each comprise at least three houses, implying that social organisation was not simple or ‘isolated’ as previously thought; and to maintain such small communities would have required marriage partners from beyond the local group (Card 2005b; Cluett 2013; Richards 1999). Furthermore, instead of uninterrupted social continuity, the period is now considered one of constant and rapid change, seeing emergence of a more complex and differentiated sequence of interaction between households and relatively small communities. Passage and stalled graves, and Grooved Ware are seen in the context of related local differentiation strategies (Bayliss *et al.* 2017:1185).

practices Themes of communality, place, and continuity were introduced and expressed through social practices. Stone houses are substantially larger buildings than their timber predecessors, and could potentially accommodate a greater number of people, this representing substantial change. Communal working areas indicate specific places for production. Furthermore, manifest in the architecture and materiality of the new stone house were horizontal relationships based on a shared hearth and social practices, yet this occurs within ‘house of the dead’ architecture materialising discourses of vertical relations emphasising descent and ancestry. Such distinction, and a general trend towards broader social units and the importance attached to their continuity, is evidenced through the changing social practices of agricultural production (Richards and A. Jones 2016:40). These developments point to more effective social control of increasingly larger numbers of people in the aggregated context of villages.

hierarchy In suggesting the possible role of the drainage system in the conduit and confluence of the ‘life blood’ of households and groups, Downes and colleagues

(2016:63) have suggested that this could have provided the material metaphors of unity through alliance and descent. Equally, through the process of becoming 'dirty' the hydrology of settlements reinforced vertical (social and topographic) residence patterns and, accordingly, the disparities of relatedness. What is clearly at play is emphasis on vertical ranking in generative cosmologies wherein the occupation of a knoll or elevated place put a 'house group' in the ascendant (socially, physically and metaphysically), as the houses below would be in receipt of more contaminated flows of substances. Positioning of passage graves upslope in the Cuween-Widford landscape and discovery of drains in chambered cairns emphasise the role of ancestry and descent in such schema. Selection of hill slopes for settlement siting was about manipulation and control of substances that flowed through the community, and creation of differences between house groups relating to where they were situated within the 'flow'. If ancestors occupied an upper realm, particular house groups locating closest to chambered cairns on the tops of knolls provided a social strategy by which, through 'association with cosmological origins', they could assert their primacy and imbue themselves with 'ancestral qualities'.

25.1.5 Economic

The Knap of Howar midden contains cattle, sheep, pig, fish, seal and whale bones as well as carbonised seeds of hulled barley, and wheat pollen in a contemporary buried soil horizon. Most animals had been killed for meat, hides, and bones. There is little evidence of hunting, the seal and whale bone probably from strandings. Ritchie (1985:47-58) concluded this indicated a self-supporting, extended family practising mixed farming with a pastoral economy based on cattle, sheep and some pigs. Cereal cultivation was possibly more extensive than suggested by the archaeology because of the problem of seed preservation and the practice of spreading household rubbish as fertiliser. The House 1 trough quern and House 2 stone grinders indicate seed processing.

Fish variety indicates both inshore and offshore fishing, with deep water fish caught by line from boats. There was an equally diverse exploitation of shellfish in which limpets were predominant, but oysters, winkles, cockles and razor shells were also significant. The few bones of freshwater and sea-going birds suggest they were not important in the diet, but oil from particular species would have been valuable for domestic lighting.

Both flint and bone tools were manufactured.

25.1.6 Distant Contact

There was little need to import food to Knap of Howar. Trade and distant contact was probably related to the acquisition of exotic and esoteric items, or those valued for their particular qualities, such as exotic flint and pitchstone.

Ritchie (1985:48, 55) noted the possibility that cereals could have been obtained from outside the settlement; if so, some form of reciprocity would have been involved, perhaps using fish. She added, however, that the impression of self-sufficiency is strengthened by an artefact assemblage in which there are no detectable imports, either from outside Orkney or the local area. This, however, may not be entirely correct given the extent of flint knapping, when quality flint was a scarce resource in Orkney and probably imported.

The architectural evidence of the Orkney-Cromarty cairn forms (Fig. 25.11) and the horned spiral decorative motif (Fig. 25.12) demonstrates contact with Mainland Scotland, and the latter with variation occurring over a wider area including Ireland and England (van Hoek 1993). Crozier *et al.* (2016:197) commented that there is no clear evidence that either form of the tomb originated in Orkney.

Similarity of ceramics between Orkney, Caithness and the Western Isles suggests contact despite local production.

Social contact and influence would have been integral to the Orcadian way of life, and particularly at Knap of Howar given its peripheral location (Richards 1993a:101).

25.2 OBSERVATIONS

If the Orcadian Early Neolithic was one of isolated units of farmsteads and dispersed villages comprised of social groupings associated with particular tombs, and no overarching social, economic or political control except that within those units, there was potential for conflict between those units. This would have been particularly the case as corporate groups emerged bound together through proximity and shared practices giving rise to relatedness that extended beyond blood ties. Within settlements hierarchies appear to have developed. This is evident in the vertical positioning imposed within dwelling clusters of house groups below the larger ones — the ‘big houses’ of particular individuals who would have emerged using various strategies to command the support of the house societies making up their respective communities and reinforce their status and group identity. The strongest and most ambitious among them possibly may have had

archipelago-wide objectives and been in a position to realise them. If this were the case, aggression was one line of action, but divisive and difficult to maintain, and resource expensive. Strategic use of ideology would have been manageable and effective: it appears to have been integral to establishment of the village units in the Bay of Firth, and in bringing together politically isolated farmsteads, such as Knap of Howar, in other parts of Orkney (Richards and Brophy *et al.* 2016:110-111, 127). Its underlying influence, apparent in all activity, would have facilitated sociopolitical manipulation.

shamanism Ritual practice at Knap of Howar may have proceeded in House 2 away from the House 1 domestic zone, and by an individual of particular importance and status. One possible scenario is that this was undertaken by itinerant shamans in such two-structure settlements, or a special unit within a 'village' cluster. There would be parallels in this with the Hayonim Complex, Wadi Hammeh 27 and Hallan Çemi where it has been argued that one structure of a pair represented the private domain of a shaman, the other accommodating groups for ritual and ceremonial practices. Orkney may have been serviced by a number of independent shamans.

REDACTIONS

- Figure 25.1** Location of Knap of Howar and main sites discussed
ref: Base map Davidson and Jones 1985:14
- Figure 25.2** Knap of Howar: detailed plan of House 1 and House 2 showing camera positioning for related interior photographs ref: Carey 2012
- Figure 25.3** Knap of Howar: House 1 and House 2 as excavated
ref: www.papawestray.co.uk/images/knap.jpg
- Figure 25.4** Knap of Howar: entrances to House 1 and House 2
ref: <https://www.archaeology.co.uk/articles/features/a-tale-of-two-neolithics.htm>
- Figure 25.5** Knap of Howar: three-roomed House 2
ref: http://farm3.staticflickr.com/2287/2329410244_321ae0f2d5_o.jpg
- Figure 25.6** Knap of Howar: two-roomed House 1
ref: www.spottinghistory.com/view/4593/knap-of-howar/
- Figure 25.7** Plan of primary features of Smerquoy Hoose, Mainland ref: Gee *et al.* 2016:68
- Figure 25.8** Unstan Ware and Grooved Ware ref: Orkneyjar 8, Stu Westfield, Ranger Expeditions
- Figure 25.9** Decorated stones incorporating entoptic motifs (including ‘horned spirals’)
ref: Gee *et al.* 2016:88
- Figure 25.10** Heavy eyes/eyebrow motifs on (a) the ‘Orkney Venus’ and (b) Papa Westray South tomb refs: Orkneyjar 13; papawestray.co.uk
- Figure 25.11** Orkney-Cromarty tomb forms: (a) stalled and (b) chambered ref: Google images
- Figure 25.12** ‘Horned Spiral’ motif , Pierowall Westray
ref: www.olagoriejewellery.com/blogs/news/westray-inspirations



Chapter 26 MODEL PHASE 2 KILVERSTONE & MAXEY COMPLEX SITES (ENGLAND)

Kilverstone is discussed with reference to three other East Anglian sites, Etton and Northborough causewayed enclosures and Etton Woodgate enclosure, that make up part of the Maxey Complex in the Lower River Welland valley on the Fens edge (Fig. 26.1), considered the earliest elements of what became a major ritual landscape and the largest cluster of monuments outside Wessex and the Cotswolds (Bayliss *et al.* 2011). Table 26.1 refers.

**Table 26.1 MAXEY COMPLEX REGION
SITE CHRONOLOGICAL RELATIONSHIPS
calBC DATE ESTIMATES**

ref: Healy *et al* 2011; Historic England 2012a,b,c

	Site Use	Main Use	
Kilverstone	between 3845-3540 and 3360-3020	3725-3525	
	Site Initiated	First Circuit/Ditch	Site Use End
Etton	3725-3670	3710-3645	3310-3210
Etton Woodgate	3800-3540	3645-3525	unreliable dating
Northborough	3645-3585	3640-3555	3580-3510

The causewayed enclosure is a new element of Phase 2 and its signature feature. In East Anglia these monuments were part of a cultural landscape made up of settlements described as typically Neolithic but different in occupation and archaeologically (Garrow 2010:215-216): places, the occupation of which was measured in degrees of both time and pit deposition of selected cultural material. Kilverstone was one such site.

The three enclosures were associated with the braided watercourses dissecting their location, located on successively higher floodplains and terraces. Two cursuses, on two slightly different northwest-southeast alignments, both ended in the area of the Etton enclosure. Etton was constructed within the northern apex of a channel meander that separated it from Etton Woodgate 80m to the east (Healy *et al.* 2011:314-315; Pryor 1998:372). Northborough lies on higher ground 850m from the present River Welland,

less than 2km distant. Kilverstone, 80km to the southeast on the northern side of the River Thet, is very different, interpreted as a long-term settlement impermanently occupied through several decades (Beadsmore *et al.* 2010:115-116).

26.1 KILVERSTONE ARCHAEOLOGY DISCUSSION AND INTERPRETATION

Garrow (2007; Garrow *et al.* 2005a) described Kilverstone as composed of numerous pits. No associated dwellings have been identified, although shelter would have been required and may have been transportable. Excavation focused on two zones of pit concentration, Area A and Area E, embracing 226 pits grouped in spatially discrete clusters (Fig. 26.2). These are indistinguishable in terms of radiocarbon dates, morphology, fill type, artefact style and construction, but considered to represent separate occupations. Within both, some clusters are well defined with closely spaced pits, separated from those adjacent by several metres. Cluster size and pit-to-cluster ratio differ between the two areas. Many pits in individual clusters share material assemblages. Garrow considered these to reflect separate social groups. Pit superimposition is evident throughout (Fig. 26.3). Pits in Area A are tightly grouped and often intercut but with no regularity of form; by contrast, in Area E they are very regular, forming rectangular groups of similar size and little intercutting, suggesting deliberate intention possibly to differentiate and establish group identity. Many spaces between a number of clusters, such as in Area A, are large enough to have accommodated a structure, but no post-holes or other evidence have been found. If, as Garrow and his colleagues considered, the pits were dug around structures, the latter would have been very small given the 2.5m maximum internal cluster dimension.

Pit artefacts generally comprised pot sherds and flint debitage. Pot form ranged from small cups to large bowls. A number were decorated, and while each pattern was unique all were variations on the same theme. Two pieces of a polished stone axe made of igneous greenstone came from Area A pit 1472 in a small isolated cluster. Many pits contained pieces of the same tool or pottery vessel. Some fragments show evidence of weathering and/or burning. This could imply a predepositional dump before pits were filled, or deposition as part of abandonment. Stratigraphically, the vast majority of pits revealed only one filling episode, and none had more than three. Pit profiles were well maintained, suggesting rapid backfilling.

While pits within clusters were closely linked, different clusters were not, which might represent separate, extended occupations or differences between contemporary groups, and that cluster development involved different communities at different times. With

only radiocarbon dates for seven pits, it is difficult to interpret the nature of occupation, the number and size of groups on site concurrently, or over time. Pits per cluster might indicate the number required to bury material accumulated by one group or a number during a single occupation.

For Garrow (2007; Garrow, Beadsmore and Knight *et al.* 2005), the importance of pits lies not in the deposition *per se* but in information provided on the occupation and its accumulation within living space. Pit content could have been intentional to identify and declare a particular relationship to the site. Cummings (2008:148) agreed with this seeing them as components of the built environment, their significance lying not in the pits *per se* but the people gathered and producing them, the source of the raw materials, and the investment in time.

From the perspective that pit-digging related to the persistence of a place, there is the possibility that areas with the largest and most densely grouped clusters were occupied repeatedly for longer periods and by more people than areas with scattered small clusters and isolated features (Garrow 2006:81). It may be that, in an area where enclosures are few, these were also agglomeration sites, and that those who marked the time they spent at a place by digging a large pit cluster to bury a fraction of what their activities there had generated, were made up of more than one group (Healy *et al.* 2011:338).

26.1.1 Settlement

Location close to the river, karst springs, easily-worked soil, and possibly a contemporary routeway may have been important factors in site selection. Perceived worldview elements could also have been influential, as it is a meeting place of “the three natural zones and cosmological worlds” (Helskog 1999).

Garrow (2007:10) argued that pit sites had the potential to become settlements with long occupation. Gamble and colleagues (2005) considered them to be a response of people aggregating in larger numbers.

Kilverstone’s complex sequences of pit digging and back-fill indicate it to have been a site regularly occupied by mobile communities. This implies that isolated and small clusters resulted from short visits, while larger ones represent more substantial occupation. The data are best explained in terms of repeated, but not continuous, occupation by one or a few groups, with variation in scale and duration and of significance to its occupants (Garrow 2007:10). Garrow, Beadsmore and Knight

(2005:155) noted that the amount of material culture suggests long use. Pits in Cluster Q (Area A) indicate six possible occupations.

If pit clusters reflect separate social groups, they do not indicate communities of any great size. If, however, the number of pits per cluster represents the number in the community and this increases with time, then so does the number of people and social groups coalescing. Together, these observations suggest a possibility of generally dispersed groups aggregating for increasingly longer periods over a short time, and in progressively larger numbers.

Spaces between many of the clusters could have accommodated archaeologically invisible (i.e., transportable) structures; and they need not have been particularly small because pits may have been dug within them and not outside. Smythe (2010:13) reported that pits were dug in the rear of houses in Neolithic Ireland on abandonment, a practice which, given cluster size, would possibly indicate seven structures at Kilverstone.

Of the period concerned, Garrow (2010:216), noting the view that sedentism should be measured in degrees and qualities, stated that it was the same with landscape occupation:

During the 4th millennium, the picture in East Anglia is not one of neat villages with fields around post-built houses, but nor is it one of people constantly on the move, never settling down. According to the evidence ...settlement was neither completely permanent nor completely mobile.

26.1.2 Ideological

The majority of pits were rapidly filled only once, a feature observed elsewhere (Thomas 1999:64-65). This practice, together with the nature of fill, indicates ritual, not routine waste disposal, and suggests they were places both ideologically created and marked.

While the material was not carefully placed, it had been selected. Garrow, Beadsmore and Knight (2005:151) considered the pits were dug to receive specific cultural material. Richards and Thomas (1984:192) have argued that such deposition conveyed complex ideas. The Kilverstone pits can be viewed in this context as the objects deposited were not necessarily the focus but the behaviour that had produced them.

The potential symbolic implications of fragmented material, such as stone axes and cremated human bone within the pits, is significant when viewed through the concept of 'enchainment' (Chapman 2000a; 2000b) whereby people are engaged with a series of places, times, people and ideological constructs. Indeed, subsequent to pit use, human burials perhaps confirm an ideological dimension to the pits and the site.

Pits have been interpreted as liminal thresholds to the lower cosmic realm, while offerings, commemorations, and the creation and marking of places both physically and metaphorically, signify belonging to a place and claiming ownership (Thomas 1999; Edmonds 1999; Russell 2002; Davies and Robb 2004). Thomas (1999:71-72) regarded such deposits as creating durable memory and establishing the significance of a place or social grouping. McFadyen (2008:125-126) viewed features such as pits and flint scatters as a series of processes with histories evidencing “the ways things/actions are connected to, or interlocked with, other activities in an extended network of structured action”. Pit backfilling might also be placation of the underworld for having breached the surface (Green 2000:80), or its intended healing (Russell 2002:107).

26.1.3 Political

Given the relationship between pits and social groups, repeated assembly must have some underlying reason or compulsion. It is argued that this reflects ideopolitical control and is probably shaman-related, a view strengthened if each pit in a cluster related to one group rather than a cluster representing one group only. Such individual groupings suggest that decision-making was consensus-based but with some controlling influence.

Garrow, Beadsmore and Knight (2005:144-145) commented that while clusters were initially defined on spatial proximity, they could be grouped by shared material assemblages. The consistency in pit placement and preparation implies that some pressure was being exerted to achieve a common approach.

While there was no patterning of pit materials, commonality of fill matrix appears to have been an objective. This suggests a strategy to maintain group cohesiveness at this stage of decreasing mobility among people, and avoiding fission. Such commonality in an ideological would tend to militate against the latter.

The two pieces of a polished igneous greenstone axe have been sourced to the Langdale quarries in Cumbria (Garrow pers. comm.). These would have been not only exotic but of significant value and power. Speth and colleagues (2013:117) regard ritual in their deposition as an attempt to harness the perceived power of the source site, while at the same time using that of the stone axe *per se* to augment the importance of the depositional site. Such fragmentation and deposition support the view that Kilverstone was a ‘special’ place, and that these actions were probably linked ideologically to shamanic presence.

Decorated sherds of distinctive shapes and sizes represent special purpose equipment, perhaps the remains of eating and drinking wares that had been deliberately broken following feasting. Their decorative motifs are entoptic, made up of repeated parallel vertical, horizontal and diagonal lines in herringbone/ chevron patterns, and bands of dots (Garrow *et al.* 2006:30-31). This suggests shamanistic influence in artefact presentation and community behaviour. It is also possible that the source of the pottery and/or that of the materials used in manufacture may have had a similar ideological connotation, whether it was made locally or elsewhere.

26.1.4 Social

The repeated sub-rectangular pattern of pit placement in Area E implies positioning of some type of structure. The smaller clusters, especially those with intercutting and superimposition, each perhaps reflect occupation by a particular individual, possibly a shaman, as they tend to distance themselves from other community members by establishing a no-entry space around them.

Separate pit clusters suggest that groups retained individual identity. Changing social relations, however, can be discerned in the practice of pit cutting and filling as people acted communally when ritually abandoning the site. In terms of social differentiation, if single pits and small isolated clusters are interpreted as shaman-related, then individualisation beyond that traditional within egalitarian society is indicated.

26.1.5 Economic

Subsistence activities were intensive and broad spectrum, exploiting both wild and cultivated resources. Hazelnut shells in large numbers and some cereals were found in most midden samples taken. The association of arable weed with cereal grains suggests small-scale cultivation within woodland clearances. This would not have required permanent occupation, but stays may have been increasingly longer. Large stone saddle querns and rubbers or pestles suggest on-site cereal processing.

26.1.6 Distant Contact

All artefacts are considered to have been locally sourced (Garrow 2005:146) except the two stone axe pieces from the Langdale quarries, sites both difficult to reach and located near to Scafell Mountain (Bradley 2000:85-86). The significance of Langdale is that around 27% of axes originated from there and were favoured in the east of England, particularly Lincolnshire (Pryor 2003). Supernatural connotations were possibly

involved, and it is postulated that shamans not only managed such items but controlled acquisition. Exotic objects endow prestige, status and power, permitting the underpinning of social and economic networks (Davis and Edmonds 2011).

Furthermore, they brought their communities into the belief systems associated with distant sources, testifying to involvement in a wider world (Bradley 2000:84-85). Such connections reveal knowledge of place with similar levels of cultural significance.

26.2 THE MAXEY COMPLEX ENCLOSURES

During the Early Neolithic, causewayed enclosures were constructed on open ground, establishing fixed points in the landscape, their arrival indicating outside influence and ideas, probably from the Continent. While they appear as regional centres with evidence of a range of communal activities, feasting and ritual, there has been recent debate as to the particular focus: feasting or domestic activity, or the nature of a combination; this referencing Etton (Thomas 2016; Parmenter *et al.* 2015). The majority are in southern England, most on high ground and always on sloping terrain distinctly oriented just off summits, but also in low-lying riverine locations. It is uncertain whether all circuits at a site with more than one were dug or used at the same time (Oswald 2011).

Causewayed enclosures consist of single or multiple circuits and other lengths of interrupted ditch, sometimes with surviving banks, and range in area 0.41-8ha. Ditches contain varied and sometimes rich deposits of human bone, food remains, digging implements and artefacts. Their significance is mainly due to the large size and often rich cultural assemblages, and to the stratified sequences they provide. The frequent presence of human remains, generally weathered and disarticulated, show that the sites figured in mortuary rites (Whittle *et al.* 2011:7-8).

Etton, Etton Woodgate and Northborough are the earliest elements in the extensive and long-lived Maxey Complex. Although not all were built at the same time, they form a concentrated horizon *c.*3800-3700 calBC. Some were used briefly for a number of episodes, others for several generations, probably beyond the span of personal memory of any one individual in the community but passed on by parents or grandparents. Initial use of Etton is estimated at 345-635 years; and Northborough 1-200 years (Healy *et al.* 2011:322-329; Historic England 2015a).

For some scholars, these enclosures were community focal points with a connotation of authority (e.g., Renfrew 1973c); for others (e.g., Edmonds 1999) they may have been arenas in which identity and authority came into being, rather than expressions of pre-existing authority. Whatever the sociopolitical context, enclosures related to the areas to

which they were physically oriented and with which they were intervisible (Oswald *et al.* 2001:91-106; Whittle *et al.* 2011:11). Edmonds (1999:92-93), however, saw them as marginal to the places in which people lived for most of the time. Evans *et al.* (1988), holding the same view, considered their remoteness from everyday life to suggest that they may have been the scenes of potentially dangerous rituals, such as rites of passage, conducted in liminal, peripheral locations where everyday norms may not have applied.

Spatially grouped causewayed enclosures probably represented communities in a single region, while those isolated may have been regional centres. Differences in form possibly indicate a new idea of settlement. In the Welland valley, five are within 5km of each other, all sharing similar locations in relation to the river (Oswald *et al.* 2001:109-110). They lie at the boundary between a number of productive ecological zones which, from the Mesolithic, had offered the potential for the exploitation of varied wild, and subsequently domesticated, resources. These zones included the inland oak and lime forests along the fen-edge, woodland margins and clearings on the sand and gravel terraces and islands, which provided also areas of well-drained soils suitable for cultivation. It was also a social landscape, with the Northborough enclosure likely to have played a central role in processes whereby dispersed and mobile communities, seasonally exploiting their varied subsistence strategies, became more firmly wedded to particular areas of land and maintained ties of kinship and affiliation through communal activities including monument construction, seasonal gatherings, exchange and ritual (Wessex Archaeology 2005).

The proximity of enclosures in the area, particularly Northborough and Etton, suggests that these sites need to be interpreted within the context of the wider landscape which was clearly a focus of ritual activity throughout the Neolithic. It was also a social landscape. The two enclosures are likely to have played a central role in the processes whereby dispersed and mobile communities seasonally exploiting their varied subsistence strategies became more firmly wedded to particular areas of land, and maintained their ties of kinship and affiliation through communal activities including monument construction, seasonal gatherings, exchange and ritual.

26.2.1 Etton

This causewayed enclosure (Fig. 26.4), on a slight knoll, consisted of a single segmented ditch circuit roughly circular in shape c.180m diameter. Estimated initiation is 3310-3210 calBC and primary use probably ending 3310-3210 calBC, initial use lasting probably 380-510 years. Three principal entrances are noted to the north, east and west;

if there was another tin the southernmost part it has been destroyed. There are 14 visible ditch segments numbered sequentially from the southwest, with the intervening causeways labelled A-O (Pryor 1998:13-16; Beadsmore *et al* 2010:118-119). Excavation immediately to the south and east revealed over a thousand contemporary pits, indicating that during the Early Neolithic activities focused on its interior space, and surrounding area (Beadsmore *et al.* 2010:118-119). Etton's location suggests that the site had been important long before the Neolithic, having traditions and history within the earlier hunter-gatherer communities (Pryor 1998:380; Historic England 2015a).

The ditches appear to have been both the focus for the formalised deposition of artefacts and human and animal remains, and a repository for materials deriving from the range of activities undertaken. This activity appears to have been intense, although for only a relatively short period. Numerous loose and unarticulated human bones were recovered from the enclosure ditch only, but no complete skeletons. Many, especially skull bones, had been placed in prominent positions within structured deposits. It is possible that these were from bodies undergoing excarnation within the enclosure; the smaller bones having been either lost or discarded in favour of the larger, more visible ones that were added to and incorporated within the structured deposits of the enclosure ditch. Deposits also included pottery, animal bone and lithics. Evidence for coppicing has been identified, and for cereals having been grown and processed within the immediate vicinity (Pryor 1998:271-272; 353, 361-362; Historic England 2015a).

A north-south ditch and linear posthole settings bisected the enclosure. The eastern half was mainly given over to rites of passage, most particularly those concerning death and transformation. The western half, on the other hand, produced much evidence of feasting, such as animal bone heaps, suggesting use for more public, communal gatherings. Etton, therefore, catered for two levels of social interaction. Doubtless, deposits expressed social competition as well as identity. At all events, the numerous 'offerings' in 'small filled pits' were individual expressions of major life events, of which death was probably the most significant (Pryor 2001:430).

Causeway F, originally *c.*25m wide, on the northern side of the enclosure was probably the main entrance. The line of the eastern gate slot was probably extended by a fence demarcating a pit-free area to the south and east (Healy *et al.* 2011:315; Pryor 2001:72). The width of two other causeways, B in the east and M in the west, indicate other possible entrances. Through these there would have been access to the enclosure, but their cardinal orientation possibly had ritual implications. Furthermore, possible screening associated with F and the structure adjacent to M are suggestive of some type

of control. Differences in depositional practice between east and west sides of the enclosure has prompted interpretation of the west as 'public' space where feasting, ritual slaughter and exchange of livestock took place; while the east side was 'private', reserved for smaller-scale personal or kin-group ceremonies, possibly funerary or commemorative (Pryor 1998:352-354, 364-370).

The numerous small pits and ditch segments produced substantial assemblages of Middenhall pottery together with smaller amounts of Fengate and other Peterborough Ware, Grooved Ware and Beaker, worked flint and stone, animal and human bone, and well-preserved organics (Beadsmore *et al.* 2010:118). Some pits contained ritually placed items of high status, such as a polished stone axe or a quartzite polissoir. While pit-fill may have been connected with Etton ritual it could have been brought from elsewhere, being related to the funerary rites of an individual. Such an explanation would account for why pits are not intercut. There was no evidence for long-term settlement within or near the enclosure; and the pattern of pits showed nothing that could be considered house-like. The vast majority of features are considered to relate to religious, funerary, or ceremonial activity (Pryor 1998:353-354).

It is assumed that pit material had been 'stored' in a 'pre-pit' or 'pre-ditch' context where broken pots, flint working debris, food remains, and other materials were accumulated prior to final deposition, similar to the probable practice at Kilverstone. This fragmentary material appears to have been the result of regular use but with selection of what was to be deposited. The presence of multiple connections between different enclosure segments, and between segments and pits, is seen as evidence that they were open and filled at the same time (Beadsmore *et al.* 2010:125).

26.2.2 Etton Woodgate

This is a two-phase Neolithic site located 80m west-north-west of the Etton enclosure. It comprises an arc of two northeast-southwest aligned ditches 50-75m in length interrupted by a single 2.75m wide entrance separated from Etton by a palaeochannel and facing its possible western (M) entrance (Fig. 26.5), suggesting Etton Woodgate was not a domestic site. Ditch cutting is estimated at 3645-3525 calBC; end of use not known. Excavation revealed a dense concentration of small pits and postholes around the entrance that contained small quantities of Early Neolithic pottery and blade-based flints, as well as fired clay and burnt stone. Although broadly contemporary with Etton, this phase of activity featured notable differences: in particular, there were no decorated pottery sherds. One pit held a crouched burial. On higher ground to the northwest, lithics and

similar plain pottery were recovered together with contemporary pits, one with human bone. There were postholes of a rectangular structure. The sharp northeasterly butt-end and pit burial of the ditch with entrance way suggests connection with Etton and that it was not a domestic site (French and Pryor 2005:17-23; Pryor 1998:372; Healy *et al.* 2011:317; Historic England 2015b).

26.2.3 Northborough

This oval enclosure has at least four circuits with pairs of closely spaced ditches (Fig. 26.6). Estimated initiation is 3700-3550 calBC and end of use 3605-3400 calBC. It lies on higher ground 850m from the present River Welland less than 2km from the Etton enclosure. Limited examination suggests that cattle had been driven through the entrance into the enclosure. There was no trace of banks. Pollen analysis suggested that the surrounding area was under grassland or pasture (Oswald *et al.* 2001:60, 69, 150; Healy *et al.* 2011:315-317). A range of wild and domesticated plant and animal food sources was exploited. Phosphate analysis indicated more intense animal-related activity in the eastern part of the site, but this cannot be securely associated with Neolithic use (Wessex Archaeology 2005).

The pottery assemblage was small, and none was recovered from the outer enclosure. This contrasts markedly with finds from many other causewayed enclosures (including Etton). It may be due to the limited nature of the excavation: deposits of both wild and domesticated cattle bone in the bases of two ditch segments flanking the possible access point of the outer enclosure hint at the potential of more substantial and complex deposits elsewhere around the inner and outer circuits (Wessex Archaeology 2005).

Re-cutting of the inner enclosure ditch at the western 'entrance' was not witnessed elsewhere around either circuits, and may highlight the significance of that location. Subsequent burnt deposits in and adjacent to the ditch in this area provide the clearest evidence for activity at the monument and may represent the final clearing, cleaning and closing of the site.

26.3 OBSERVATIONS

26.3.1 Overview

The Beadsmore *et al.* (2010) consideration of the dynamics of deposition at Etton revealed that the amount of material culture did not appear to be sufficient for the estimated years of permanent occupation. Rather than it being a central place where large

groups regularly gathered, this appeared to have occurred for a relatively short periods and widely spaced occasions. Pit sites, such as Kilverstone, therefore, were not the peripheral places where people lived at other times of the year: they provided the more central element of the socio-political landscape for the communities concerned. This suggests that the causewayed enclosure was introduced as a new element to ideologically counter the independence of settlements and particular individuals within them.

In such context, Warren (2001:93, 97) saw the Early Neolithic to be a period of increased social tension as population increased and people became more visible in the landscape, and their influence challenged accepted forms of behaviour. He considered one way of coping with this and maintaining power relationships may have been to regulate activity surrounding deposition and ritual, and in doing so, provide opportunity for social manipulation. This is evident in the shamanistic, ideopolitical behaviour apparent at differing levels in the settlement hierarchy represented by the Maxey Complex and the Kilverstone. Adoption of new forms and meanings of material culture and ways of doing things involved ritual lifting of elements of the mundane into the numinous, serving to reiterate and reaffirm, or break down and challenge, complex series of associations. This included explicit symbolic statements about how people related to the world, as reflected in deliberate deposits of fragmented stone axes, polissoirs, worked stone, and human skull at Etton (Pryor 1998:261-268). Warren (2001:93) considered such episodes best understood in ritual context when the social order was under stress and the dominant ideology open to questioning.

26.3.2 Shamanism

Shamanistic behaviour is evident in a number of contexts in the two locations.

site selection Both the Maxey Complex and Kilverstone are closely related to environmental elements with cosmological connotations: water (rivers, springs and fens) and karst.

social aggregation Kilverstone shows this in terms of small dispersed communities on repeated occasions, while the Maxey Complex evidences larger groups of the wider region coming together periodically. Repeated assembly and related pit digging implies some underling ideopolitical reason/compulsion. The bigger and more complex Northborough enclosure would appear to have been designed for much larger groups than could be accommodated at Etton. This, as well as possibly reflecting regional

population increase or an extended catchment, indicates that an increasing number of communities were being brought together for ritual and other behaviour.

ritual Digging of pits, their selected contents and closure at both sites indicate ritual, suggesting they were ideologically created and marked, and used to establish/reinforce 'place' significance.

Only loose and unarticulated human bone was found at Etton, mainly cranial fragments, in prominent positions within structured deposits. This showed evidence of abrasion and canid gnawing, possibly the result of excarnation. Death clearly played an important part in Etton ritual (Pryor 1998:271-272; 361-362). Fragments of cremated human bone were present in Kilverstone pits (Garrow 2005:144) reflecting the situation observed earlier at Wadi Hammeh 27. Given, however, that human remains from both were few, bodies must have been disposed of elsewhere. Etton, as Pryor has stated, is regarded as a place of transition, whereas Etton Woodgate with a burial may have been an integral part of this process. Only certain individuals were buried or cremated and within settlements or enclosures. Their post-death 'processing' signals perception of both an afterlife and need to cater for the dead. This was probably because they become powerful supernatural entities needing to be placated, controlled. It also suggests that the individuals concerned had been known as living people with particular status.

shamans Small pit clusters at Kilverstone are seen to indicate huts occupied by individuals appropriating shamanistic behaviour, delineating zones restricted to them. Social restriction was clearly more rigorous at Etton. Shamanistic behaviour is evident at both sites, but is significantly more evident, intense and of wider nature at Etton. Entoptics are found on pottery pieces at Kilverstone.

distant contact Apart from the two axe fragments from Langdale, the contents of Kilverstone pits had been obtained locally Garrow (2006:147); at Etton, a similar situation pertained, but with the axe fragments concerned having originated predominantly from Penmaenmawr/North Wales (Group VII) as well as Langdale/Cumbria (Group VI) (Beadsmore et al. 2010:121-122; Pryor 1998:260-266). This suggests the Early Neolithic here to have been socio-politically parochial with respect to both individual settlements and the infrequent association of communities at enclosures; but in terms of the overall nature of axe movement the enclosures were linked to large-scale trading networks, this possibly providing the context for close supervision of trade by particular individuals living within their territory. Access to such

exotic objects would have brought prestige, status and power to those controlling it, as well as stabilising their social and economic networks.

REDACTIONS

Figure 26.1 Maxey Complex and Kilverstone: location in East Anglia, England

Figure 26.2 Kilverstone: Area A and Area E, the two major pit concentrations
ref: Garrow *et al.* 2005:141

Figure 26.3 Kilverstone: pit clusters
ref: Garrow 2007:2; Garrow *et al.* 2005:144

Figure 26.4 Kilverstone: two pits in Area E under excavation
ref: Garrow *et al.* 2007:144

Figure 26.5 Maxey Complex: (a) Northborough causewayed enclosure;
(b) Etton-Woodgate enclosure; Etton causewayed enclosure
refs: Healy *et al.* 2011: 329, 326; Pryor 1998:14

Chapter 27 MODEL PHASE 2 WINDMILL HILL (ENGLAND)

The North Wiltshire Downs is bounded by the Vale of Pewsey to the south, including the upper valley of the River Kennet in their midst, and the Marlborough Downs to the northeast (Fig. 27.1). It has three causewayed enclosures: Windmill Hill (*c.*3700-3610 calBC) on its northern edge 8km from Rybury and Knap Hill in the south and only 4km apart. Windmill Hill lies on a hill rising 35-40m above two branches of the Upper Kennet valley (Fig. 27.2). Deliberate siting on the broad slope just below the summit ensured commanding views in all directions and visibility from area below. It is considerably bigger than Rybury and Knap Hill, but single-ringed Crofton 20km to the southeast is larger. The region also has a number of other Early Neolithic structures (Fig. 27.3), long barrows prominent among these and including West Kennet (Fig. 27.4), Horslip, Beckhampton Road, Millbarrow and South Street. Long barrows are traditionally interpreted as collective tombs. While the totality of function is not known, it is clear they were used as funerary monuments from the time they were built, and that this continued for a long period with remains being placed inside or in their mounds afterwards — for at least a thousand years in the case of West Kennet. There is little evidence for such practice before *c.*3800 calBC. West Kennet dates from the 37th century calBC (Bayliss *et al.* 2007:97-98; Historic England 2015d). Renfrew (1973c) proposed a hierarchical model in which each Wessex causewayed enclosure served as a central place for an emerging chiefdom, the nearby long barrows marking the territories of component communities.

27.1 SITE OCCUPATION

27.1.1 Pre-enclosure

Pit digging and deposition during the earlier Neolithic as actions intended to bring meaning to places and establish connection between people and ‘place’ (Thomas 1999:87). These were undertaken during the final stages of occupation at particular sites after quantities of refuse had had time to accumulate, and possibly at abandonment. This is to reflect interment of human remains in tombs — formal burials of transformed materials, “dead artefacts”, whose special treatment may have been bound up in complex ideas of symbolic renewal and regeneration (Pollard and Reynolds 2002:34-35). Such

earlier Neolithic pits, both isolated and clustered, are associated with settlement episodes on Windmill Hill.

A cluster of over 30 pits was located in the area later enclosed by the enclosure's inner circuit. Pits varied from being empty to having a mixture charcoal-rich soil, pottery sherds, flint implements, animal bones and items of carved chalk. Several contained sarsen, either fragments or in the form of pounders, rubbers and querns used for the processing of plant foods. One pit cluster included a range of carefully selected objects. The pits were not all dug at the same time, their sequence beginning with a large oval pit backfilled immediately with clean chalk. A regular arrangement of three pits (Figs. 27.5) was then dug around this filled with dark soil containing animal bone, charred cereals, pottery, flint and sarsen. A large sarsen quern had been carefully placed in one and two rubbing stones against the edge of another. The worked flint included large knives or sickles. Objects used in the collection and processing of plant foods, combined with carbonised grain is seen to link these pits with the physical processes and symbolism surrounding cultivation, consumption and nurture (Pollard and Reynolds 2002:35-36). Concerns with other aspects of routine life and death are indicated by features sealed under the outer bank of the enclosure. Radiocarbon dates place some of this activity in the first half of the 4th millennium calBC, though it may have continued on and off for a long period. The buried soil under the earthwork contained occupation material: flint knapping waste and implements, pottery, butchered bone, charcoal from camp fires and charred cereals. A small hearth and several pits were also present (Pollard and Reynolds 2002:36-37).

Predating the enclosure bank by a short interval is an oval grave (Fig. 27.6) containing the skeleton of an adult male (aged 35-45), lying on his right side with head to the north having been placed there as a fleshed body (Pollard and Reynolds 2002:37). Under the outer bank, and also pre-enclosure, was at least one post-built structure (Fig. 27.7). This was in the same area as the grave and defined by lines and rectangular settings of post-holes. Following a north-south axis, these may belong to one or more timber buildings. Sixty metres to the east was a feature known as 'the Square Earthwork' (Figs 27.8). While it is uncertain whether this predates the enclosure, it lies outside the outer circuit not far from the four-pit cluster referred to earlier. It is an irregular, square ditch enclosure, 10.5 x 10.5m with causeways on the west and possibly north-east. The shallow ditch seems to have acted as a slot for posts, possibly creating a structure with solid wooden walls. Pits found within the interior may be earlier as a number were cut by the ditch. If this was a house, it would be unusual and indicate the site to be no ordinary settlement; alternative

interpretations might include a post-built shrine or exposure platform on which bodies were left to decompose (Pollard and Reynolds 2002:37).

Later activities were concerned with commemoration, establishment of place, cyclicity of time, and ritual participation. People had brought with them a particularly wide range of items including pottery, axes, live animals and curated bones. Whittle and colleagues (1999:385) saw the enclosure as representation of the practical routines and recurrent subsistence concerns of social existence. Windmill Hill is a subsequent stage in an ideological development of middle 4th millennium calBC monuments known as the Wessex Complex (David *et al.* 1999:14; Whittle *et al.* 1999:16).

Pre-enclosure activity, some of which can be characterised as occupation, some to do with mortuary ritual and perhaps ancestor veneration, marked the hill as a 'place', a generation or more before. As the tradition of the enclosure grew, it became not just a pre-eminent place, but one with considerable history stored in it. Gatherings continued to take place within it, probably with greater frequency and in larger numbers than at other local enclosures; each gathering presumably helped to enhance the special character of the place, since people kept returning to it. At one level, it may have been regarded metonymically as an especially significant part of the seasonal, annual and lifetime occupation; and at another, it may have come to stand metaphorically for their existence as a whole: always there, rooted in one place but open to access in the appropriate conditions and at the right times. Building and use of the enclosure could have set up other metaphoric and metonymic associations (Whittle *et al.* 1999:383-384).

27.1.2 The Causewayed Enclosure

The enclosure has three circuits (Fig. 27.9). The outer ditch and bank enclose an area of 8.45ha measuring 360m in diameter on longest axis. It was probably constructed in short straight sections of 50-120m long (Barber and McOmish 1994). The middle circuit has a maximum diameter of 220m and area of 3.32 ha, and comprises many short and long ditch segments varying in depth and width. The inner and middle circuits may have also been banked. The inner circuit is elliptical, 0.52ha in area and 80m in diameter (David *et al.* 1999:14; Whittle *et al.* 2011b:61). It has a north-facing, in-turned entrance that opens towards a wide causeway. During the first years after construction the chalk of the banks would have remained white, making it visible for considerable distances in every direction (Smith 1965:19).

All three circuits of the enclosure appear to have been dug in the 37th millennium calBC, over a period of c.5-75 years. Whittle and colleagues (1999:353) proposed that

construction of the inner and middle circuits preceded the outer one. The '*Gathering Time*' analysed dates (calibrated/95% probability), however, indicate that the inner (3700-3640 calBC) and outer (3685-3610 calBC) circuits began to be constructed together; and that about the time the inner one was finished, for some reason the decision was made to build the middle one (3685-3635 calBC), this work continuing until after the outer one was completed. It is argued that the number of circuits is probably the result of social status regarding who could enter each successive one, and the acknowledged transformation from the outside wild to the cultural inside. Scale of the enclosure relates to a new regional approach to community involvement under some form of ideopolitical social control. It is clear that both had been finished by the time human remains were being placed in the West Kennet long barrow. The cessation of burials within it was possibly in the 3630s or 3620s calBC, contemporary with completion of the middle circuit. Pottery from both sites is comparable. Those interred would have experienced activity at Windmill Hill, and older individuals may have participated in its construction (Whittle *et al.* 2011b:81-91; 102-103).

Across the site there are significant variations in different types of artefacts and deposit. Patterning occurs at several levels, with specific finds seen to focus upon particular ditch sections within circuits, such as cattle skulls in terminals flanking major causeways. Variation in the scale and type of deposit characterise each ditch circuit. Animal bone forms the principal component of ditch deposits, mainly from domesticated cattle, pig, goat, sheep and dog, but there are also some wild cattle, boar, deer, fox and cat. The range of deposited material is diverse, also including human bone, pottery, worked flint, sarsen, exotic stones, chalk, antler, and plant remains. The bone, pottery and flints are perhaps from inside or close by the enclosure, while the chalk objects are from elsewhere. Local tombs were probably the source of human bone, pieces of which probably circulated between different contexts. Most had been broken and processed, including the fracturing of human long bones and skulls. The condition of these materials shows transformations prior to deposition, some of which were minimal, i.e., intact and partly butchered animal burials. The time between initial discard of bone, sherds and flint, and final deposition in ditches could have been prolonged, as indicated by weathering on bone and sherds and their association with midden and charcoal. Different material groupings suggest that many may have experienced complex histories prior to deposition (Whittle *et al.* 1999:358-359).

Substantial groups of disarticulated bone feature in the inner and middle rings, while human bone, including infant burials, and articulated animal bone, including whole

carcasses, are more frequent in the middle and outer rings. Dog and articulated cattle bone are found in the middle ring. There are more cutting tools, denticulated flakes and knives in the inner ring, whereas flints scrapers and axe fragments are more frequent in the middle and outer rings. Ditch segments flanking major causeways were selected unusual or large-scale depositions, with opposing segments having markedly different assemblages. Such asymmetry may be an extension of principles of bodily classification and symbolism, sidedness carrying sets of associations linked to different realms of social and cosmological order and processes of transformation (Whittle *et al.* 1999:206, 369-371).

Pottery was of particular types and deposited in different parts of the enclosure, together with variation in the size and intensity. Within the inner part of the enclosure it was associated with the ditches and interior of the inner circuit. Pottery used and discarded within the enclosure is considered to have been connected with domestic activity, this view supported by the animal bone evidence. It has been suggested, however, that there may have been more specialised activity on the periphery of the enclosure. The greater presence of decorated carinated bowls and the less intense scale of depositional activity in the outer circuit can be linked to the idea of ritual or special activities taking place at the outer edge of the arena. There may have been an emphasis here on vessels for display and handling, it being important to employ visually more distinctive pottery styles at the enclosure periphery. The perimeter of the enclosure may well have been invested with an enhanced symbolic significance, representing a barrier to and a boundary with the everyday world. Decorated carinated bowls have not so far been recovered from the environs of Windmill Hill, which could suggest that their use was exclusive to activity taking place within the confines of the enclosure. Windmill Hill was likely to have been an arena for a wide audience of participants and spectators; accordingly, activity there may have been highly structured and formalised which may have been reflected and played out in the deployment of certain material symbols, pottery among them (Pollard and Whittle 1999:284-85).

Depositional patterning evident is the end-product of a long process embodying commonly held notions about appropriate actions required for particular parts of the enclosure. Whittle and colleagues (1999:371) considered the periphery to be associated with more marginal or socially dangerous realms, whereas the interior related more to consumption, sharing and routine tasks. There is a probable spatial distribution of tasks, reproduced in symbolic order and further emphasised through deposition.

The abundance of pottery, rubbers and querns, and animal remains testify to consumption of food on a large scale. The amount and variety of animal bone cannot be

interpreted as the remains of ordinary meals but rather implying communal feasts. The combination of cattle, pig, sheep or goat is a recurrent pattern in the ditches and pits of the primary occupation of the site. It is possible that such refuse had special significance (Smith 1965:20).

Many of the activities inferred from site finds, notably those concerned with the preparation of skins and hides, indicate periods of communal life. Flint-knapping was practised at all seasons, but new tools were probably made for the occasion, and groups from flintless regions would have had an opportunity to renew supplies. Chalk objects possibly suggest performance of magico-religious rites. Other aspects of spiritual life may also be represented by scattered fragments of human bone (Smith 1965:19).

**Table 27.1: WINDMILL HILL
PRINCIPAL FEATURES OF DEPOSITS FROM EACH RING**

ref: Whittle *et al.* 1999:371

inner	large-scale deposition of groups of fully processed bone in dark soil; articulated bone groups rare; high density of flint; denticulated flakes and knives proportionately more frequent; middening in the interior?
middle	articulated groups of cattle bone; dog bone groups; pottery including a large percentage of uncarinated decorated vessels in high densities; worked sarsen; worked bone and antler; and carved chalk more frequent than elsewhere.
outer	articulated animal bone groups (including burials of whole pig and goat); human bone, including infant burials; decorated pottery vessels with carinations, and plain with heavy rims; scrapers and axe fragments more common than elsewhere; unworked antler more frequent.

**Table 27.2: WINDMILL HILL
PERCENTAGE OF MAIN FINDS CATEGORIES IN RINGS**

after Whittle and Pollard 1998:239

	Inner	Middle	Outer
human bone	18.7	36.4	44.9
articulated animal bone	18.8	37.5	43.8
pottery sherds	39.33	46.2	14.5
flint implements	51.3	30.8	17.9

The enclosure can be interpreted as a cosmological microcosm with its centre an *axis mundi* around which are zones of ritualised activities, with the ancestors removed to the outside and buried. In terms of the ditch deposits, outside the enclosure is regarded as the unsocialised, profane world of nature and the dead, while the outer ring reflects ritual and marginal activities related to ancestors with offerings, unusual deposits, little pottery,

flint, animal bone and infant burials. The middle ring is associated with butchery, ritual cattle burial, articulated animal bone, ritual artefacts in antler, bone and chalk, whereas the inner ring relates to a zone for gathering, feasting; and cultural exchange and ritual.

Evidence points to visits by groups from other regions as well as by those who lived in the immediate vicinity, as the enclosure served as a central place. Such sites played an essential role in the lives of some contemporary communities. Assembly of the scattered families or tribal units took place at one or more times during the year, probably at slack periods in the agricultural-pastoral cycle, and affords opportunities for the business of tribal life. This may have included initiation ceremonies, match-making and weddings, the exchange of stock and seed, and perhaps more durable goods. Rites and ceremonies were probably performed to ensure the fertility of the animals, the growing of cereals, and the harvest. Communal feasts probably occurred during such occasions, and some industrial activities undertaken. The archaeological evidence from Windmill Hill accords with these interpretations (Smith 1965:19).

The enclosure's date and location in the Avebury area place it near the beginning of the unique Wessex complex, the earliest elements of which may have been some of the numerous local long barrows, two of which lie within 1km. It accommodated large aggregations and was dominant within a regional hierarchy of sacred places, including the lesser enclosures and long barrows. Windmill Hill has played a key role in demonstrating the extent of the long- and medium-distance transport of artefacts and materials during the Early Neolithic, the character of contemporary animal husbandry, and development of Early and Middle Neolithic pottery styles (Whittle *et al.* 2011b:61).

27.2 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

27.2.1 Settlement

pre-enclosure As noted, an inherent degree of mobility has been recognised in settlement practices of the Neolithic communities across southern Britain, with groups rarely settling in any one place for more than a few years at most, in some instances perhaps even involved in seasonal transhumance; and also that distinction between earlier mobile Mesolithic communities and still mobile Neolithic groups might not be marked (Thomas 1999:17-23; Whittle 1977b; Pollard 1999). Stable isotopes-geochemical signatures have demonstrated that the lifetime ranges of some individuals could be very extensive.

Evidence for pre-enclosure use of Windmill Hill in the form of isolated and clustered early Neolithic pits extends in a broad east-west swathe across the site for a distance of c.300m. These are explained as a result of ‘ritually-charged’ acts performed upon the abandonment of occupation sites. Occupation could have involved some or all of a residential group in seasonal or episodic visits, but with the careful burial of objects in specially dug pits, a ritually-charged act, implying that established links with the site required marking in some way. They are also considered to have cosmological implications (Pollard and Reynolds 2002:33-35).

Whittle and Pollard (1998:235-236) regarded the region as a home range with a core area associated with ancestors. Population density was low, and the location of the enclosure chosen to contain dangerous rituals and objects in an out-of-the-way place, and/or enhance its special nature and be visible. Cattle were important for both subsistence and on-the-hoof wealth. Accordingly, the need to move animals between pastures probably set a rhythm to life. As a medium for exchange, they were probably important in the maintenance of social relations for trade, obtaining marriage partners, gaining information, and ceremonial activity. While mobility imposed some isolation on communities, aggregation at particular times and places would have been beneficial.

Windmill Hill had no earlier advantages for occupation, residence or subsistence routines; however, it acquired significance in a landscape in which ‘looking out’ and ‘looking at’ were important. The density of tombs indicates that this area was the most intensively used or frequented within the region. The type of enclosure was a new ideological concept, attesting to a change in use of and attitude to territory. It was a place of social aggregation, not a permanent settlement (MacKie 1977:220; Whittle *et al.* 1999:347-349). Lifestyles probably encompassed semi-sedentism through to annual or seasonal movement (Whittle and Pollard 1998; Pollard and Reynolds 2002).

The site represents the largest accumulation of occupation residues and materials in the region. The pre-existing burial, pits and lithic scatters suggest that it had become recognised as a ‘place’ (Davies and Robb 2004:8). The excavated material, its quantity and deposition, indicates large group visitation over a long period (Whittle *et al.* 1999:348). The picture is perhaps one of gradual consecration as a special place with the site being sealed by construction of the outer bank after having been in use long before.

27.2.2 Ideological

Previous activity on the site provided ‘pre-text’ for enclosure development which was an enhancement of the fixed places in the landscape established by the long barrows,

formalising meaning and communal practices. The earlier tombs were built in or on the edge of small clearings, to contain dangerous elements associated with the dead. The enclosure, in contrast, is open and exposed and probably intended for ideological purposes concerning the living. Whittle and colleagues (1999:348) noted that its construction required woodland clearance on a very much larger scale, and that it was a symbol for the relationship between people and their natural surroundings. Hodder (1990:260) considered it a “monumental intervention in nature”.

Windmill Hill was a focal point in the landscape. Its activities were important in consolidating the local community. Recent interpretations emphasise its role in social exchange and ceremonies involving rites of passage; its symbolism; and the ditch deposits representing attitudes to land, nature and culture, and serving to celebrate new communal concepts (Edmonds 1993; Fairbairn 1999:151; Whittle 1993, 1996). Whittle and Pollard (1998:242) stated that “the embodiment of the general idea of enclosure was a stunning novelty locally, and that both its construction and careful layout may have constituted a powerful symbol of inclusion and exclusion, conveying a strong sense of cohesion and identity to its prime users”. This is reflected in power and control generated by the structure. It accommodated not only large aggregations of people and cattle; and its dominance related not only to its location, visibility and features, but as top in a hierarchy of sacred places. Of particular significance was pre-enclosure activity concerned with mortuary ritual and ancestor veneration marking it a memory ‘place’. As its tradition expanded, its pre-eminence resulted in the deposition of considerable quantities of material, and therefore stored history (Whittle *et al.* 1999:383).

The ditch offerings of human bones established a new form of burial at an important new place. Whittle and Pollard (1998:243) suggested that transformation and selection of animal bone deliberately mimics the treatment of human bone in barrow burial rites, indicating a possible relationship between animals and people. They added that some deposits could be part of propitiatory rites during the process of ‘becoming Neolithic’, in the context of the Eliade’s (1968:43-47) observation that myths are frequently concerned with human guilt at domesticating the natural world.

Long barrows were used to place the selected dead. Rituals took place within these structures but participants were limited in attendance, while there was also ritual activity in forecourts for a larger community. Windmill Hill, by contrast, was a place to acknowledge ancestors, introduce them to social discourse and centre them in the presence, probably using specifically chosen bones from the long barrow. Rituals there were different in being in the open and visible, and large numbers able participate.

Despite construction of the enclosure the barrows still had longstanding ancestor association, and curated skeletal material from them was probably incorporated within the enclosure. This is perhaps indicated by its positioning to contain the pre-enclosure human burial, and by the cattle skulls within the long barrows of Beckhampton Road and Fussell's Lodge (Whittle *et al.* 1999:385).

The principal theme at Windmill Hill was group cohesion within the new way of life and changed ideology. The enclosure is interpreted as being central to a multi-faceted strategy for ideopolitical control of independent, dispersed communities within the region. It was a new location for presenting ideology, designed to encourage people to embrace changed concepts of community, identity and adherence to particular places, and to accept a more settled existence that required a new approach. It provided everyone with access to the spirit world, particularly for those who could communicate with the supernatural realm, while subtly presenting social elements of inclusion and exclusion. It is argued that the leaders were probably the ritual specialists who would have been involved in its construction and operation.

The things that were built, dug, eaten, used, stored and deposited in the enclosure probably stood metonymically for larger wholes, and metaphorically for larger ideas. Equally, activities may also have represented many dimensions of life, while the site idealised a set of concepts and values fundamental to the people which were now played out, experienced and commemorated in one arena. The enclosure was probably a metaphor for ideas of cyclical return and symbolic renewal (cf. Eliade 1965); and, in contrast to the linearity of contemporary barrows, one that embodied ideas of process and directed transition, and transformation of the human body. Rhythms of enclosure use created another sense of time, as compared with those of the aggregating groups whose mobility contrasted with the permanence of the enclosure's earthworks (Whittle *et al.* 1999:354, 381-384).

Recurrent concepts are perceived in the enclosure. Inclusion is observed in the circular plan with its permeable boundaries, and the range and location of deposits. Transition is a feature of the plan, suggesting movement through the thresholds between the ditches and also in its symbolic layering. Such movement can be conjectured between different realms, between the living and the dead, the socialised and unsocialised, the present and the past, and the cultural and natural. Transformation is reflected in its plan and construction, as well as in the creation of place and the treatment of materials and their eventual deposition. Sociality is also observed in the plan and construction, through patterns of exchange evidenced by the sources of pottery and stone axes, and the

repetition of communal feasting. Domesticity is observed in the range of objects used for preparing such events (Whittle *et al.* 1999:386).

The chalk, easily carved or marked, afforded an opportunity for the expression of art and symbolism (Fig. 27.10). The forms recognised comprise 'cups' (C1-8); blocks and smaller pieces with hour-glass perforations; phalli (C9-10); various human representations, obviously intended headless and/or limbless (C11-12); incised (C13-15) and perforated pieces (C16-19); balls (C20); and other broken objects that had been shaped or smoothed (C21), which probably served no utilitarian purpose (Smith 1965:130-134).

The question must be why was the middle ditch not conceived of and started at the same time — what changed? The evidence that the three rings were laid out as a unitary plan is equivocal, given that the outer and inner ditches began to be constructed at the same time, and that the completion of the inner ring became necessary to create an intermediate zone between them, suggesting a refinement in the ideology. The middle ring ditches only commenced with completion of the inner ring.

27.2.3 Political

The variety and content of the Windmill Hill deposits indicate participation by a diverse range of people. This suggests change in relationships between dispersed communities. Accordingly, the enclosure can be seen as a strategy for exerting political control over groups that were not necessarily closely associated. Construction proceeded to a predetermined plan that was directed and indicated by the nature and placement of deposits. Such planning requires leadership and it enabled communal aggregation and integration on a greater scale, for longer periods, for its construction, but also imposed specific depositional behaviour. Furthermore, it facilitated efforts by certain individuals to access its symbolic power, thereby enhancing their status and increasing their influence over the community; and, therefore, provided an avenue for political and ideological change (Pryor 2002:107-108). It is probable that those intimately involved in establishment and use of the enclosure saw it as the means for reinforcing and extending ideology-based authority.

There is a lack of identifiable change at Windmill Hill through time with no evidence for successive deposits and no change in the range or quantities of material deposited, indicating that it represents a period of relative stability politically. Edmonds (1993), however, has suggested that later activity was marked by increasing division and control of access to such enclosures and their rituals, thus locating sacred space within this power struggle. The significance of domestication in the context of Windmill Hill agrees

with the respective positioning of wild and domestic plant remains within the three rings: wild plants outside, agricultural in the outer and middle rings, domesticated cereals, present in all three rings but on their own in the inner (Fairbairn 1999:152-154). Similarly, pottery reveals evidence of a gradual progression through time from predominately plain vessels in the lowest layers of ditches to heavy-rimmed, often decorated vessels higher (Zienkiewicz and Hamilton 1999:257), suggesting increasing emphasis on conspicuous consumption.

27.2.4 Social

As a result of aggregation and the openness of social discourse, the plan of the enclosure also evokes liminality (Whittle *et al.* 1999:389), a passing into and through conceptual spaces and different times, involving a reversal of normal roles. The act of offering and the nature of deposits were probably used to encourage communities to embrace a sense of belonging and engagement with the site as an expression of their common will.

Ditch segmentation may have indicated the participation of smaller social groups involved in communal construction. Each could be a metonym of autonomy within a wider community, and the plan a metaphor for participation and intense social interaction (Whittle *et al.* 1999:384); however, the enclosure can be seen as an act of communal integration and identity at a wider scale than long barrows. It appears that while people came together to participate in ritual and ceremony, they were also segregated. The site layout symbolically includes and excludes, restricts access and bounds space, which is reinforced by deposits marking different rings and emphasising thresholds. The extent of participation may have been dictated by the perceived value of deposits themselves (Whittle *et al.* 1999:384). In addition, the few burials and human bone facilitated the institutionalisation of identity, social inequality and ranking.

The enclosure builders lived within a social order characterised by hierarchical relationships. If ditch segments were dug by separate communities, then there must have been social differences in that such participation would have been managed by some authority. This ritual function probably reinforced leadership and ranking. While social solidarity and cohesion were important goals at Windmill Hill (Whittle and Pollard 1998:244), it is expected that there would have been competition for status between groups both within the Windmill Hill domain and inter-regionally.

27.2.5 Economic

Keeping animals and growing and gathering plants was the fabric of social existence, and a means of social participation and interaction. The ability to provide food and drink, especially meat, seems to have been central. Large cattle herds could have been fostered there, and probably mechanisms at the enclosure for the sharing of slaughtered animals through participatory ceremonialism. Production, therefore, was for use in social interaction. Significantly, Fairbairn (1999:150) noted the presence in the middle circuit of the mild emetic lesser spearwort, *Ranunculus flammula*, used in traditional medicine to induce vomiting. It is possible that it was used as a purge to help attainment of ASC and participation in particular rites.

The predominance of cattle presents a selective view of the subsistence importance and role of domesticates. Sheep and goats, for example, are more frequent at the South Street long barrow, pigs on Roughridge Hill, and deer at several sites. Whittle and colleagues (1999:349) suggested that subsistence practices and resource balance should be regarded as contextually specific. The regional economy was mixed, but dominated by domesticated animals, and this is reflected in those people using the enclosure.

The enclosure was a place for communal feasting and ritual, involving food, beverages and medicines; and ritually discarded animal parts and carbonised cereals as evidence for ceremonial consumption (Thomas 1993c:338). Cattle held an important position in terms of both subsistence and wealth; and ideologically, became the focus of activity. Subsistence remains and equipment indicate that while hunting and gathering by a mobile population continued, herding and the growing of crops in a transient system was practised.

Communities may have been pushed in this direction by those in control, perhaps ideopolitically, in order to reduce mobility further to effectively control them, and to provide adequate resources to support communal activities within the enclosure. Whittle and colleagues (1999:348-350) commented that evidence from elsewhere suggests that cereals may have played a limited role. Fairbairn (1999) disagreed, suggesting that there was a shamanic presence and that the plant remains, usually conceptualised as food, could also have implied more cultural functions, such as brewing, medicines, drugs, cosmetics, dyes, perfumes and adornments. Plant use within specified social contexts may symbolise ideas of identity, position and power of individuals and groups. As well as being consumed, they were probably exchanged at social gatherings. In the Neolithic, the use and exchange of plants and plant products would have positioned particular

individuals and influenced others' interpretation of them (Edmonds 1993; Fairbairn 1999:151-152; Tilley 1996).

As well as any symbolic meaning explicit in preparation and consumption, subtle expression of such social positioning would be reflected in those who owned particular plant products, who had access to them, who prepared them, and by whom they were used. This could have had symbolic resonance as a metonym for access to and control of cultivable land, and endowed status and prestige within and between groups and lineages, favouring those who adopted the new ways and advancing their claims to influence and dominance (Fairbairn 1999:152-153). The presence of cereals in exchange, ceremonies and feasts during rites of passage might have valued them above traditional wild plants as explicit expressions of domesticity. While cereal consumption and exchange had symbolic associations to land and social position, the burial of left-overs would have provided a metonym for completed social exchanges. Such incorporation into the enclosure would have been recognised as important in influencing future practices, and important also in the renegotiation of tradition (Edmonds 1993; Fairbairn 1999:152).

Although cereals had symbolic power as new foods, the continued consumption of wild resources may have symbolised tradition. This mirrors the placement of ancestors in the enclosure in the validation of activities and claims to social position through it. These subtle metaphors and metonyms may have evoked tradition, ancestors, or the presence of spirits to validate specific practices and reaffirm relationships to territory (Edmonds 1993; Fairbairn 1999:152-154). The distribution of wild and domesticated plants within the rings probably served the same purpose.

27.2.6 Distant Contact

The enclosure was a focus for dispersed communities within its region, many of which on the periphery would have had regular contact with adjacent groups, creating avenues for acquisition of knowledge, ideas and attitudes, including the establishment, maintenance and extension of authority and power.

Many of the finds relating to consumption during ceremony and ritual could have had ideological significance as products from elsewhere, possibly from a broad area of southern England. Pottery, for example, points to visits by people from other regions, notably from around Bath and Frome (Smith 1965:19). A shale bead (shale is not local but could be found in Jurassic clays) and another of amber (amber is found in Norfolk, Suffolk, but also Sussex, Isle of Wight, Cumbria, and North Yorkshire), also indicate the

wide reach of Windmill Hill (Smith 1965:134-135), as do a large whelk, and oyster and limpet shell.

Small pieces of exotic oolitic limestone, and marble were found on the site. Nearly half were concentrated in and near the pre-enclosure Square Enclosure, and a piece of oolite was in a pit under the outer bank. Both rocks are associated with construction of West Kennet and other nearby long barrows, indicating their probable connection with funerary practices and also with pre-enclosure activities on the site. Oolite was also recorded from the inner circuit and marble in the outer circuit, both in ditch upper levels. The two rocks are exotic to Windmill Hill and are considered to have derived from the Frome/Bath region 30-35km distant (Smith 1965:33, 117-118). Oolite is seen to have held special associations: with the architectural tradition represented by the Cotswold-Severn tombs; and possibly by extension to qualities associated with human bone and ancestral vitality (Pollard and Whittle 1999:341). Bradley (2000:91) suggested that its fossil content may have made its use ideologically important; and that its presence at Windmill Hill was possibly due to incorporation in pottery as temper. He saw the same reason accounting for oolite in artefacts generally and its association with tombs.

A large number and variety of imported stone implements had been brought to the site. Over 50% of the flint axes came from Sussex (Field 2009). Stone axes also originated from distant locations: Lake District – Groups VI and XI; southwest Wales – Groups VIII and XIII; North Wales – Group VII; Cornwall – Groups I and IIa; and the Charnwood Forest – Group XX (Clough and Cummins 1979). This suggests long-distance exchange (Bradley 1984:28-35; Pollard and Whittle 1999:338-340; Stone and Wallis 1951:133), and people at Windmill Hill would certainly have had knowledge of the importance of those places. This confirms Windmill Hill was an important centre of some kind (MacKie 1977:220); the axes, however, were not being passed on so the enclosure does not appear to have been one of redistribution/marketing (Field 2009).

26.3 OBSERVATIONS

26.3.1 Overview

Developments were becoming more specific, more contextualised and more personalised in the Early Neolithic of Windmill Hill. The enclosure's dominating prominence in the region made it an ideological focus; and its leaders drew on the power of ancestors by the deposition of human bone, curated and sourced elsewhere, to legitimise their authority. Concentration of long barrows in the area invites linking of their use and purpose with the causewayed enclosures. Smith (1965:137) has suggested that disarticulated human

bone in Windmill Hill ditches had been taken from four long barrows: West Kennet, Millbarrow, Horslip and South Street, two of which are within 1km.

Given the widespread sources of items deposited within the enclosure, there may have been intended competition with and countering of similar centralising tendencies towards social control in adjoining regions, such as on Salisbury Plain. This reflects developments elsewhere where large groups centralised co-ordinated social, economic, political and ideological activity necessitated full-time religious management, permitting emergence of elites within communities because of the need of administrative support by dominating individuals. Renfrew (1973c) proposed a hierarchical model in which each Wessex causewayed enclosure served as a central place for an emerging chiefdom, the nearby long barrows marking the territories of component communities.

Consideration of the Windmill Hill enclosure and West Kennet long barrow data emphasises the potential swiftness of Early Neolithic change in this region with respect to the concentration of primary activity over a short period of time; an interest not in timeless, generalised or anonymous forebears but in the dead of known, remembered and countable generations — a history that begins to speak for local agency and local identity within the structure of wider changes elsewhere. Developments were becoming more specific, more contextualised and more personalised. At the same time, in the case of Windmill Hill, people show stronger attachment to the site and were prepared to occupy it longer and more regularly, as indicated by both domestic equipment and the evidence of conspicuous consumption and other ritual behaviour.

26.3.2 Shamanism

Specifically, shamanistic behaviour relating to the enclosure is evident in the strategy employed to introduce and establish a new way of life. A number of elements reflect this objective and its achievement.

sacredness Pre-enclosure site features, particularly those relating to a burial and numerous pits, marked the site as a 'place' and one concerned with mortuary ritual and ancestor veneration. Exotic oolite is seen to have had associations with the dead and ancestral vitality. Ditch deposits of human bone established a new form of burial at an important place. The enclosure circuits marked out the sacred zone. Transition is a feature of the plan, suggesting movement through thresholds between the ditches and also in its symbolic layering.

ideology This was seminal, designed engender and underpin political control and group cohesion on a scale embracing not only local communities in but also those from other regions not necessarily closely associated.

aggregation The monument served as a permanent central place periodically occupied both by those living in the vicinity as well in more distant communities. Variety of circuit deposits indicate participation by a diverse range of people and origins, and involvement in significant trade networks. The act of offering and the nature of deposits would have encouraged communities to embrace a sense of social cohesion and belonging and engagement with the site.

ritual Enclosure rituals were different in being open and visible, enabling participation by large numbers in contrast to pre-existing long barrows where it was restricted. However, while everyone now had access to access to the spirit world /sacred place, the enclosure layout subtly constituted a powerful symbol of inclusion and exclusion, conveying a strong message of social organisation and identity, particularly those who could communicate with the supernatural realm. To those intimately involved in enclosure establishment and operation it would have been seen as a means of reinforcing and extending their ideology-based authority.

feasting Gradual progression through time in pottery to heavy-rimmed, often decorated vessels suggesting increasing emphasis on conspicuous consumption.

plant use The presence of a mild emetic possibly used in attaining ASC used and for participation in particular ritual. Plant remains, as well as able to be seen as food, could also reflect more cultural for functions such as brewing, medicines and drugs.

REDACTIONS

- Figure 27.1** Location of the North Wiltshire Downs and Windmill Hill, England
- Figure 27.2** Windmill Hill: the enclosure from the northeast ref: Pollard and Reynolds 2002:47
- Figure 27.3** Windmill Hill: early Neolithic sites in the region ref: Pollard and Reynolds 2002:28
- Figure 27.4** West Kennet long barrow ref: Pollard and Reynolds 2002:67; Google images
- Figure 27.5** Windmill Hill: pre-enclosure pit cluster to the southeast of the enclosure
ref: Pollard and Reynolds 2002:36
- Figure 27.6** Windmill Hill: pre-enclosure burial under the Outer Bank
ref: Pollard and Reynolds 2002:Plate 3/Ch3
- Figure 27.7** Windmill Hill: pre-enclosure postholes, pits and grave sealed under the Outer Bank
ref: Pollard and Reynolds 2002:25
- Figure 27.8** Windmill Hill: plan of the pre-enclosure Square Enclosure ref: Smith 1965:31
- Figure 27.9** Windmill Hill: layout of causewayed enclosure viewed from the east, with deposits, activities and symbolic references of its primary base ref: Whittle and Pollard 1998:239
- Figure 27.10** Windmill Hill carved chalk: cups (C1-8); phalli (C9-10); figurines (C11-12); incised pieces (C13-15); perforated pieces (C16-19); ball (C20); dumbbell-shaped object (C21) ref: Smith 1965:131,133

Chapter 28 SKARA BRAE AND PREMONUMENTAL BARNHOUSE (ORKNEY)

From a number of small-scale, contemporary dispersed and shifting villages such as those in the Bay of Firth, there began a process of conglomeration resulting in substantial nucleated settlements that varied in terms of the particular responses of the communities concerned to the social consequences they experienced in an ever-changing Neolithic world (Richards *et al.* 2016:128, 243-244; Carey 2012:10; Bayliss *et al.* Supplementary Data 2017). The effect of this process is clearly shown subsequently by Skara Brae (c.3200-2500 to c.2450-2200 calBC); and by Barnhouse prior to its abandonment and construction of monumental House 8 over the remains (c.3410-3100 to c.2900-2750 calBC) possibly together with another similar building, marking radical departure from earlier house construction (Hill and Richards 2605:160, 188). This occurs at a number of other sites but on a less monumental scale. There is an obvious move towards larger internal areas in the Late Neolithic house, evident in difference in the size and scale of buildings, and character of architecture. At a practical level, this is construed as a response to growth in household size. Initial indication of this trend is evident at Knap of Howar with expansion of a single house into double units (Richards *et al.* 2016:232-233).

The trajectory continues at Barnhouse with the construction of a large double structure, House 2, a development of earlier 'big houses'. Similarly, the prominence of and necessity for such a unit continues at Skara Brae, seen in House 7 being retained from the earlier village and no longer a separate entity but physically attached by a linking passage. Running parallel towards fusion and unification of dwellings at Barnhouse was the greater material wrapping of individual houses achieved through an encircling wall, and being surrounded and fused by midden. At Skara Brae the gap between the original house wall and the outer casing wall was filled with midden, over 2m in thickness. Consequently, within Late Neolithic settlements, as houses became physically closer together, paradoxically they became more separated through a process of extensive wrapping (Richards *et al.* 2016:243-244).

28.1 SKARA BRAE

This settlement is located in Skail Bay (Fig. 28.1) and was thought initially to have consisted of groups of small freestanding structures with open areas in between before sand and midden build-up (Fig. 28.2). The first phase consisted of the small Houses 6, 9 and 10, and the large House 7 (Fig. 28.3). Midden material was mixed with clay during

construction, as at Knap of Howar (Ritchie 1985:56-58). Excavation has revealed numerous rebuilding episodes over a long period. Initially Childe (1931:61-95) identified four phases, but these were reduced to two by Clarke (1976:17). Richards (1991a:25), however, considered that this is misleading, as it is improbable that the entire village was simultaneously rebuilt.

Evidence shows that individual houses were frequently refurbished, demolished, and reconstructed *in situ*. The latest comprised ten stone houses, all but one (House 8) linked by passages (Fig. 28.4). They are conjoined and semi-subterranean, with thick walls of double-faced drystone and a midden core, and also surrounded by midden (Fig. 28.5). Each has a single entrance with internally placed holes and small recesses on the architrave to secure bars holding a stone slab door. Throughout the sequence, a typical cruciform layout was maintained with an entrance, left- and right-hand 'beds', recesses and cells, and a rear 'dresser', around a square central hearth (Figs 28.6-28.8). Internally, they have a single room of c.2.5-3.5sqm. Houses 7 and 8 are different, and not positioned within the central nucleus of the settlement. The former is entered from a side passage perpendicular to the main thoroughfare, while the latter is detached from the principal cluster.

House 7 is situated on the southern side of the village, separated from it and approached via a side passage (Fig. 28.9). It is similar in size and construction to late-period houses but, unlike others in the cluster which overlie previous structures, it is a remodelled original unit on natural sand. The door is slightly east of north, and the door bar, in contrast to others, was controlled from the outside, keeping the interior securely closed off and preventing anyone from leaving. It was "a structure of separation; a place which can be shut up and kept apart" (Richards 1991a:31-37). A small cell permitted control of the doorway. Adjacent to its left-hand jamb is a hearth, an arrangement also recorded in Structure 8 of Barnhouse, the Standing Stones of Stenness and the Ness of Brodgar. The route taken to reach it is more circuitous than the others and has five sill slabs and four areas of decoration.

The house has a central hearth and a typical cruciform arrangement of furniture. Under the right-hand 'bed', a decorated stone cist contained the remains of two mature females, possibly important individuals, in crouched position, a practice, Piggott (1938:94) considered, to have been introduced from Europe. The assemblage does not suggest domestic occupation, yet includes animal bone, ash, potsherds, and stone implements and ornaments. Ceramic, bone and stone containers were positioned around the interior, some holding (unidentified) bones. Near the hearth was a large, highly decorated

Grooved Ware pot, possibly used in fermentation for alcoholic beverages (Dineley and Dineley 2000). A bone dish containing red pigment was set into the floor in the front left-hand corner. A bull skull was found in the left-hand 'bed'. Many objects of adornment were distributed on the left-hand side of the house, including a cache of beads and pendants in the rear cell. In contrast to the other houses, much material culture had been left *in situ* on abandonment.

House 8 is architecturally different and stands isolated on the western side of the settlement, separated by paving but not surrounded by midden (Fig. 28.10). It is ovoid, measuring 2.7m north-south with a maximum width of *c.*2.1m (Ritchie 1983:60-66). There are two entrances: a major southern one protected by an outside porch, and a narrower opening at the northern apex. A stone threshold slab marks a small 5cm step up into the slab-floored porch; inside on the left is a small enclave containing two large pots flanked by two upright slabs. The doorway is narrow with a threshold slab and bar holes on the interior. Internally, it has the same spatial organisation with a central hearth as in other houses, but with other elements substituted for the usual furniture, such as alcoves replacing beds and floor pits, and a partitioned recess for a stone dresser. In contrast to the other houses, its walls are substantially decorated. Similar positioning of a single dwelling adjacent to the main settlement occurs at Links of Noltland (Richards *et al.* 2016:246).

The large partitioned recess at the rear has been interpreted as a kiln, highlighting the importance of fire and leading most to conclude that this was not a dwelling. Ritchie (1983:67) argued that it was a workshop, noting that the heat-damaged stones and an apparent flue would suggest stone was heat-treated prior to working to improve its flaking qualities. Richards (1991a:40) rejected this, but acknowledged that particular activities, including flint and chert preparation, had involved fire treatment, and that pottery may have been decorated and fired there. Material contents also emphasise the difference of this structure. Items found in other houses, such as those indicating stone tool manufacture, were rare in House 8.

28.2 PREMONUMENTAL BARNHOUSE

Barnhouse lies adjacent to Loch Harray, on the southern section of the breached isthmus separating that lake from Loch Stenness (Fig. 28.1). It is 200m from the Stenness Standing Stones to the south, in a zone with earlier ephemeral Mesolithic occupation.

Approximately 150m to the southwest, on the brow of a slight rise near the Standing Stones, was Barnhouse Odin, a surface scatter of flint, pumice and slag. It is considered to have been a cluster of 15 free-standing round houses (Figs 28.11-28.12). The site plan

reveals a small central open area with ash deposits and two concentric rings of houses, each with its own drainage system (Fig. 28.13). Two structures in close relationship and sharing the same drainage system, the large House 2 and smaller House 9 on the southwestern periphery, were in the outer circuit. Apart from these, houses were similar in size and relatively small, c.5m in diameter internally. Walls were wide and made of drystone masonry with midden core, and probably protected by outer layers of turf. Roofs were of timber and turf. Each house had a single narrow doorway opening into the typical cruciform arrangement around a square kerbed hearth (Downes and Richards 2005:57-58). Houses 6 and 9 had stone-lined drains from hearths to the outside, that in the latter were also associated with water pit (Fig. 28.14).

Like Skara Brae, the individual structures were frequently refurbished, demolished and reconstructed in the same location, but showing variation in size, orientation and furniture. Barnhouse was abandoned after 450 years of occupation. Material culture consisted of Grooved Ware ceramics, worked flint and other stone artefacts including Skaill knives like those at Skara Brae, and much burnt bone. Similarity with Skara Brae is also seen in the extraordinary nature of houses such as House 2 (Richards 2005b:129-156). Barnhouse, however, differs from Skara Brae in also having a domestic function.

House 2, c.12.8m x10m, was a large structure; twice the size of others with high-quality masonry and being in a prominent peripheral position within Barnhouse, it would have overshadowed them in external appearance (Fig. 28.15). Internal features differing from those in other houses suggest functions different to them. Internal layout and imagery point to symbolic qualities referencing places of the dead, while also pertaining to the social practices of the living, may have determined its peripheral location (Richards 2005b:137, 143).

In the plans of two houses and their cruciform pattern were effectively juxtaposed, the unusual interior being divided symmetrically in half by two centrally positioned masonry piers. Each space consisted of a central kerbed fireplace and pit together with six large recesses formed by corner buttresses and the two central wall piers. Its single doorway on the southern side was narrow and paved, and entered the eastern room. The floor was of yellow clay, kept clean and periodically renewed. A stone-covered burial cist with some decayed bone marked the threshold between the two halves. Excavation revealed domestic activities in the eastern room, including Grooved Ware vessels associated with food preparation, retouched flints and a polished chisel. A large pit contained sherds of two Grooved Ware vessels. In the western half were sherds of thinner-walled serving vessels, and a worked stone assemblage different from elsewhere, including unfinished

maceheads on red-black mudstone. Termed the ‘Ceremonial House’, the structure reveals that architecture in terms of size and construction quality was being used to signify particular places as qualitatively different, and that social identities and practices may have varied within these different contexts. It shows strong evidence of ideological beliefs and practices (Richards 2005b:129-156).

Although interior symmetry is apparent and important, in practice it breaks down because of the off-centred doorway. Since access was into the eastern half, a ‘weighting’ of space was effected when moving through it, providing a sequential order from entry to the deepest part of the western half. Such movement through a structured, dimly lit interior would have made it difficult to visualise the structure in its entirety. While on entering the eastern section the experience would have been mediated by familiar principles of spatial organisation, these were transformed by the nature of the access to the western room. Reorientation of that order and reference to ancestral places, and the formalised and controlled nature of movement within it, ensured a qualitatively different experience of restriction, power and authority, typical of ritual contexts (Richards 2005b:147). In reflecting aspects of passage grave architecture, House 2 presents as a place where the living and dead converge.

The careful attention given to maintenance argues for the structure’s special character and possible role in ritual practice; it was kept clean. Such behaviour recalls the highly codified nature of ritual behaviour where there is concern about the maintenance of purity and the control of polluting and dangerous substances. Ideological use of pottery is evident with Grooved Ware vessels being differently decorated between its two halves. Pot fabric displays a higher number tempered with sandstone and lacks igneous materials found in the dwellings (Downes and Richards 2005:88).

House 9, similar in shape but much smaller, appears to be a typical dwelling (Figs 28.12, 28.13), the lack of the characteristic internal stone ‘furniture’ possibly resulting from complete demolition. Its central hearth had a covered drain running beneath it and a large pit adjacent. There is no evidence of rebuilding or refurbishing episodes other than a single renewal of the clay floor. It constitutes an important dwelling, however, because of its close relationship with House 2, as their entrances face each other across a paved alley. Richards (2005b:129-130) commented that its proximity to House 2, together with “intimacy” of their opposed doorways, “drew the houses into a relationship which would have been immediately obvious to the external observer”. As noted, the drain beneath the central hearth was unusual in being covered and connected to a reticulation system separate from those of other dwellings but also servicing House 2. There was also a

large opening of the drain between the hearth and entrance passage, possibly providing air draft to achieve increased temperature for manufacturing in the hearths as well as disposal of fluid waste.

The relationship between House 2 and House 9 implies differences between households and between different groups and individuals. Whilst the House 9 occupants may have gained power through esoteric knowledge and related behaviour, it is likely that access to House 2 and its practices was status restricted. House 2 architecture supports this by providing seclusion achieved by crossing many boundaries or thresholds, and only a few people could have been accommodated, probably for ceremony. The smaller House 9 would have served a subsidiary purpose. S. Jones and Richards (2005:204) concluded that House 2 was a “domain dominated by male elders who used knowledge as a commodity to maintain their power over women and younger men”. They noted that a cist burial made House 7 comparable to House 2 at Barnhouse in its ritual nature, the latter having a cist that may have contained a human burial.

28.3 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

28.3.1 Settlement

The two sites evidence rebuilding in the same location, but in doing so maintain very different settlement plans: Skara Brae, a tight, agglutinated cluster of subterranean houses; Barnhouse, concentric rings of free-standing houses. In both cases, however, two buildings (respectively Houses 7 and 8; and Houses 2 and 9) differ from the rest in size, interiors and content, and in their isolation. They also stand out as a pair with respect to purpose and practice.

At Barnhouse, the situation may be more complex given the apparent House 1/House 6 relationship on the inner ring, as the latter was the only house to have a pit below the entrance paving (Downes and Richards 2005:59-60).

Both settlements had an ideological relationship with the Maeshowe passage tomb. Major Barnhouse structures are aligned towards it; and a road connected Skara Brae to it via the Brodgar isthmus and Barnhouse (Castleden 1987:117).

28.3.2 Ideological

water All known Orcadian settlements are close to water and maintain a clear view of the sea and/or lake. There was purposeful connection of houses to flowing water, and water bodies generally would probably have been connected with social relations implying strong ideological association. If water was an important factor in the

Barnhouse location, subsequent construction of the Stenness Standing Stones suggests the locality to have been of significance. Special liminality might have been perceived in the breach in the narrow isthmus uniting the salt water of Loch of Stenness and the fresh of Loch of Harray.

Water was deliberately led through the house (Downes *et al.* 2016:62-63). Drains from the extramural cells of houses probably were for sanitation but may also have been an ideological response to waste and concepts of impurity (Clarke and Sharples 1985:60; A. Jones and Richards 2005:50-51), as well as the possible presence of ‘dangerous’ substances.

midden At both sites each house was surrounded by midden deliberately and ideologically deposited. In this could have been the linking of past with present. As suggested earlier, the clay used in construction may also have been viewed ideologically because of ‘magical’ qualities associated with its source. The practice was also observed at Knap of Howar.

cosmology The categories of order within Orcadian houses formed part of wider symbolic classifications embracing many spheres of meaning. These could only be realised through social practices in which are seen the reflexive nature and power of house architecture and contents. Downes and Richards (2005:57-59) considered the house to be a spatial construct in terms of architecture and cosmology; and regarded its internal organisation as a microcosm of the socially constructed world with links to wider symbolically-based spatial and temporal cycles. They have suggested that the cruciform arrangement of interiors relates to the cardinal directions and becomes more significant when alignment with solstitial sunsets and sunrises is considered as 80% of dwelling entrance orientation at the two settlements lie on this axis. Houses 7 and 8 at Skara, however, Brae are clearly aligned north-south.

This characteristic cruciform layout and orientation, noted at Knap of Howar, is more developed at Skara Brae and Barnhouse. These features probably formed part of a wider symbolic classification embracing many layers of meaning underpinning and informing particular understandings of the world, given the emphasis on boundaries, thresholds and clearly defined spaces. They not only ordered space but controlled people movement. Regularity in distances between furniture over a substantial period of time suggests that complex rules of layout and rituals surrounded house erection and occupation. The position and alignment of hearth stones with cosmology a vital reference, in terms of the cosmos being re-created (Eliade 1959:52), constituted an important part of construction

and the house ritualisation to be better understood, particularly with respect to those 'different' ones.

House construction sequence, selection of materials and establishment of spatial order and imagery were part of a single process conceived as a series of rites of passage bringing a house into physical and social existence. Rituals were probably part of construction and internal furnishing. In many societies, the help and advice of ritual specialists is sought for the successful erection of a dwelling (Downes and Richards 2005:59-60). The highly ritualised nature of movement within houses was maintained with size increase difference in later houses effectively countered by projecting stone furniture.

Skara Brae was to be 'experienced' by people as they moved through its narrow passages. Purpose is seen in the way they were ideologically required to move to reach particular zones/structures, and how these were delineated and ordered. A number of different methods were employed in passages to break up space, each embodying different symbolic meaning, such as projecting upright stone slabs from side walls carrying decoration. The several decorated boundaries and thresholds along the passage to House 7 symbolised passing from the profane into sacred spaces. Movement to it was probably restricted to certain times and specific events, and to particular individuals. Because of the different nature of the Barnhouse settlement, such thresholds were incorporated within House 2, immediately encountered on entering.

visual imagery This was a strategy used to differentiate various zones within Skara Brae and effectively order movement, distinction being evident in type, context and the material inscribed. The passages, building walls and stone furniture of Skara Brae are incised with entoptic motifs: lines; crosses; chevrons; zig-zags; triangles and lozenges; and horizontal banding within lozenges (Figs 28.16, 28.17). They are also present on artefacts (Shepherd 2000:146-154): stone knives; Grooved Ware; bone awls and needles; beads; and finely decorated pendants and pins of bone and marine mammal teeth (Figs 28.18-28.20). Those in House 8 are superior and more prolific, associated with stone, bone and shell pots containing red ochre and haematite nodules (Fig. 28.21). Other artefacts included decorated carved stone objects; bone jewellery; and bone dice-like objects (Figs 25.22-12.24).

Entoptic motifs were used similarly at Barnhouse. Grooved Ware sherds, representing a range of pots from very large to small, exhibit variety in decorative schemes incorporating entoptic motifs (Figs 28.25). The low percentage of decorated sherds was considered by Jones (2005:261) to indicate that its production was symbolically

powerful. Dineley and Dineley (2000) saw the large vessels being used for fermentation in the preparation of alcoholic beverages, and small ones to drink them. This has ideological implications. House 5d had decorated stones (Figs 28.26).

In both settlements linear decoration was on stone artefacts, while curvilinear motifs with circles and dots are only found on Grooved Ware. In the older passage graves, curvilinear patterns mark important zones such as entrances and internal thresholds. These practices demonstrate the specificity of different decorative styles for different contexts, and the interchangeability of these rules on different media (Richards 1991a:28-29; Sharples 1984:116-117). Furthermore, such connections suggest that the tomb decoration made direct reference to the domestic sphere, forging a link between the living and the dead, and emphasising the parallel between the plans of tombs and houses. In this a firm ideopolitical strategy is identified, reflected in the widespread application of the same motifs: in the passages of Skara Brae, and in Houses 7 and 8; the Barnhouse structure thresholds; on building stones in Barnhouse and Ness; a slab at the Ring of Brodgar; and on the locally produced Grooved Ware and the earlier Unstan Ware. It has been suggested that the Brodgar piece had been removed from Barnhouse, as had probably a small decorated stone inside Maeshowe (Bradley 1998b:387; Bradley *et al.* 2000:55-62).

Two observations are made: the simplicity and narrow motif range, and the rapidity of execution suggest in some cases a quick, graffiti-like intention to strategically mark places and objects; the close association of motifs with tombs, as seen view at the Holm of Papa Westray South (*c.*3000 calBC) and Maeshowe (*c.*2800-2700 calBC). In this is seen a strategy on the part of those in control to instil awareness and understanding of the ideopolitical regime. Given the close association of motifs with tombs, their use implies an endeavour to consolidate power over communities by emphasising and using the influence of ancestors. This would have ensured the influence of all tombs/houses of the dead was harnessed, creating a sense of community in which the deceased remained involved in the everyday activities of the living. Another related conclusion is that a priesthood was exerting ideopolitical influence, not simply parochial but representative of a wider society in Late Neolithic Britain. The associated elites were seen to have occupied ceremonial centres and developed a sophisticated system of observational astronomy and field geometry; and commanded manpower, resources and technical skill to erect the architecture evident (MacKie 1977:2-3).

Shepherd (2000:146-154) noted the natural fracturing of flagstone displaying crosses and lozenges with internal divisions, quartering and banding (Fig. 28.27). Appleby (1994)

interpreted Skara Brae art as: the pendant triangle representing loch or sea; the horizontal band, the land or sand bar; and the upright triangles and lozenges as mountains, hills and sky. Shepherd supported the idea that it represented a mythological tiering universe of sky, land and water, with underwater or underground zones. Such meaning implied an ideological perception of 'place'. This imagery during the earliest occupation phases is seen to mark it as a basic element in site identity, and of sufficient significance to encourage permanent occupation and subsequent village development.

paired structures Both settlements have isolated, paired structures different in nature and function from the rest in each settlement. The Skara Brae pair, Houses 7 and 8, are similar in terms of material culture. It is clear from the plan that these segregated zones identify important areas and create spatial and temporal depth to movement. Direct access to both was prevented by a porch built around the House 8 doorway restricted visibility into it; while the door bar of House 7 would have ensured the interior was kept out of view, this assisted by the angled passage and the cell containing the door. The concentration of decoration around the right-hand 'bed' inside assumes greater significance when it is noted that the cist containing the two mature females is directly below. Since this is the only cist burial known at Skara Brae, its presence within House 7 helps to explain apparent sanctions imposed on entry and exit. The material contents of House 7 were unusual and probably special. Richards (1991a:36-41) questioned why they were still there. They may have needed to remain locked away and, as Richards concluded, were not intended for removal. The contents of House 8, similarly, emphasise its difference, since common domestic objects were rare.

A similar situation with regard to controlled movement probably pertained at Barnhouse House 2, the entrance to which was reached after passing down a narrow passageway between it and intimately-related House 9. There, however, the various thresholds of fireplaces, pits and stone partitioning were experienced within the building after having to crouch and step down to enter and pass through the first.

maintenance of 'place' With houses at Skara Brae and Barnhouse demonstrating a general pattern of rebuilding in the same location (A. Jones and Richards 2005:56), there must have been something special about the individual plots. The practice ideologically tied the people and structure to ancestors and the past. Samson (1990:7-8) described building superimposition as a "conscious architectural expression of continuity" of site occupation. Residing physically on space formerly occupied by ancestors created links with the past, particularly with individuals of seniority and authority.

Richards (1991a:26) commented that, while the issue of ‘place’ and availability of a suitable plot within a settlement may have influenced this practice, kinship and inheritance rules played an important role in governance of residence patterns. That ideological influences were also significant is suggested by two aspects of rebuilding: a new house as opposed to refurbishing an existing one; and its placement in a slightly offset position. These may reflect an ambiguous relationship with ancestors that Sharples (1984) observed in the isolation of chambered tombs in peripheral areas. The fact that early Skara Brae structures on the edge of the settlement were not later rebuilt suggests a deliberate and significant break with the past.

28.3.3 Political

Skara Brae and Barnhouse exhibit three developments in particular reflecting social control: increased ideopolitical influence of Maeshowe (constructed *c.*2800-2700 calBC) and individuals associated with them, this over now larger social units; nucleated settlement plans (Skara Brae clustered; Barnhouse ringed); and similarity of house interiors.

The presence, nature and positioning respectively of Houses 7 and 8 and Houses 2 and 9 at Skara Brae and Barnhouse point to imposed ideopolitical hierarchies within the two settlements.

Maceheads are present in the artefacts of both Skara Brae and Barnhouse (Figs 28.28, 28.29), suggesting possible conflict situations. These stone objects, however, were not exclusively weapons as they appear to have had a number of purposes which saw them associated with status and possibly involvement in a range of social, economic and political arrangements (Anderson-Whymark *et al.*: 2017).

28.3.4 Social

status At Skara Brae and Barnhouse particular individuals probably accrued special status through association with the pairs of different structures (A. Jones and Richards 2005:23).

relations Development of cereal agriculture and animal husbandry were associated co-operative practices that required the broader-based social units of house societies as seen with the Bay of Firth villages, and movement towards nucleated settlements. The increased household size and promotion of more kin-based social relations involved, however, initiated fault lines through the broader community or village. The final stage of this process was settlement nucleation at Skara Brae and pre-monumental Barnhouse

with stand-alone houses being bound together within extensive middens — a material strategy of wrapping disparate ‘identities’ in an attempt to exhibit unified communities, the product of highly competitive localised conditions where different houses competed for social status (Richards *et al.* 2016:232-233, 244, 252-253). This is seen to have been played out in a strict ideological context constructed and maintained by powerful individuals.

Ritchie (1985:58-72) stated that the highly integrated nature of later Orcadian settlements indicates community co-operation. She argued that at Skara Brae, midden material was not simply dumped but must have been stored elsewhere for future use. Its incorporation into house construction ties the living to the ancestors, and establishes group identity and site ownership. She considered it difficult to see its use as only practical, by improving weatherproofing, and stated that houses surrounded by midden and other materials created the impression of a highly developed sense of community. Downes and Richards (2005:59) added that rebuilding on the same site would have enhanced such ideas.

boundaries One difference between the two settlements is that Skara Brae lacked an open communal zone. Some boundaries are physical barriers to movement within each. In addition, differently ‘weighted’ spaces were created by areas of paving, variation in roof height, and sloping floor levels. These may have operated to exclude certain people who lacked the necessary ideological standing for entering Houses 7 and 8. Another difference is that Barnhouse is neither below ground, nor are its structures linked by passages: they are free-standing, exhibiting social independence. Selective exclusion certainly operated at Barnhouse by means of subtle boundaries associated with the settlement rings and the zone dominated by House 2.

individualisation/distinction The amount of jewellery at Skara Brae implies identification as a group, household or individual. Pins resemble those found at Newgrange: colour seems important, as some have been deliberately given a blackish-blue hue resembling ethnographic examples of differentiating body adornment. Other pieces include pierced teeth like those of shamanic context in the Upton Lovell G2a grave.

Features at both Skara Brae and Barnhouse reflect social distinction between domestic and non-domestic structures. Within Barnhouse, this is reinforced by two stone-built drains which, despite their closeness, do not intersect. A similar concern with drainage is observed at Skara Brae and may relate to the perceived symbolically laden and polluting nature of waste in many societies (A. Jones and Richards 2005:27, 50-51; S. Jones and Richards 2005:202). Social ordering is illustrated by the small, apparently one-person

dwelling at both sites, House 8 at Skara Brae and House 9 at Barnhouse, suggesting that particular individuals promoted their difference and mystique through self-imposed isolation. That at Skara Brae was not only built apart but also decorated, while activities within it involved the use of fire, probably transformational from natural to cultural which “frequently require spatial separation and sanction” (Leach 1977).

At both settlements there were individuals effectively bringing independent groups into larger communities that co-operated and conformed to standardised practices. Social differentiation was accepted. The larger size of their later structures, however, indicates increase in those permitted to participate in ritual and ceremony.

At Barnhouse, inner ring inhabitants must have been associated with essential community activities that took place in the central area, while those in the outer were physically associated with the formalised and restricted ceremonial activities in House 2. Artefacts in the two zones were different. House 2 was concerned with macehead production, whereas the inner ones contained objects, such as pumice, associated with object manufacture. Households, therefore, had identities related to their location and daily activities. These may have concerned household kin relations as implied by house rebuilding (S. Jones and Richards 2005:203-204).

Downes and Richards (2005:59) commented that house appearance is the public face of its inhabitants and constitutes a medium for intentional construction and expression of social identity. They added that there was some variation to the standard house plan; that house spacing supported community cohesion and described individual family space; and that ‘dressers’ might have been designed to display status objects. Clarke and Sharples (1985:70-71) commented that, if this was the purpose, their positioning and form could not have been better. Further variation is seen at Barnhouse, where A. Jones (2005:271) noted differences in Grooved Ware assemblages in terms of vessel form, size, fabric, temper and decoration between the central houses and those on the periphery. If settlements the size of Skara Brae and Barnhouse practised exogamy, this could have regularly introduced variation in ideas and practices if newcomers retained and publicly presented features of their former communities (Downes and Richards 2005:126).

settlement organisation Certain longstanding social principles can be identified in settlement organisation, such as the inner and outer patterning of structure location at Skara Brae and in the Barnhouse rings. At Barnhouse, repetition and transformation of the basic principles is evident in House 2, which physically exaggerates many of the

subtle attributes of the other houses. At Skara Brae, retention of House 7 unchanged from the earlier village clearly indicates their intentional maintenance.

S. Jones and Richards (2005:197-199) regarded the Barnhouse rings as mirroring the concentricity within the houses where rounded walls encircle the living quarters and central hearth. They also considered that the cruciform plan added to the symbolic power and authority of those who controlled knowledge about it and which must have structured the lives of Orcadian village people. In some contexts this would have been explicit, in others subliminal, to do things in particular ways, in specific places at particular times. At certain levels of interaction and social domains, these shared principles formed the basis for recognition and expression of a common identity, and informed the identities of individuals within communities. Barnhouse suggests that the village had special identity resulting from its location and ideopolitical associations, and because of its specialisations such as exotic pumice acquisition, pottery, and alcoholic beverage production (seen by Dineley and Dineley 2000 to be indicated by large and small decorated Grooved Ware vessels, and house floors being possibly resurfaced and kept clean for barley malting surfaces). Each house may have had its own particular specialisation, such as House 6 with pumice. While there was evidence of animal husbandry and cereal production (and these foods being significant in the diet), this may not have related to Barnhouse itself on the scale expected for a settlement of that size, given the small number of tools for animal butchery and lack of grain processing equipment when compared with other sites (A. Jones and Richards 2005:34-38; Jones *et al.* 2005:289-291) could support this view with regard meat provision, though slaughtering may have taken place outside the village. The site was obviously not simply a production place, but ideologically one of transformation, where materials were changed into cultural items.

Primary production of food beyond Barnhouse would indicate that some of its activities were perceived to be 'different'. For example, flint knapping was not found among everyday activities, perhaps because of its scarceness, its dangerous and magical nature and its products, and the special skills required in processing it. There is a concentration of debris from the production of 'special' ritual objects within the western half of House 2. Not only does this highlight a difference of categories, but it may have also played a role in the constitution and maintenance of specific social identities (A Jones and Richards 2005:38). This categorisation of flint reflects the situation observed for House 8 at Skara Brae.

28.3.5 Economic

subsistence Food supplies came from a mixed farming economy, a view confirmed by recent research (Ritchie 1985:72-78; Hinton 2005). The diet included milk and cereals along with edible wild plants, including hazelnuts and crab apples, probably harvested near the settlement. Barley was important, as were cattle, pig, sheep and goat (Cluett 2013:13). Animal husbandry at Barnhouse involved roughly equal proportions of cattle, sheep and/or goat, with only a small number of pigs (King 2005); similarly at Skara Brae together with hunting of red deer, fish and marine molluscs, and sea mammals including seal, whale and otter. Seabirds formed part of the diet there, but were also important for bone, skins, oils and feathers. Substantial quantities of carbonised grain, mainly barley, indicate that cereals were grown near Skara Brae. A network of walls dividing the land around the settlement supports this view. Confirmatory evidence of intensive local cultivation comes from contemporary Links of Noltland on Westray (A. Jones and Richards 2005:26, 33).

Subsistence activity involved a wide range of stone and bone tools (Figs 28.30-28.32). Of the 157 artefacts making up the Barnhouse stone tool assemblage, 43% are simple cobble tools and the rest comprised small ground pebbles, axes and maceheads, flakes, multi-hollowed stones, and flaked cobbles. The main raw material is sandstone, with smaller amounts of quartz, quartzite, granite, amphibolites and igneous rocks. Sixty-four pieces of pumice were recovered, over a third of which display no wear. The remainder show clear evidence of use as tools for smoothing wood and bone, and for leather working. There was a very discrete distribution with half recovered from House 6 and associated external middens and occupation areas, suggesting centralised acquisition and control of a valued and exotic raw material (Clarke 2005:323, 335).

storage Undoubtedly, surplus was garnered for ritual feasting at critical times of the year and to support large aggregations of regional communities constructing monuments. While storage is rarely mentioned, it must have been integral to successful existence and important when some staples were out of season or the weather was bad for extended periods. The practice indicated by specific house elements formed of stone slabs and uprights, and interpreted as beds, dressers, cupboards, shelves, recesses, partitions, boxes and cells. If their function was for storage, then enlargement over time observed at Knap of Howar, Skara Brae and Barnhouse implies intentional increase in amount. Resources excess to subsistence requirements would have been available for ideopolitical exploitation.

28.3.6 Distant Contact

Trade in exotic items is indicated in raw material acquisition. Haematite, discovered as a red pigment in Skara Brae House 7, is sufficiently rare on Orkney to have been obtained from outside (Ritchie 1985:81-82). A. Jones and Richards (2005:45) and Ballin (2013) reported that Barnhouse pitchstone came from Arran over 400km distant. Ballin's study showed that the direct relationship between quantity and distance from source was not sustained with the amount at Barnhouse being 1150% greater than predicted. It was, therefore, a special place within its wider region and played a central distributional role throughout Orkney. Used in the production of tools for scarification and tattooing (Preston *et al.* 2002:234), pitchstone was perceived as a very special material, with its trade or exchange highly organised and strictly controlled (Ballin 2013). The same is possibly true of flint, since good quality material was scarce in Orkney and of high social value. It occurs as beach pebbles, but importation would have been necessary to produce objects requiring large pieces and high quality such as flint knives (Wickham-Jones and Collins 1977-78:7-8). Producing sharp cutting tools, both pitchstone and flint would also have given them a 'dangerous' quality. Stone for maceheads, included imported types. Finished articles were exported.

The rarity (or uniqueness) of the raw material for producing maceheads was significant but precise sources remain enigmatic. It is likely they were both manufactured in Orkney and imported. Importation (or at least raw materials) is evidenced by four pestle maceheads of Lewisian Gneiss, all of which were found in the environs of the Ness of Brodgar. This raw material can only be obtained from north-west Scotland and the Hebrides, indicating a western seaways connection. A Shetlandic link may be indicated by a fragmentary cushion macehead reportedly of Riebeckite felsite found on Stronsay (Anderson-Whymark *et al.* 2017).

28.4 OBSERVATIONS

While the settlement plans of Skara Brae and Barnhouse are suggestive of determined individuality and underlying ideopolitical purpose; this would appear to have been very different in both cases. Skara Brae is seen as possibly being a closed, but powerful religious community as proposed by Mackie (1977), with a wide, outward-looking focus; indeed, its houses were tightly clustered. Collectively, its entoptic imagery and passage thresholds suggest concern with ideology *per se* rather than the occupants simply influenced by it domestically. This would have identified the settlement as socio-politically different and important, its reputation and individualisation being emphasised

and deliberately pursued by an internal hierarchy in which the occupants of the very different Houses 7 and 8 probably played a prominent and influential role. It is perhaps not drawing too long a bow to see Skara Brae having been at some period a regional religious centre. Barnhouse, on the other hand, was a more 'normal' community of freestanding structures, but through House 2 it may have had a regional focus — ideopolitically based social control. Nevertheless, the settlement would have been ideologically powerful, as well as probably the most economically important of the time. Definite shades are seen here respectively with Höyücek and Hacilar.

The close association of the two settlements with Maeshowe and during its construction period (c.2900-2800 calBC), and Skara Brae being linked to it and Barnhouse by road via the Brodgar isthmus strongly point to shamanistic context, particularly when taken into account with features discussed below. It may well have been that Skara Brae influenced Orcadian communities through house relationships such as that of Barnhouse 2/9; and by ensuring the embodiment of symbols it promoted and used itself was not restricted to everyday structures, and that control of movement was not exclusive to non-domestic monuments.

Ideology, and by association, probable shamanistic behaviour, is evident in the structures at both sites that differ internally and externally from other units, a trend first recognised in House 2 at Knap of Howar. At Skara Brae, Houses 7 and 8 lie outside the settlement core: the former could accommodate small groups while the latter is a single-person dwelling, possibly occupied by the influential community head or ritual specialist. The same pattern is seen in the outer ring at Barnhouse with Houses 2 and 9.

Entoptic motifs are seen to indicate shamanistic manipulation of sophisticated worldview ideology. Richards (1991a:29) reported linear decoration at Skara Brae on a Skaill knife found on the floor of an early house between Houses 2 and 7, and on a similar stone knife from House 10 (Childe 1931). The latter's cutting edge had been modified by bifacial bevelling, and its smoothness attributed to repeated sharpening, long use and its keeping in a leather container. Saville (1994:108-110) commented that it was unusual to decorate these implements but did not suggest ideographic significance. Childe (1931:153) maintained that it was just decorative or possibly of unknowable magico-religious significance. Such interpretations do not take account of the entoptic nature of the motifs, their uniqueness and contexts, nor possible shamanistic associations.

Fire played a major part in House 8 activity at Skara Brae. As Richards (1991a:40) stated, flint knapping and pottery production may have been restricted to this structure

because they involved “transformation from the natural to the cultural which frequently requires spatial separation and sanction”. Accordingly, this could indicate the presence of someone with the capacity to handle such natural-to-cultural transformation.

Furthermore, the raw materials may have been relatively scarce locally and, if obtained through long-distance trade, would have been deemed to have a special, exotic quality that probably only particular individuals could manage. In this category is pitchstone, recovered from House 8 and sourced on Arran (Ritchie 1985:67; A. Jones and Richards 2005:45; Ballin 2013:4, 11).

In addition to shamanistic associations and strategies indicated or implied in the foregoing, the following are added:

- . Barnhouse 2 in its peripheral location and with symbolic qualities referencing places of the dead while also pertaining to the social practices of the living;
- . the careful attention given to Barnhouse 2 maintenance argues for the structure’s special character and possible role in ritual practice; it was kept clean, recalling the highly codified nature of ritual behaviour where there is concern about the maintenance of purity and the control of polluting and dangerous substances;
- . the large House 7 at Skara Brae containing human remains having been retained throughout the history of the site despite redevelopment of the others;
- . the paired-house relationships, the associated thresholds needing to be negotiated to reach/enter in both cases, not only imply a significant degree of ideopolitical control but this by one powerful individual with the smaller being his/her private domain; and
- . if a purpose of drains in the two settlements was to provide air draft for achieving higher hearth temperature within houses, a possible purpose for this could have been one involving social difference by exclusion — a sauna — and associated with ASC induction. A sauna has been identified at Links of Noltland in Bronze Age Orkney (Towrie 2016).

REDACTIONS

- Fig. 28.1** Skara Brae and Barnhouse: location of site on Mainland, Orkney
- Fig. 28.2** Skara Brae aerial view ref: topofly.com
- Fig. 28.3** Skara Brae: spatial organisation of first settlement phase showing large House 7 ref: A. Jones and Richards 2005:25
- Fig. 28.4** Skara Brae: spatial organisation of latest settlement phase (after Childe 1931) with House 7 jutting out on the southern boundary and House 8 isolated on the west ref: The Map Archive
- Fig. 28.5** Skara Brae: house structure ref: graham edwards.com
- Fig. 28.6** Skara Brae: interior organisation of the Late Neolithic house ref: Downes and Richards 2005:58
- Fig. 28.7** Skara Brae: (a) stone-built dresser and (b) stone-lined hearth ref: teachers.sduhsd.net
- Fig. 28.8** Skara Brae: stone-built box bed
ref: http://www.solaripedia.com/13/399/5979/skara_brae_stone_wall.html
- Fig. 28.9** Skara Brae: (a) House 7 and (b) House 7 artefact location ref: Village News
- Fig. 28.10** Skara Brae: (a) House 8 and (b) House 8 artefact location
ref: ru.esosedi.org/GB/SCT/1000097012/skara_brey_skara_brae_/photo/84655.html + Clarke and Maguire 2000: 17; Richards 1991a:39
- Fig. 28.11** Barnhouse: an impression of how the settlement might have looked when inhabited ref: Jones and Richards 2005:24
- Fig. 28.12** Barnhouse: suggested concentric organisation of dwellings around a central open area ref: A. Jones and Richards 2005:49
- Fig. 28.13** Barnhouse: village plan as excavated to date and showing drains (blue) and house hearths (red) ref: A. Jones and Richards 2005:28
- Fig. 28.14** Barnhouse: House 9 showing hearth (red), water pit (purple) and covered drain (blue) to/from them ref: Richards 2005b:134, 151
- Fig. 28.15** Barnhouse House 2: (a) details of interior and (b) isometric reconstruction, with hearths shown red ref: Richards 2005b:134, 151
- Fig. 28.16** Skara Brae: decorative motifs used during the village lifetime
ref: Shepherd 2000:148
- Fig. 28.17** Skara Brae: plan showing position of decorated stones within the settlement cluster
ref: Richards 1991:26
- Fig. 28.18** Skara Brae: decorated ground-edge stone knives ref: Saville 1994:109
- Fig. 28.19** Skara Brae: decorative motifs incised on bone objects (a, b) pins; (c) astragalus; (d) bead; (e, f, g) pendants ref: Shepherd 2000:152
- Fig. 28.20** Skara Brae: decorated Grooved Ware pottery ref: Shepherd 2000:15
- Fig. 28.21** Skara Brae: stone and bone pots containing red pigment; clay ball
ref: www.scottishheritagehub.com
- Fig. 28.22** Skara Brae: axehead ref: National Museum of Scotland

- Fig. 28.23** Skara Brae: jewellery of bone, stone and teeth ref: <http://www.bbc.co.uk/scotland>
- Fig. 28.24** Skara Brae: dice-like bone and other stone objects
ref: <http://www.bbc.co.uk/scotland> and National Museum of Scotland
- Fig. 28.25** Barnhouse: entoptic motifs on Grooved Ware ref: Jones 2005:267
- Fig. 28.26** Barnhouse: decorated stone from House 5 ref: Downes and Richards 2005:81
- Fig. 28.27** Orkney: flagstone demonstrating key elements within the range of decorative motifs, in particular the interlinked X crosses forming lozenges with internal divisions ref: Shepherd 2000:151
- Fig. 28.28** Barnhouse: stone mace heads ref: Clarke 2005:325
- Fig. 28.29** Skara Brae: stone macehead ref National Museum of Scotland
- Fig. 28.31** Barnhouse: cobble tools ref: Clarke 2005:326
- Fig. 28.32** Skara Brae: stone axe heads; an awl; and bone head of a mattock
ref: Clarke and McGuire 2009:23

Chapter 29 MODEL PHASE 3 CASE STUDY COMPLEXES

Barrett (1994:136) has written that life during the Neolithic was “a process of *becoming*, a movement towards a future state which was described by reference to ancestors or to gods and where life itself might be spoken of as ephemeral”. Similarly, Pollard and Reynolds (2002:45) concluded that for these people “life was perhaps seen as a transitory journey towards some future eternal state, necessitating a greater investment in monuments through which [they could mediate] with the realms of spirits and the dead, rather than in building structures for the living”.

The Wessex and Orcadian Complexes, like that of the Boyne, represent a hierarchical settlement pattern with new types and levels of occupation at the apex, a significant change in the way in which dispersed communities were assembled. There is, however, a sense of change and scale, as these sites were massive collective undertakings requiring vast amounts of labour and with construction spread over many years compared with that relating to long barrows, causewayed enclosures and cursus monuments. A number of questions arise concerning whose ideas they were; the imperatives that drove them; and whose interests they served.

The Complexes each developed on or near earlier sites, such as villages, burials or offering places, highlighting them, not destroying. If the locations were already regarded as special, these later structures would have served to increase their potency and act as permanent markers. Once constructed, they altered the landscape and continued to influence ideological understandings and behaviour through subsequent generations. Combining the importance of stone with the power of carved motifs to integrate architecture and ideological experience was a subtle strategy (Lewis-Williams and Pearce 2005:203). Their enclosure with banks and ditches, and timber and standing stones, defined them as places of particular ideological interest, special locations within which the focus could be on activities of heightened significance (Thomas 1999:182).

These Complexes are massive and well planned, and only make sense regionally, not as individual sites. In addition to their historical associations, they were new, large and different, located to dominate the landscape on ridge tops and basin centres. They were designed to exploit people and resources, and to access and exert control over associated symbolic power. A number of features indicate that they reinforced and extended ideology-based, regional political authority. Their architecture, together with

construction materials and the building process itself, permitted the introduction of new elements of ideopolitical control. Designed as physical and metaphorical microcosms of the surrounding landscape to represent the territory occupied by various groups, they would have been most effective in maintaining ideopolitical control over those people. The use of exotic materials probably added a new dimension to this in linking the Complexes politically and ideologically with other significant, but distant, places.

Construction necessitated not only large numbers of people but also planning and oversight. This strengthened relationships between groups through co-operation, alliance, affiliation, reciprocity and redistribution. Relationships between people, animals and places were strengthened, but also classified and separated (Thomas 1991:223). In construction, Whittle and Pollard (1998:236) saw communal identity and integration at a wider scale than attempted previously. Barrett (1994:29-32) related this to ritual practice and the way it fashions society and is fashioned by it. He noted that organised labour involved the raising of “a relatively few people [who] were ... elevated and placed beyond reach, but in full view of those who had given them the means to occupy that position”.

A new dimension to ideological activity introduced by these Complexes was reflected in the shifting of ceremonial emphasis from one centred on the dead and tombs to open-air enclosures with multiple functions. This suggests that institutional changes became more political, and involved the domination and manipulation of the people. It is argued that this was generated by individuals who sought to control territory — people and resources — and required an ideological base to do so. The appearance of new objects and practices indicates that they served new and socially defined purposes (Thomas 1999:114-118). Furthermore, the Complexes were not only central places ideologically, but economically as key nodes in extensive wide exchange networks where people from different places came together, bringing with them various objects and taking others away. This exchange included knowledge and ideas.

These places were never static. They were forums for debate and inducement to innovation (Pryor 2002:107-108); and they were performative. Their construction was accompanied by a gradual change in how they were used. While access to the interiors was probably restricted, outside zones became increasingly significant. Subsequent building of external platforms, timber settings, or earthwork enclosures began to overshadow the original purpose of tombs, and social differences probably increased and relations transformed (Bradley 2007:116).

Given the large scale of these Complexes, strong leadership would have been necessary to plan, control and persuade the workforce, and to forge networks to acquire the resources required. Roles played by particular individuals were probably concerned with organising and building these sites, while their planning and use highlighted the status and importance of others (Barratt 1994:70-97). It is argued that such leaders were probably shaman-priests, with an elite stratum working for/with them socio-politically. The Complexes are seen by Sims (2009) as centres in which local high-status groups out-competed others by their display of such monumental architecture.

Chapter 30 MODEL PHASE 3 BRODGAR COMPLEX (ORKNEY)

Brodgar, with Orkney's most imposing group of monuments, is a deeply stratified, multiphase complex (Krakowka 2018). It occupies a central position within the archipelago extending along a breached isthmus between freshwater Loch Harray and seawater Loch Stenness in western Mainland, edged by low hills on the west, north and east, and in the south by those of Hoy (Fig. 30.1). Card (2015) has commented that what is seen today is not a true indication of these sites, and that they represent a constructional and functional sequence through time, possibly responding to change in ideas and beliefs, and from local to regional social control. All were contemporary at some stage (Table 30.1). He suggested that the scale of the Complex meant it was not only locally important but known further afield. The epicentre, the Ness of Brodgar, was initially occupied *c.*3300 calBC; by 2200 calBC the site had been closed down and partly dismantled (Towers *et al.* 2015:2-3).

At its zenith, from *c.*3100 calBC, the Ness was dominated by huge free-standing buildings enclosed by a massive stone wall that may have been 100m long and at least 6m wide. This was much more than a domestic settlement: the size, quality, and architecture of these structures, together with evidence for tiled roofs, coloured walls, over 800 examples of entoptically decorated stone, and rich assemblages of artefacts, all add to an overall sense of the Ness being special in some way. Although the site's function no doubt changed over time, during this peak period it was a meeting place for people from all over Orkney, and probably from outside the archipelago also. The archaeology suggests that they were feasting and exchanging ideas and objects, and involved in rituals and celebrations of the 'political' and celestial events (Krakowka 2018).

Rather than there having been a very long span of almost continuous activity, new radiocarbon dates combined with Bayesian statistical analysis testify to development punctuated by hiatuses, a pattern paralleled at other Orcadian sites that seems to reflect wider changes in prehistoric society. Overlapping histories with contemporary near-neighbours at Barnhouse and the Stones of Stenness raise questions about the relationship between the three as to whether they were rivals or distinct parts of the same huge complex (Krakowka 2018).

After the abandonment of pre-monumental Barnhouse (*c.*2900-2750 calBC), the landscape became dominated by impressive sites including: two stone circles, the Stenness Standing Stones and Ring of Brodgar, with the Ness between them; to the north the Ring of Bookan henge, the Bookan chambered tomb and the Dyke of Sean; and Maeshowe in the east. Related sites include Barnhouse Structure 8 (BH8) and adjacent Barnhouse Odin. The Odin Stone, Watch Stone and Barnhouse Stone are associated minor features.

The Rising Tide project noted that at the start of the Holocene, sea level was *c.*35m below present but gradual rise since has submerged considerable tracts of land (Dawson and Wickham-Jones 2009; Orkneyjar 5/2008). Radiocarbon dating indicates that the present sea level was reached *c.*4000BP, a thousand years after work had begun on the major elements of the Complex. At that time the narrow Brodgar zone would have been a causeway between extensive low-lying marshlands. Flooding of the Stenness and Harray basins was probably impeded initially by a rocky area in the narrow Brig o'Waithe opening of Loch Stenness to the sea (Towrie 2012; Wickham-Jones 2015a, b). There are indications of possible archaeological features on the bed of the Loch of Stenness adjacent to the Complex (Fig. 30.2). To the northwest at Wasbister, geophysical survey indicated a major settlement site of several hectares suggestive of a multi-period site, probably a Neolithic. Chambered cairns and extensive remains of ridge and furrow complement this evidence. Similar physical anomalies have been identified by survey to the south and east of the Stenness Standing Stones (Card *et al.* 2007:221). The Unstan tomb is southwest on the shore of Loch Stenness, and another lies near the Loch's southern shore (Card 2005a:186; Cowley 2010:26).

30.1 THE SITES

30.1.1 Maeshowe

Constructed *c.*2800-2700 calBC, the Maeshowe passage grave lies approximately 1km to the southeast of Barnhouse with commanding views and is probably the most ideologically significant tomb in Orkney (Figs 30.3-30.5). Its location was influenced by an earlier structure in the same place, possibly with standing stones, the existence of which is indicated by a drain discovered beneath the tomb's platform and sealed by it (Challands *et al.* 2005).

As restored, Maeshowe is now 7.3m high and 37m in diameter, but formerly stood 11m in height with a diameter of *c.*30m. It is henge-like in form on an artificial yellow clay platform which was possibly used for rituals; and surrounded by a ditch, 14m wide, and

an outer bank. The narrow entrance passage, 11m long and 1m high, leads to a square central chamber, c.4.6m on each side and at least 3.8m high, with three raised side cells (Figs 30.6-30.7). Construction is of flat stone slabs, weighing up to 30 tons, many of which extend the whole wall length. Its corners are buttressed by angled standing stones, but at a height of c.1m construction changes to corbelled stone slabs forming a beehive-shaped vault. The plan is cruciform, reflecting cosmological principles of order. Sophisticated construction distinguishes it from other Orcadian passage graves. An architectural difference is the use of standing stones within the chamber and entrance passage, suggesting that they may relate to the earlier structure on the site (Challands *et al.* 2005b; Garrow *et al.* 2005b).

Unlike other passage graves, Maeshowe did not have the visible outer revetment walls. It was covered with a turf mound and stabilised with a series of stepped walls. Outwardly, it has the appearance of a glacial hill common in the surrounding topography. A conscious attempt was made to create a structure to house the dead, positioned as if below the surface of the human-inhabited world. Accordingly, the tomb was both conceptually below ground and physically above it, emphasising the ambiguous position of the dead between two realms. In this can be seen the imposition of order on the world as perceived: the dead were contained, while the living co-operated in its construction and participated in its rituals. There is no archaeological material from the tomb interior, and only bone fragments and part of a skull have been reported (Challands *et al.* 2005b:231; Garrow *et al.* 2005b:254).

Maeshowe has 11 decorated panels incorporating entoptic motifs including zig-zags, triangles, chevrons, lozenges and lattices (Fig. 30.8). These emphasise thresholds within the structure, particularly the entrance to the central chamber and side cells. A large panel, 60x30m, in the entrance passage has several motifs. Its location and incised nature are difficult to see, suggesting that prominence may not have been the purpose, relevance probably residing within the restrictive domain of esoteric, ritual knowledge. Very few Orcadian tombs exhibit decoration, and where it occurs it is limited and entoptic. Older tombs, as with Holm of Papa Westray South, Eday Manse and Arsdale, display curvilinear pecked motifs, contrasting with those angular and incised at Maeshowe and Cuween Hill, Wideford Hill and Quoyness (Figs. 30.9, 30.10). Maeshowe motifs, integrated into all aspects of the living, ensured the presence of ancestors in everyday life.

Maeshowe is an example of how particular places become part of a landscape as people endeavour to understand their world, and in doing so impose order on it. Since the tomb was surrounded by a water-filled ditch, people entering would have crossed a water

threshold between the zones of the living and the dead, which Richards (2005c:257) has suggested may have embodied aspects of purification and separation. Maeshowe also exudes a notion of separateness, division and restriction. Its long entrance passage puts a substantial distance between interior and the dead and the outside world, while the external wall and ditch effectively separate it from the broader landscape. Furthermore, the entrance blocking stone having to be pulled into place from the inside suggests that it was used to seal off the tomb at particular times (Mark 2012:4). The chamber corner stones were probably associated with the dead who, therefore, would have been already present before any interments. Maeshowe's relationship with other elements of the Complex meant that the ancestors were always present. The orientation of the entrance to the southwest permitted the setting sun at the midwinter solstice to illuminate the interior of the chamber (Fig. 30.6a) and provided a particular time for the dead to be celebrated. This marked a fixed point in the annual cycle, heralding a period of rebirth and regeneration; and ritual celebrating the ancestors and involving union with them (MacKie 1998:338-359).

30.1.2 Stenness Standing Stones

The Stenness henge and stone circle is situated on a low ridge 150m from Barnhouse, dominating the promontory (Figs. 30.11, 30.12) and visible from a distance in all directions. Radiocarbon dating indicates its construction and use 3100-2650 calBC. Other isolated standing stones nearby are thought to have been part of the circle complex, and include the Watch Stone, the Barnhouse Stone and the Stone of Odin.

In its original form the Stenness circle was a classic henge with outer bank, inner ditch, inner bank and central stone circle. Only four stones stand today, two of which were re-erected in modern times. Excavation suggests that the ring was never completed as at least one stone was not erected. Stumps of four others are known, and the holes of a further three identified in excavation; the position of the twelfth remains uncertain. The stones, up to 5.7m tall, are larger than those of the Ring of Brodgar. The rock-cut ditch is *c.*2m deep and 4-7m wide, elliptical in plan, measuring *c.*70m in diameter, and enclosing an internal diameter of 44m. Bradley (1998a:122) has suggested it was filled with water to mirror the adjacent lochs.

There is a single causewayed entrance to the north facing Barnhouse Odin, the Odin Stone, Barnhouse 8, and a large slab-lined hearth containing much slag. Excavation revealed a setting of four stones in the centre enclosing an area 2.1m x 1.9m (Fig. 30.13). Close to this are two low angular slabs standing side by side with a large stone prone beside them, possibly the remnants of a porch or entrance to a timber structure (Fig. 30.14).

Burl (1988) interpreted these as dolmen stones. If correct, the circle incorporated a place linked to the dead; and the evidence suggests a chambered cairn replacing a wooden structure that was related to ancestors and a centre for mortuary rites. The gap between these two uprights focuses on Maeshowe, indicating connection with the tomb. Sherds of thin-walled Grooved Ware vessels, identical to those from Barnhouse, and fragments of burnt animal bone in hearth ash were recovered within and outside the structure. Animal bones and pottery were also found in the ditch, linking the site with Skara Brae and Maeshowe (Burl 1981:15; Challands *et al.* 2005a:218-225; Higginbottom *et al.* 2015:588; Renfrew 1979; Towrie 2008a).

Architecturally, the Stenness circle is considered to have drawn heavily on the spatial representation of a house with its single entrance, circular boundary and central hearth. The entrance and central stone setting axis is almost cardinal, 2° west of north, while the circle has several significant lunar standstill horizon targets and two solstitial, despite the almost flat horizon (Higginbottom *et al.* 2014). Higginbottom and colleagues (2015) confirmed sightlines identifying how the site and the natural environment were used to create a landscape embedded with cultural meaning. Their research established that consistent horizon profiles and alignments were observed from the site, suggesting its construction embraced locational rules associated with the rising and setting of the sun and the moon at their respective northerly and southerly extremes.

The prominent location of the stone circle within the landscape was associated with that of Barnhouse, Barnhouse Odin and the Odin Stone where village people and those from further afield gathered for particular activities and social relationships. The circle's central hearth with paired stone uprights is considered to have been relocated from Structure 8 at Barnhouse, and is significant in that it ties the circle to that location. Challands and colleagues (2005a:218-221) stated that the Standing Stones were constructed co-operatively by communities from different areas who would have required high-level organisation and provisioning whilst there. It is argued that organisers were motivated by ideopolitical power regionally, while for the workers it was ideological participation and, possibly, intercommunity competition.

Pottery and burnt animal bones indicate that consumption took place both within and outside the henge, with the larger articulated ones representing sacrificial events. While large numbers of people gathered there for feasting, food was sourced from elsewhere. Large and thick sherds from Barnhouse Odin were possibly from vessels in which food and beverages had been transported. Sherds of more delicate, thin-walled Grooved Ware

vessels within the henge suggest consumption there was different, perhaps including alcoholic beverages and hallucinogens associated with ritual.

The Stenness circle was built with specific social practices in mind, and architecturally structured with the landscape to convey particular cosmological meanings. Its spatial arrangement directed attention towards the hearth and its axis, and to employ those cosmological understandings. In plan, the circle replicates a house, especially Barnhouse 8. The entrance provides a series of boundaries dividing space from the outside to the interior and involved crossing a series of thresholds. Its construction represents continuing ideology, supporting the view that it was never completed but an ongoing ritual process. Alternatively, construction interruption may reflect a new ideopolitical regime, typified by the Ness of Brodgar with its unique architectural concepts, differences in scale and complexity, and apparent exclusiveness.

30.1.3 Barnhouse Structure 8 (BH8)

BH8 is approximately 20m in diameter and was built *c.*2290-2600 calBC after village abandonment (Fig. 30.15). Roughly aligned to the midsummer solstice sunset, it is sited in an open area, partially superimposed on earlier House 9, and probably determined by a large pre-existing hearth. The structure is a square with a double-faced wall, 3m thick, delimiting a single, hall-like building, *c.*7m square, with central hearth and a dresser opposite, and the northwestern entrance facing the midsummer sunset. It is enclosed by a 3m-thick circular wall and built on a raised yellow clay platform edged by an outer wall, the two walls creating a surrounding courtyard. Such clay platforms are usually observed at Orcadian chambered tombs; therefore, a Maeshowe-like exterior is emphasised. The outer wall and platform form an effective barrier between the exterior and interior realms, and may have been designed to forge links with other places including Maeshowe and the Stenness circle. The 3m-long entrance through the outer wall and its door with external bar underline privileged access. The doorway itself comprises a narrow porch and entrance passage with a fire pit covered by a stone slab and positioned between two standing stones, probably a threshold for some form of ritual purification prior to entering the main room similar to those found in Ness Structure 1 and House 7 at Skara Brae (Bradley 1998a; Card 2005a:185; Higginbottom *et al.* 2015; Hill and Richards 2005). An orthostat-lined opening in the outer wall on the southeast above drains may also have provided access to the platform for participation in ritual-related behaviour, probably involving larger numbers than permitted access to the centre.

The hearth in the central building was not used for food preparation. All cooking took place in the platform courtyard between the inner and outer walls. On the platform is a

series of stone hearths, pits and boxes, mainly in the south and southeast, including a linear arrangement of two hearths with extensive areas of burning surrounded by a dark ashy layer, rich in both vessel sherds and flint scrapers. Drains radiate from the building under the platform and wall (Challands *et al.* 2005b:235). The building's special purpose was ritual and ceremony, and it was occupied by those who managed these activities and determined who could enter and participate.

Internally, the building has similarities with Neolithic houses in that it had a central hearth and a dresser opposite the door, this indicating that these units were more than mere furniture items and had ideological significance. The sequential layering of yellow clay floors shows it had been refurbished and remodelled on a number of occasions. In the southeast are two oval pits, one with a red ashy fill and no artefacts, while the other contained 14 large flint nodules, a significant quantity given its scarcity. Adjacent to the eastern wall a large Grooved Ware vessel set into the floor with its decorated rim projecting contained traces of barley, perhaps from the beer fermentation. Floor refurbishment may also reflect malting practices (Dineley 2004:56-57; Hill and Richards 2005e:189-190). Many Grooved Ware sherds were found on both the interior floor and outer platform. Those from the interior were decorated with complex entoptic motifs and made with shell temper, while those on the platform were plainer and stone tempered. The blackened sherds of cooking vessels from both locations are larger than those used earlier at Barnhouse, suggesting food production and consumption on a larger scale.

The plan, threshold hearth flanked by a pair of standing stones, and long entrance reflect aspects of the Stenness Standing Stones, tying the structure to that sacred location (Higginbottom *et al.* 2015: 588-589; Richards 2005e:157-186). Certainly, their proximity and other features suggest such an association. In contrast to the Stenness circle, if the two structures were contemporary BH8 may have been the domain of extreme isolation with respect to particular practices and those individuals controlling it.

The difference in size and form of BH8, particularly its platform, suggest that larger numbers were assembling from a wider region, controlled ideopolitically for rituals. It was a location for non-domestic activities over a long period. Internal refurbishments imply revision of social practices with changed ideology and facilitation of community integration. Shell-tempering may have enhanced a perceived association with the dead with the sea; it could also have recognised the life form represented by the shell. Drains possibly relate to waste from special activities requiring disposal. The flint cache could reflect its scarcity and hence high value, as well as control of its acquisition and processing, suggesting the presence of socially differentiated individuals.

A second building immediately to the southeast of BH8 with similar features and a series of drains is reminiscent of the earlier pairing of Structures 2 and 9. It contained many Grooved Ware sherds, and clay and stone features, similar to those of the Structure 8 platform and outer wall (Hill and Richards 2005:186-188).

30.1.4 Barnhouse Odin

This is a surface scatter of flint and slag *c.* 150m southwest of Barnhouse on a slight ridge running towards the Stones of Stenness entrance, *c.* 80m to the southeast (Fig. 30.16). A fire pit was full of ash, slag and burnt material. To the east were ash heaps; to the west, shell-tempered Grooved Ware sherds, flint artefacts and flakes, and pumice, the latter two indicating particular tasks. The assemblage also included a broken stone macehead, suggesting deliberate breakage and deposition.

There was a noticeable lack of burnt animal bone; the site, therefore, was not a place where food was consumed. Activities associated with large hearths dominate, and there are no other structures. Unlike the earlier village, where slag deposits were derived from pot firing, this area had no burnt clay nor evidence for pottery. In form, the large shallow fire pit is circular and stone-lined, indicating a lack of formality and no desire for orientation; yet it was used intensively. Its purpose may have been food preparation for consumption elsewhere or associated ritually with the construction and use of the Stenness Standing Stones, perhaps for their illumination (Challands *et al.* 2005a:208-211, 225).

30.1.5 Stone of Odin

Two rock-cut standing stone sockets were found 70m north of the Stenness Standing Stones, slightly to the west of the latter's long axis (Figs 30.16, 30.17). The Stone of Odin stood in this area in the early 19th century and is considered to have occupied the southern one. It was *c.* 2.5m tall, 1m wide and 140m long, with a hole cut through its centre which Challands and colleagues (2005a:215-216) suggested was for something or someone to be passed through, possibly providing a metaphor for transformation. Eliade (1958:226) saw such stones featuring in rites of passage, the hole symbolising notions of rebirth or creation.

30.1.6 The Watchstone

The Watchstone, situated on the edge of the southern section of the breached isthmus, is 5.6m high, the largest standing stone in this area (Fig. 30.18). It was originally one of a pair with the second 13m to the southwest, raising the possibility of a larger grouping. From

it the sun at the winter solstice disappears behind the top of Ward Hill on Hoy for several minutes, then reappears momentarily at the bottom of the north flank of the Hill. Just after the solstice, the glow of the sun shows clearly in the notch in the Hoy Hills between Ward Hill and Cuilags (Fig. 30.19) (Challands *et al.* 2005a:216; Tait 2002).

30.1.7 Barnhouse Stone

This is also a standing stone just over 3m tall, *c.* 700m southeast of the Stenness Standing Stones (Figs 30.20, 30.21). Observations from Maeshowe indicate that it acts as a foresight to a point on Ward Hill where the sun sets one month before and after the winter solstice (MacKie 1977:250).

30.1.8 Ring of Brodgar

The stone circle (Fig. 30.22), *c.* 103m in diameter, lies to the northwest of the Ness and is thought to have been erected 2600-2400 calBC (Downes *et al.* 2013:113). Of its original 60 standing stones, only 21 remain with some re-erected. They range in height from 2.1 to 4.7m, tallest in the south and west, and are set within a 7-9m wide circular ditch, *c.* 123m in diameter, cut into sandstone bedrock up to 3m deep. There is no apparent bank. As it is not on the highest part of the isthmus, topographically, visibility and prominence were not determining requirements suggesting that its location may have been predetermined by an earlier structure. Geophysical survey, however, indicates no anomalies (Downes *et al.* 2013). In the vicinity there are a number of standing stones, including the Comet Stone, *c.* 1.75m tall on a low platform *c.* 140m to the southeast.

There are two opposing causewayed entrances located in the northwest and southeast, 3m and 1m respectively, suggesting movement through the circle but with the latter forcing procession to the Ness into single file. Their impressiveness was enhanced by progressively closer positioning of standing stones, particularly in the southeast, where a closely juxtaposed pair with opposed angled tops mark it (Fig. 30.24). Geophysical anomalies suggest that a façade-like arrangement of posts may have been present.

The stone circle is another important astronomical observation point (MacKie 1977:206; Renfrew 1979; Ruggles 1982). There is no stone marking its centre, only the axis between the two entrances providing an alignment. Ruggles (1982:S37), reassessing earlier research at the site by Alexander Thom (1967; Thom and Thom 1978), confirmed one probable, very precise lunar sightline and possibly two others.

Richards and Card (Card 2015) have stated that the Brodgar and Stenness Circles were portals to the Ness. Significantly, the former lies at the end of a broad elevated section

that constricts and descends to the isthmus. Noting this, Downes and colleagues (2013) suggested that if its purpose was to punctuate movement along a pre-existing route, then the isthmus was effectively being subdivided into sequential qualitatively different spaces. They believed that it was an attempt to enhance the grandeur of the Ring as an awe-inspiring form of transitional architecture, fusing themes and effecting a change in state of those who passed through. The stone circle, however, was not the first threshold en route along the isthmus to the southeast. That role was performed by the Dyke of Sean, a large sinuous earthen bank stretching between the Lochs and between the Ring of Brodgar and the Ring of Bookan to the north, which has a masonry entrance reminiscent of the wall beneath the bank surrounding Maeshowe and in-turned towards the Ring of Brodgar. It was constructed as a distinct boundary to restrict use of this area. There is a similar dearth of sites between the stone circle and the wall enclosing the Ness. Accordingly, the Dyke of Sean and the wall are boundaries defining the Ring of Brodgar (Downes *et al.* 2013; Towrie 2008c).

Challands and colleagues (2005a:224) and Card (2015) regard the significance of the Ring of Brodgar not in its structure but in the act of construction. The prestige of erecting megaliths was suggested as the motivational force behind circle development, and the builders may have seen participation in this light; however, there remain questions about the concept, organisation and construction oversight. An answer in terms of power and status for one individual or group was discounted, but the possibility of competitive behaviour between groups trying to outdo each other in terms of prestige suggested. As with Stenness, this structure might be seen as a project having involved different groups of people working in various places quarrying, transporting and erecting the stones, and digging ditch segments as an ongoing physical act of construction. The regional community was emphasised in standing stones through employment of different rocks and arranging them in a manner that referenced various qualities, associations and memories (Fig. 30.25). Additionally, the deployment of labour identified these qualities with particular people. It is known that one of the standing stones came from Eday (Richards 2013).

The small number of barrows surrounding the Ring suggests that burial was reserved for particular individuals. This, and the numerous chambered tombs in the vicinity, implies a hierarchy of burial places probably correlating with distance from the Ness.

30.1.9 Ring of Bookan

This henge is located c.1.3km northwest of the Ring of Brodgar on a raised platform c.44.5 x 38m (Fig. 30.26) (Towrie 2015c). The ditch, 2m deep and 13m wide, encloses an

area of 42.6x41m with a number of stones, either originally standing stones or the remains of a cairn. Its entrance is probably on the southeast.

30.1.10 Bookan Chambered Tomb

The tomb, constructed of large stone slabs, lies on a ridge crest to the northwest of the Bookan Ring with commanding views over the isthmus and the Lochs. It is now a degraded mound, approximately 16m in diameter, with some internal chambers visible. Evidence indicates two phases of tomb use. The original tomb, *c.*7m in diameter, comprised a passage *c.*2m long and 0.5m wide, leading to a central chamber with five side cells of similar size, *c.*1.3m by 0.9m, arranged symmetrically. It was subsequently incorporated into a larger structure, *c.*16m in diameter, with three concentric stone revetments, dating to the Late Neolithic. Revetments are noted on Barnhouse 8 forming a low stepped platform and as secondary additions to other Orcadian tombs and structures. Bradley (1998a:110-114) saw in them growing emphasis on tomb exteriors in contrast to the closed interiors; increase in the number of people permitted to use them; stages for performances; and a focus for distinctive deposits. Card (2005a:185), noting that the life history of Orcadian tombs is site-specific and of limited duration, compared them with the Barnhouse practice of repeated reconstruction considered to reflect the duration of a kinship group.

The tomb exhibits similarities in plan and architecture to Maeshowe, rather than the earlier Orkney-Cromarty tombs, as well as to House 2 at Barnhouse in the arrangement of side compartments around a central chamber and removable doors. Despite this, its size and architectural aspects are noticeably different from other Orcadian chambered tombs, and there had been periodic deliberate destruction and/or blocking of cells (Card 2005a; Towrie 2015d). Excavation recovered only a sherd of poor quality Grooved Ware, a single flake of red flint and three other stone artefacts. Phosphate analysis indicated that three of the five cells had held human remains (Card 2005a).

30.1.11 Ness of Brodgar

The Ness, covering 2.5ha, is the Complex epicentre located on the southeastern tip of the breached Brodgar isthmus between the Lochs of Stenness and Harray in the middle of the large natural bowl of the West Mainland hills (Fig. 30.27). Occupied *c.*3300-2200 calBC with a period of relatively intense Late Neolithic activity *c.*3000-2800 calBC, it consists of several large free-standing buildings of similar architecture with fire pits in threshold positions (Figs 30.28-30.29) and carrying entoptic decoration (Figs 30.30-30.33) (Card 2010, 2013; Card *et al.* 2007). Clearly visible from the site are the Ring of Brodgar

(0.75km northwest), and within 2km of that to northwest, the Ring of Bookan and the Bookan chambered cairn; the Stones of Stenness (0.5km southeast); Maeshowe (1.5km east); the Unstan cairn a few kilometres southwest on the shore of Loch Stenness and another on its southern shore; and Barnhouse *c.*300m away on the south side of the isthmus. Skara Brae lies 7km northwest. More archaeology may be submerged beneath the lochs (Towers *et al.* 2015:13, 18).

The evidence suggests that the Ness was an integral part of a ritual landscape. It experienced several developmental phases with earlier structures under and incorporated in later ones (Fig. 30.34). Excavation and geophysics have shown sections of a large stone wall over 4m wide enclosing an area *c.*125m long and 75m wide, running along the shores of both lochs and curving to form entrances in the middle. This was constructed during earlier phases of the settlement, in some cases incorporated into contemporary structures. Excavation of a large mound of midden which may relate to conspicuous consumption outside the enclosure wall at the tip of the peninsula revealed structural elements paralleling the Bookan tomb (Card 2010:1-3; Card *et al.* 2017).

It is not possible to determine which of the Ness and Barnhouse is the older; or whether they were rival sites: one claiming seniority and precedence; and the other challenging for equal or better position. What can be said is that while earlier activity is indicated at the Ness, Barnhouse 8 was constructed prior to Ness S10 and it would be plausible to envisage the builders of the latter setting out to emulate and surpass the scale of the former. There is also the possibility that the two sites, initially separate, may have become part of a wider complex in which, on grounds of scale, Barnhouse could be a Ness satellite. The Stones of Stenness were constructed within the period of overlap between the two sites, about the same time as construction of S10 (Card *et al.* 2017).

The earliest structures date to *c.*3300-3200 calBC, followed by a series of oval ones built *c.*3000 calBC similar to those at Skara Brae and Barnhouse and contemporary with the enclosing wall (Table 30.1). Construction of S1, S8, S10 and S12 dates to *c.*2700-2300 calBC, and the Late Neolithic/Early Bronze Age witnessed the building of S7, S9 and S11 (Towrie 2011a). Excavation of these revealed structures each different in detail but divided internally by opposed stone piers, creating recesses and resulting in exaggerated or elongated versions of contemporary large buildings at Barnhouse and Skara Brae (Downes *et al.* 2013). A paved area with a standing stone was central to the whole walled enclosure at this stage. Structure features point to special functions interpreted as non-domestic and associated with the preparation of special foods and manufacture of unusual items such as maceheads (Card 2010). A number of the latter and polished stone

axes are included in artefacts recovered, together with Grooved Ware sherds having previously unseen red, black and white surface colouring (Figs 30.35, 30.36) (British Archaeology 2013).

The location of S1, S8 and S12 with respect to each other and their similarities in architecture and north-south alignment indicate possible contemporaneity and similar function. Each is composed of local sandstone, possibly indicating the Ness was a meeting place where separate groups constructed similar buildings. Card (2010) considered that this also explained the wide range of Grooved Ware decorative styles present. Paired structures are evident, as in the association of S7 with the primary S1. Superimposed on part of S8, S10 represented the final building phase and was the site's sole structure (Fig. 30:38). It differed in style and scale from those earlier in having an internal square chamber with rounded corners bearing close comparison with Barnhouse 8, as did its scale mirroring a general trend in the Orcadian Late Neolithic towards monumentality and house style exaggeration.

**Table 30.1 BRODGAR COMPLEX REGION STRUCTURES/HOUSES
KNOWN DATES, DIMENSIONS AND AREAS**

ref: determined from plans in Historic Scotland 2005; Towers *et al.* 2015; Wickham-Jones 2015c; Orkneyjar

	Date	Dimensions	Area (
Stenness Stg Stones	c.3100-2650	44m	1520sqm
Ness S1	c.3000 calBC	15.0x10.0m	150sqm
Ness S8	c.3000 calBC	20.0x10.0m	200sqm
Ness S12	c.3000 calBC	17.5x11.5m	201sqm
Ness S14	c.3000 calBC	11.0x8.5m	94sqm
Ness S16	c.3300 calBC	-	
Ness S17	c.3300 calBC	-	
Ness S18	c.3300 calBC	-	
Ness S20	c.3300 calBC	-	
Ness S22	c.3300 calBC	-	
Ness S23	c.3300 calBC	-	
Ness S24	c.3300 calBC	-	
Ness S10	c.2900 calBC	25.0x20.0m	500sqm
Barnhouse 8	c.2600 calBC	20.0m diam	315sqm
Ness S7	c.2200 calBC	-	
Ness S9	c.2200 calBC	-	
Ness S11	c.2200 calBC	-	
Ring of Brodgar	c.2600-2400 calBC	136.0m diam	14,533sqm
Maeshowe	c.2800-2700 calBC	35.0m diam	963sqm
Ring of Bookan	date unknown	46.6x41.0m	1911sqm

At the end of building phases the related structures were partly demolished and infilled with layers of midden and rubble. Following the closure of S10, ephemeral activity continued but on a greatly reduced scale (Card *et al.* 2017).

The Ness structures are impressive in terms of scale, symmetrical architecture and decoration. Natural fracturing of local stone produces flat, vertical surfaces which were put to exceptional use. Pick-dressing, a relatively rare form of decoration in Orkney seen only at the chambered tombs of Maeshowe and Dwarfie Stane, and the Stenness Standing Stones, is common, particularly in S10 and S12. Over one hundred stones exhibiting both finely incised and pecked entoptic motifs are seen to indicate the site's significance. The amount of decoration varies with over 60 examples in S1 alone; and whereas most buildings have only one decorative style, S1 and S12 reveal several. Cupules are limited to S10. Several buildings have structural stonework painted red, brown, orange and yellow. The unusual nature of these structures is further emphasised by evidence for slate-tiled roofs.

Red and yellow sandstone used in construction was imported from several kilometres away, while igneous rock was probably sourced from local and distant dykes. The intention may have been to engender co-operation of communities associated with sources in Ness construction through use of both their stone and labour. In the same way, stone may have been viewed as symbolic 'temper' associating communities with particular buildings and rituals. Coloured pigments used in structure decoration and reflecting the natural shades of the sandstone probably contributed to community recognition, as might the variety of decorative styles. Such practices would have served as a suite of effective, ideology-based strategies to extend political control over communities, their territory and resources, while engendering, emphasising and demonstrating regional cohesion.

30.2 BRODGAR COMPLEX: DISCUSSION AND INTERPRETATION

30.2.1 Settlement

Site excavation (<10% in 2017) has revealed a complex sequence of monumental buildings contained within a massive walled enclosure with stratigraphic relationships between structures and surrounding midden layers. A preliminary series of phases are identified during which structures were extended or altered, replaced, or abandoned and buried under midden (Fig. 30:34). Selective sondages between buildings have revealed definitive relationships between several buildings, while other more obvious relationships are discernible where a clear sequence of construction is visible.

Contemporary structures may each have concerned particular elements of the ideology practised during the phase concerned. They may also have related to particular communities represented within the settlement. The data suggests that three Ness structures, S1, S10 and S12, tended to remain operative throughout. The earliest, S2, S17, S18, S23 and S24, did not survive the first phase; and S8, S11, S14, S16 and S18 built subsequently lasted only through the second or third before being closed down. S10 was the last on the site. It would appear that some structures within a phase were closed down because they were no longer needed ideologically or concerned segments of the regional community who, for some reason, were no longer participating in Ness activity. Those continuing may have related to elements of the current ideology, revamped or newly introduced.

In its latter phases the site was dominated by several large buildings which, by their scale and architectural refinement including piers buildings (internally divided by pairs of opposed stone orthostats) would appear to be outside the norm for the domestic sphere. This is reflected in the artefactual assemblage and numerous examples of entoptically decorated stone (Card *et al.* 2017). Structure 1, built on top of the remains of an earlier one, has a complex history and appears to have been central to the site. Originally more than 15m long, it was radically rebuilt within a century: two doors were blocked up, a new door inserted and a new wall built. It was decorated with much entoptic stone artwork, some of which was on internal walls and only viewed by those inside participating in activities for which the structure had been built; and presumably to which the motifs were related (Towers *et al.* 2015:18-19).

Structure 8, roughly contemporary with Structure 1, had ten recesses, six hearths and coloured pigment on walls. Finely-worked stone spatulas were found there made with great care and resembling flattened spoons. Other finds included a whalebone macehead and a whale tooth set in stone (Towrie 2010b).

Structure 10 represents continuation of changes that began with the presence of 'different structures' at Skara Brae (House 7) and developed further at Barnhouse (House 2). Described by excavators as 'temple-like', S10 had walls 4m thick. It is 25x20m with a standing stone with a hole shaped like an hourglass incorporated into the walls. There is a cross-shaped inner sanctum, and the building was surrounded by a paved outer passage believed constructed c.2900 calBC. This is the largest structure of its kind anywhere in the north of Britain and thought probably to have dominated the ritual landscape of the Brodgar isthmus. Extensive remodelling of the interior c.2800 calBC increased its difference by creating a cruciform plan, adding new wall faces and corner buttressing,

and incorporating a surrounding outer passage, reflecting elements of Maeshowe with which its entrance was aligned. Furthermore, as with that tomb, massive stone slabs were used, their size suggesting they were originally parts of standing stones. These complemented an up-standing holed stone in the forecourt and were decorated with entoptic motifs. A paired relationship with Maeshowe is identified. S10 was used until c.2400-2200 calBC when it appears to have been closed in an extraordinary and unique episode of ceremonial demolition involving the slaughter of several hundred cattle. Bones were laid around the structure and an upturned cow skull was placed within it. The bones appear to have been cracked to extract the marrow, suggesting that this slaughter was accompanied by a feast. All the slaughter appears to have taken place in a single event. After the event the whole carcasses of several red deer were placed on top of the broken bones and the structure largely destroyed and covered with midden. This event appears to have marked the closure and abandonment of the Ness (Smith 2014).

Structure 12 was built around 3000 calBC with four recesses and two hearths. An annexe was added later in the Neolithic which contained masses of Groove Ware pottery including very large vessels, some made with techniques not otherwise known from the Neolithic (Towers *et al.* 2015:24-25).

Structure 14 was built c.3000 calBC, roughly contemporaneously with S1, S8 and S12 and built on top of earlier structures. It had three entrances, four recesses and two hearths. Apart from its size, it is generally similar in design to S8 and sections of it appear to have been used for different purposes (Towers *et al.* 2015:20-21; Towrie 2012b; 2014b).

The size, nature and apparent increasing number of the different structures with multiple recesses, hearths and thresholds point to the settlement, and indeed the Complex as a whole, having had intense ideopolitical context. This is particularly evident in S10 that was different again to the others; and in its treatment marking closure and abandonment of the settlement. Floor deposits indicate that these buildings were special places with a rich array of high-value polished stone artefacts, including maceheads and polished axes, Skaiill knives and hammerstones, and exotic items of ideological significance. The enclosing stone wall traversed the entire site and may have been a symbolic barrier between the ritual landscape and the mundane world around it.

Concentration of the sites and their interrelationships, together with superimposition of occupational phases and structures, point to the significance of the Brodgar zone. Internal house plans have features in common with Maeshowe: similar orientation; entered through low passages; recesses; and in some the internal area subdivided with

greater emphasis on the right-hand side (Bradley *et al.* 2000:62; Richards 1991b). Richards (1992b) considered it no coincidence that the Barnhouse village plan of buildings surrounding a central space was similar to that of the chambered tomb, and that the tomb ground plan mirrored that settlement as a whole.

30.2.2 Ideological

settlement The use of architecture and materiality to constitute microcosms of the Orcadian world was a recurring ideopolitical strategy (Downes *et al.* 2013:94). Card and colleagues (2017) commented that exceptional architecture, diversity of structures, and evident size and complexity all emphasise the special character of the Ness; and its nature and developmental context is seen to make it a moot point as to whether it was simply a settlement. Krakowka (2018) stated that this was a place of pivotal importance to Neolithic Orcadians, and perhaps further afield. The settlement, if not initially established as an ideopolitical construct, became so very early, and one that progressively intensified while accommodating punctuated change both political and ideological. The period *c.*2900 calBC that saw Barnhouse abandonment and the appearance of pired buildings may have been such a time, one of major change in the character of the Ness. It raises questions as to what kind of communities and worldview were involved.

cosmology Fundamental to the Brodgar Complex is the local topography which encourages the perception of a series of transformations in a concentric representation of the natural world; that this zone lay in it being central to a landscape surrounded by water and encircled with hills — a microcosm of the world floating on the ocean with other lands beyond. Furthermore, its immediate location was the isthmus between the Lochs of Stenness and Harray trending northwest-southeast, a cosmological orientation encountered repeatedly in Neolithic Orkney, such as the similarly aligned promontory of the Unstan chambered tomb. Site and landscape were connected in a series of transformations involving concentric order and representation of the natural world. Together, they created a central point, an *axis mundi* of the natural and cultural worlds operating at different scales in people's worldview. A small, baked-clay figurine recovered might be seen as material conceptualisation of an element of the supernatural realm, such as a spirit or ancestor.

Cosmology and the forms of its architectural materialisation have been inherent in the occupational history of the Complex. Continuity in the cosmological system attests to its relevance despite the way in which cosmology was materialised by structures reflecting

hierarchies in size, sophistication and exclusivity, and degrees and the trajectory of ideological change. Quantitative determination of stone circle astronomical connections has revealed that the sky and land were brought together to create particular interactions at certain times of the lunar and solar cycles. The Stenness circle, for example, with its entrance and central stone setting, has been shown to have several lunar standstill and solstitial targets on the horizon (Higginbottom *et al.* 2013).

Richards (2005c:259) considered it important to recognise that the Orcadian landscape was continually being created and transformed by the sequence of monuments. Monumental construction and the sites themselves overshadowed daily tasks, as each place assumed special ideological significance at a particular time. Cosmological beliefs assisted in understanding and viewing the world, while at the same time imposing categorical order upon it. He commented that, as Bradley (1993) noted, monuments have the power to alter the physical world and continue to influence its reading by future generations. If, as suggested by Ritchie (1995:69), a cist stone at the Ring of Brodgar came from Barnhouse village, there is a continuing ideological link between Complex elements regardless of the change each might have represented.

ritual The large quantity of coloured Grooved Ware and animal bone found implies feasting was a major activity at the site. The former is unusual in that sizes range from miniature pots to massive vessels over 60cm in diameter. Miniature pots suggest ritual involving use of special substances, while the larger vessels indicate food and beverage consumption on a large scale. Card (2015) pointed out that the cattle shin bones deposited around S10, following a conspicuous consumption event, had not been dumped but carefully placed as part of the process of site abandonment.

ancestor worship Overall, Ness S10 appears as a place where the living congregated with the dead. Its large and different floor plan with a single cruciform chamber, wall finishing, corner buttresses and piers are Maeshowe features. Re-use of standing stones in its construction and part superimposition on S8 reflect ideological association with ancestors and Maeshowe. Signalled is change in the type of structure considered appropriate for a special site while mirroring features of Maeshowe to emphasise ideopolitical purpose. As noted above, ideological change may have been involved.

Parker Pearson (in Towrie 2010a) speculated that the Stenness circle, with its central hearth and evidence of feasting, settlement and activity, represented the world of the living; while the Ring of Brodgar, with no domestic activity and surrounded by burials,

represented the spiritual domain of ancestors. However, since Stenness has associations with Maeshowe the veracity of this conclusion is doubtful.

visual imagery All the main structures carry entoptic motifs ranging from deeply incised, pecked, and cup-marked decoration, to a large proportion of lightly incised markings that are almost invisible to the naked eye (Krakowka 2018). Motifs similar to those in tombs are found in a number of other contexts: in houses; on stone artefacts; and on pottery. These connections suggest that tomb decoration made direct reference to the domestic sphere, forging a link between the living and the dead, and emphasising the parallel between the plans of tombs and houses. In this a firm ideopolitical strategy is identified, reflected in the widespread application of the same motifs: in the passages of Skara Brae, and in Houses 7 and 8; the Barnhouse structure thresholds; on building stones in Barnhouse and Ness; a slab at the Ring of Brodgar; and on Grooved Ware and the earlier Unstan Ware (Fig. 29.11). It has been suggested that the Brodgar piece had been removed from Barnhouse, as had probably a small decorated stone inside Maeshowe (Bradley 1998b:387; Bradley *et al.* 2000:55-62).

These motifs were not simply decoration; instead, there is a sense that they were a crucial part of the living process and the objects on which they were placed, intimately linked to the identity and intentions of its creators. The numerous examples in Ness S1, for example, indicate facing wall interiors were clearly related to what went on within the building and meant to be seen only by those participating in related activity.

Two observations are made: the simplicity and narrow motif range, and the rapidity of execution suggest in some cases a quick, graffiti-like intention to strategically mark places and objects; the close association of motifs with tombs as at the Holm of Papa Westray South and Maeshowe. In this is seen a strategy on the part of those in control to instil awareness and understanding of the ideopolitical regime. Given the close association of motifs with tombs, their use implies an endeavour to consolidate power over communities by emphasising and using the influence of ancestors. This would have ensured the influence of all tombs/houses of the dead was harnessed, creating a sense of community in which the deceased remained involved in the everyday activities of the living.

30.2.3 Political

control As noted, fundamental to the Complex is the local topography which encourages the perception of a series of transformations in a concentric representation of the natural world. Reflecting this, both the Stenness and Brodgar circles in turn lie at the

centre of a distinctly concentric constructed and natural landscape of circles: the ring, ditch and bank; and the surrounding water and encircling hills. Their upright stones reflect the vertical rock formations of hills, cliffs and sea stacks; ditches are considered to have contained water, creating islands within islands, and possibly indicating that water both represents the natural landscape and is symbolic of transition and division (Richards 2005c:257-259). If the two circles imitate the regional landscapes they dominated, then Brodgar might be seen associated with a more extensive territory than Stenness, and with social control over more people. Ruggles (1999: 225) noted the view that their difference in size could relate to Stenness being concerned with the moon, and Brodgar the sun. A larger ring may have permitted greater precision in astronomical determinations; it would also be consistent with changed ideology and related action to increase territoriality and population being dominated ideopolitically.

exclusiveness The Ness reflects this in the extreme, the enclosing wall emphasising its importance, obscuring activities of the interior, and controlling entry as well as movement between the stone circles at Brodgar and Stenness. Furthermore, the wall would have been a symbolic barrier to a major precinct, that between its perceived ritual landscape and the surrounding mundane world.

continuity Given its number of buildings and complexity, strong organisation over more than a millennium is suggested. Bayliss and colleagues (2017:1185) have identified a sequence of constant and rapid change, rather than uninterrupted continuity. This resulted from ideological developments that saw construction of the Ring of Brodgar c.2500 calBC, which probably had the same purposes and practices as the Stones of Stenness, but involving a larger number of people.

rivalry Card and colleagues (2017:39) suggested that the Ness and Brodgar Complex had acted as a focus for local and archipelago-wide communities and possibly beyond, being a “place of renown and even awe.” They questioned the nature of leadership, planning, construction and decision-making and the consequent risks and costs of maintaining such a complex settlement. They also suggested that the site “could have encouraged rivalries and engendered jealousies.” Bayliss and colleagues (2017:1185) considered such competition to have been resolved by monument construction, changes in material culture and the discrete social spaces built into structures and settlements.

While politics were no doubt behind the emergence and development of the Ness, the fact that buildings were modified, abandoned, and replaced by different structures during the life of the settlement suggests that the initial influence did not become sufficiently institutionalised to keep the Complex going unaltered. What is apparent, however, is that

ideology was involved from the beginning and remained a strong and continuing element, this indicated by final modifications to S10 c.2500 calBC which suggest it was still able to attract attention, presumably by the enduring power of social memory and possibly mythical status. The structure is believed to have dominated the ritual landscape of the Brodgar isthmus. Whatever its role, there is the question as to the circumstances in which such a building came into being. One possibility is that it resulted from competition among users of the other buildings, be they kin groupings or representatives of the wider archipelagian community.

30.2.4 Social

sociopolitical Two interpretations have been proffered to explain the sociopolitical context of megalithic construction in Orkney. Renfrew (1979:218) argued that in building the structures, a substantial increase in energy expenditure was required that could only have resulted from organisation of the population as a whole and been achieved through centralising tendencies of chiefdoms. He modified this view to suggest collective endeavour based on some form of social unity. Alternatively, Richards (2004:111) proposed that construction arose through community identity expressed by material signifiers in response to broader social conditions. He saw Late Neolithic society possibly more competitive than unified and stable; and considered that with the simultaneous construction of passage graves and the collection of human skeletal material for redeposition within them, it was possible to discern different strategies to re-order social relations with the past and specific places. It was argued that claimed lines of descent and ties to particular places would have provided potent symbolic resources for the construction of changing individual and group identities. Monument building was interpreted as an arena of ritualised competition and social dominance that was possibly caused by changing belief systems. Richards added that variation in labour input between groups enabled a form of ritual exchange and a mechanism for enhancing social rank. Each stone transported and erected was an act of ritualised competition. Therefore, rather than being a mechanism of unification, construction of stone circles, for example, provided the context for greater social differentiation through the ability to provide resources and labour by which a massive monolith could be erected. Size and quality of these provided a further index of social order.

These interpretations are not incompatible, nor inconsistent with model expectations. Both stone quarrying and dragging required a considerable labour force exceeding one village community. While, as noted, a Brodgar Ring stone came from Eday, Richards (2004:104-111) pointed out that the two sandstone types at Stenness and the twelve at

Brodgar could all have been obtained from a single location. The stones are linked with both the groups who quarried, transported and erected them, and the quarries. He also commented that ditch sections of the Stones of Stenness exhibit different techniques and could have been dug in stages by different groups. The circles, therefore, can be viewed as a microcosm of society, the stones and ditches effectively creating a spatial and material map of different group genealogies. As well as continually reinforcing worldview understandings, controlled movement within and between the sites would have ordered experience, thus effecting memory and providing the basis of social differentiation, identity and competition. In this way, such projects would have been particularly effective for aggregating groups for construction and encouraging repeated return. This would have facilitated community manipulation regionally in terms of existing ideology or change.

Richards (2004:103) commented that social strategies lay behind such practices and indicate significant change in both social relations and difference. Evidence of privacy and control of access, apparent in the Ness, suggests that sacred knowledge was no longer public but controlled by powerful elites (Ruggles 1999:84). Horizontally, assembly of people from a wide area would have changed intercommunity relations and required popular approval to manage them; and vertically, a hierarchy of elites would have become essential. Without this and effective administration, network management would have not been possible. Furthermore, the need for project planning, organisation and co-ordination would have established social roles in terms of rank and authority. Prestige was acquired by those providing stone. Since labour provision was an element of exchange in the construction process, social order could be realigned. The erected stones and the ditches, and their positioning, became material mnemonics of the transaction — iconic representations of both places and peoples.

deposition Orcadian tombs have produced a wide variety of faunal remains, including domesticated cattle, sheep, pig and dog, and wild red deer and otter. Such remains, found within and outside passage graves, have been variously interpreted as sacrificial offerings, funerary feasting, or related to totemic practices. Particular faunal assemblages were incorporated into the site fabric, together with certain associations and identities, and animals were deposited according to topographic and symbolic principles. These remains in any one place might be interpreted as conceptual maps of resource location, and perhaps territory.

power relations Jones (1998:315-320) considered the number of species in mortuary deposits to have been one means by which power relations were expressed. Since not all

animals would have been easily obtained, particularly sea eagles and other cliff-dwelling bird species, their acquisition was the result of dangerous activities. Deposition of such large amounts of bird remains, therefore, is a statement concerning both the qualities of place and the prowess their procurement. He suggested that animal remains were used to structure perceptions of particular places, as their selective deposition established different kinds of place. Consequently, each tomb is regarded as a different kind of place, related to particular locations within the landscape. Such differences between tombs may have been instrumental in determining who was to be buried in them. Lawrence (2011), referring to the Tomb of the Eagles, considered it likely that disease and deformity had marked those whose remains it contained as somehow different, and perhaps granted special status ideologically as having been positively “chosen by the gods” or possessing “some supernatural attribute”. While Jones’ interpretation above suggests ongoing tension reflected in competition and conflict between communities may have been involved, behaviour in both is ideology based.

30.2.5 Distant Contact

The Ness was a ceremonial centre and a key node in the exchange network, ensuring access to exotic items, ideas and knowledge, while local items, ideas and knowledge would have attracted people to the site from other places. Indications of long-distance contact are numerous: Yorkshire flint; Arran pitchstone; an axe blank of Cumbrian tuff; amber beads, representing the most northerly occurrence of these in the Neolithic; Unstan Ware pottery, first produced in Orkney, being found scattered on the Scottish mainland and in the Western Isles; Grooved Ware, also considered from Orkney, present in clusters across Britain, including the Upper Thames Valley, Salisbury Plain, and Boyne Valley; and parallels with Boyne art (Card 2010:3; Card *et al.* 2017; Krakowka 2018; Hensall 1972:177; Reynolds and Ralston 1979; Botfield 2012; Cooney 2000:31, 183, 228; Thomas 1999:118).

30.3 OBSERVATIONS

The Ness, with sophisticated and imposing architecture, must have dominated the landscape; and while it was not ‘domestic’ and the general population aggregating there may have lived elsewhere in villages, the Complex anchored sedentism in the archipelago. Its significance is emphasised by the enclosure wall and positioning between the Stenness and Brodgar stone circles. Flanked on both sides by water, access could only be gained from either the southeast or northwest, requiring visitors to pass through either circle which were not the end-points or principal focus. This ceremonial

centre, Card (in Towrie 2008d) noted, followed a pattern observed at other British sites where henges were built to establish a corridor for procession and ceremony. As noted, he considered pottery diversity at the Ness I pointed to the site being a focus for communities across Orkney. Downes and colleagues (2013:94-96) saw the focus not the settlement *per se*, but what was under the large mound at its southern extremity which they thought to be “the final place, the ultimate destination”. Excavation (Trench T) has revealed a huge structure (S27) unique both in size and construction incorporating massive stone slabs considered to be re-purposed standing stones. These had been used to support orthostats that clad the interior face of a wall 2.3m thick. Their rounded edges were weathered or worked similar to the standing stones at Stenness, suggesting they may have been part of a dismantled stone circle predating the main Ness site. S27, reminiscent of the early house at Knap of Howar but much larger, was surrounded by a flagged passageway under which ran a drain (Archaeology Orkney 2016, 2017).

Table 30.2 provides a compilation of the known dates relating to the sites and related structural elements of the Complex. While appreciating that the individual sites concerned may not have been as close or as separated chronologically as radiocarbon dating suggests, they permit insight into the processes by which the cultural apogee was reached, and its ideopolitical context. Three periods can be distinguished.

Table 30.2 BRODGAR COMPLEX REGION: GENERAL TIMELINE

ref: Towers *et al.* 2015c; Orkneyjar 4

Period 1

- c.3400-3100 calBC earliest Barnhouse structures
- c.3300-3200 calBC earliest Ness structures (not excavated)
- c.3200 calBC early Skara Brae structures
- c.3100 calBC a series of oval structures built on the Ness and enclosed by a massive stone wall

Period 2

- c.3000-2900 calBC Stenness Standing Stones constructed
Barnhouse 2 constructed and operated
construction and use of Ness structures S1, S8, S12 and S14 and probably an earlier one under S8 that is separated from S1 by a narrow paved passage; the northern enclosure wall increased in width from 4m to 6m
- c.2900 calBC Ness S10 constructed
- c.2900-2750 calBC Barnhouse village abandoned;

c.2800-2700 calBC Maeshowe chambered tomb constructed

Period 3

c.2600-2500 calBC some early Ness structures abandoned and covered with a sequence of midden and rubble deposits, including infilling of the outer paved area that contained a large animal bone assemblage; those still in use remodelled

construction of structure Barnhouse 8

construction of the Ring of Brodgar

c.2600-2300 calBC Ness S10 goes through various alterations, including addition of a forecourt at its eastern end and incorporation of a pre-existing standing stone with hour glass hole

c.2450 calBC Ness S10 abandoned and infilled with midden, rubble and carefully deposited cattle bones

c.2450-2200 calBC Skara Brae abandoned

dates unknown Ring of Bookan and Bookan chambered tomb constructed

c.2200-2100 calBC ephemeral activity on a much reduced Ness site considered to be represented by S7, and S9 and S11, and possibly reuse of S1.

Period 1 (c.3400-3000 calBC) witnessed appearance of the earliest structures at the Ness, Skara Brae and Barnhouse. At the Ness these were S20, S17, S18, S23 and S24 (Fig. 30.34) and the enclosure wall was built. Brodgar (the Ness and Barnhouse) became the regional focus.

Period 2 (c.3000-2700 calBC) was ideopolitically pivotal in development of the Complex. It saw intensification of both settlement and ideology that involved construction of significant ceremonial structures S1, S8, S12 and S14; remodelling of the northern section of the wall; and the first stone circle (Stenness) and passage grave (Maeshowe). The Ness, Barnhouse and Skara Brae villages each exhibited the same general features: clustering with one structure appearing to be different from the others; and its pairing with another, smaller one — S1 and S7 at the Ness, Houses 6 and 1 at Barnhouse, and Houses 7 and 8 at Skara Brae.

At Skara Brae each house was continually reconstructed, while Barnhouse and Ness saw new architecture that was radically different as in ‘ceremonial’ Barnhouse 2 and Ness S12, but with structure pairs remaining at both. While Barnhouse had only one such structure, there were a number at Ness all showing a particular plan and exhibiting a stronger ideopolitical presence and influence. This coincided with Barnhouse abandonment which probably related to the demise of its secular aspects as a result of

centralised ideopolitical developments in the region and to competition between the two sites. (Subsequent construction at each of similar unique buildings of monumental proportions, Barnhouse 8 and Ness S10, supports this view.)

Maeshowe was constructed. Both Barnhouse 8 and Ness S10 looked towards it, as did an upright stone feature within the Stenness circle associated with the latter which may relate to an earlier structure or passage tomb site. These developments imply that the Complex ideopolitical centre at this time was in the southeastern zone.

Period 3 (2600-2100 calBC) saw abandonment of Skara Brae and Barnhouse, and further ideopolitical development together with settlement expansion at Brodgar. Barnhouse 8 and the Ring of Brodgar were constructed. At the Ness some earlier structures were abandoned and deliberately covered with an ashy midden, and others remodelled. S10 was altered with the addition of a forecourt incorporating a repositioned standing stone and then eventually abandoned and filled with midden, rubble and cattle bones.

The newly constructed Ring of Brodgar altered the isthmus appearance. It drew on ideopolitical power inherent in those earlier structures but placed emphasis on the northwestern zone. Two purposes are seen to underline this: one, astronomical in the context of restricted esoteric knowledge, since the larger circle with more stones permitted increased precision in culturally significant lunar and solar observations; the other, social control over more communities and the ability to ceremonially manage them (Richards 2013).

As noted, geophysical survey showed the area around the Ring of Brodgar between the Dyke of Sean and the Ness enclosure to be devoid of contemporary sites, underlining its ideological function. Beyond the Dyke, however, there was extensive Neolithic occupation. Settlements similar to Skara Brae elsewhere probably had access to Brodgar by land and sea.

settlement The late 4th millennium saw the beginning of a process of conglomeration of small dispersed and shifting communities that resulted in substantial nucleated settlements of varying scale and nature. Dates from a number of these suggest contemporaneous occupation (Carey 2012; Richards *et al.* 2016; Bayliss *et al.* Supplementary Data 2017). This is clearly shown by the Mainland sites listed in Table 30.3 with available dates, and others elsewhere across the archipelago.

Previously it was noted that early villages on Mainland had progressed from timber to stone buildings, and grown into relatively independent and competitive house-society settlements pursuing respective political objectives. Given that the earliest Ness settlement was 3300-3200 calBC (Towers *et al.* 2015) and buildings were of stone (no timber structures being referenced in the literature), it would appear to have been contemporary with these and coming from a common base of independence and political awareness. It would also appear that its subsequent dominance was achieved despite (or perhaps because of) extensive nearby zones of occupation.

Table 30.3 LATE 4TH MILLENNIUM ORCADIAN SETTLEMENTS

refs: (1) Richards and Jones 2016; (2) Hill and Richards 2005

Mainland

Knap of Howar	3700-3360 to 3360-2890 calBC ¹
Barnhouse	3410-3100 to 2900-2750 calBC ²
Skara Brae	3200-2500 to 2450-2200 calBC ²
Widford Hill	3630-3350 to 3340-2930 calBC ¹
Smerquoy	3370-3100 to 2140-1940 calBC ¹
Knowes of Trotty	3500-3110 to 3270-2910 calBC ¹
Stonehall Knoll	3370-3020 to 2630-2460 calBC ¹
Stonehall Meadow	3490-3090 to 3340-2920 calBC ¹
Stonehall Farm	3370-3020 to 2890-2620 calBC ¹
Crossietown	3270-2910 to 2470-2140 calBC ¹
Muckquoy	-
Bookan	-

Other Islands

Green (Eday)¹; Ha'Breck (Wyre)¹; Rinyo (Rousay)¹; Links of Noltland (Westray)¹; and Pool (Sanday)¹

ideology Earlier in Orkney ancestor-based ideology nature was manifest in the tendency of settlements to cluster around tombs and construct houses reflecting their architecture. Later developments had two major dimensions. First, the institutionalisation of ancestor worship, indicated by the construction and alteration of tombs with emphasis on exteriors to provide stages for performances and for distinctive deposits, as well as an increase in the number of people permitted to use them use; second, its further appropriation by particular individuals harnessing the influence of ancestors to consolidate social control, as indicated by the marking of places and objects with motifs associated with the dead. The continuation of ideology at the Complex points to extension of initial ideopolitical influence from a focus on individual sites to integration and domination co-ordinated by a sedentary network centred on the Ness.

In this context, the Ness presents a regime of extreme privilege and exclusivity controlled by powerful individuals and associated elites motivated by ideopolitical power and status regionally. Whether it represents power and status for one individual or group within Orkney is difficult to say; however, ideological variation in tomb focus points to competitive behaviour between communities. Orkney would have been aware of developments in centres outside the archipelago and have had connections with them (Card 2015).

Barnhouse 8 Its construction seems to indicate a change in ideology and ritual practices of the time. Whereas ceremonies took place within the open stone circles, open to the whole community, by the time of BH8 things seem to have changed. Rituals and ceremonies now took place in an enclosed space accessible by a select few, suggesting that its builders were trying to recreate the sacred space of their predecessors but in a way that would suit the changing beliefs of the time. The intention may have been to link it with the Stenness site; and with Maeshowe to which the southeastern entrance is aligned. In the latter regard, BH8 and Maeshowe would appear to be complementary opposites symbolically: Maeshowe aligned to the winter solstice, the darkest time of the year and associated with the dead; Barnhouse 8 to the summer solstice, a time of light and life/fertility.

parallels A view held is that megalithic tombs in Ireland and Scotland possibly developed through ‘competitive emulation’ among different groups, developing to enormous proportions (Bradley 2007:116). This is considered true of Orkney tombs, and also involved exotic artefacts, practices and beliefs. It can be illustrated by the architecture which perhaps drew on the Boyne passage tombs as one source of inspiration, while spatial divisions inside Maeshowe are indicated by similarly incised motifs (Bradley 2007:116-117; Bradley *et al.* 2001:63-64).

Shared influences are evident in platforms outside chambered tombs in Scotland and Ireland; and the lithification of astronomical associations can be seen in solar alignments at Newgrange, Stonehenge, and Callanish. A further parallel is possibly seen in the circular geometry of the Stenness and Brodgar henges with that evident at Stonehenge and elsewhere in England. Both the Stenness and Callanish sites share particular traits, including pairs of outlying stones and a dolmen within the circle, and show structural positioning appearing to relate to places linked to burial (Parker Pearson *et al.* 2006a:242; Higginbottom *et al.* 2015:587-588).

Use of standing stones in constructing chambered tombs was also the practice in Brittany and Iberia, where some tombs were built around pre-existing standing stones (Ramírez *et al.* 2015:67).

Parker Pearson has speculated linkage with Orkney in houses and in decoration on pottery with distinctly Orcadian features discovered at Durrington Walls (Archaeology Orkney 2017). A ceramic incense cup found at Orkney also suggests contact with Stonehenge. It is one of only five known, the other four all having come from Stonehenge (Krakowka 2018). The incense cup and maceheads at Brodgar are likely symbols of Ness authority.

REDACTIONS

- Fig. 30.1** Brodgar Complex: (a) location; (b) breached isthmus dividing freshwater Loch of Harray and saltwater Loch of Stenness; and (c) major monument sites
refs: Google Maps, <https://archaeologyorkney.com/ness-of-brodgar/>
- Fig. 30.2** Brodgar Complex: (a) sea level at Orkney 10,000BP/green, present/brown; (b) possible massive prehistoric monument in the Loch of Stenness adjacent to Brodgar revealed by remote sensing ref: SFLPS 2015; Orkneyjar 6
- Fig. 30.3** Maeshowe mound ref: <http://carpentersieffert.com/event/maeshowe-and-the-ring-of-brodgar/>
- Fig. 30.4** Maeshowe: aerial view ref: <https://www.pinterest.co.uk/pin/27866091419533337/?lp=true>
- Fig. 30.5** Maeshowe: plan and elevation of the chamber and passage ref: Mackie 1997:343
- Fig. 30.6** Maeshowe: (a) passage looking towards entrance; (b) light from mid-winter sunset shining down the passage ref: <http://www.odinorkney.com/pages/maeshoweabout.html>, <https://www.pinterest.com.au/pin/566538828116965099/?lp=true>
- Fig. 30.7** Maeshowe chamber ref: <https://www.pinterest.com.au/pin/115052965457517140/?lp=true>
- Fig. 30.8** Maeshowe: entoptic motifs used in panel decoration within the tomb
ref: Bradley *et al.* 2000:58-59
- Fig. 30.9** Maeshowe: difference in entoptic motifs used in tomb decoration between (a) older tombs, e.g., Eday Manse, Papa Westray South and Arsdale; and (b) Maeshowe ref: Bradley *et al.* 2000:50
- Fig. 30.10** Maeshowe: similarity of entoptic motifs used in decorating the more recent tombs of (a) Quoyness, (b) Cuween Hill and (c) Wideford Hill with those in Maeshowe ref: Bradley *et al.* 2000:50-54
- Fig. 30.11** Standing Stones of Stenness
ref: <https://www.walkhighlands.co.uk/news/our-pick-standing-stones-and-circles/0013636/>
- Fig. 30.12** Standing Stones of Stenness: layout showing central heart and surviving stones in black ref: <http://www.orkneyjar.com/history/standingstones/>
- Fig. 30.13** Standing Stones of Stenness: central stone setting ref: G. Ritchie:1985:122
- Fig. 30.14** Standing Stones of Stenness: setting of upright stone slabs with the gap between them focused on the Maeshowe tomb
ref: <https://www.pinterest.com.au/pin/555913147726072990/?lp=true>
- Fig. 30.15** Barnhouse: (a) plan of Structure 8 and its surrounding elevated platform; (b) Structure 8 excavated; and (c) Structure 8 entrance with threshold fir pit ref: <http://transparent-aluminium.net/2017/01/18/barnhouse-village-orkney>, <http://decodedpast.com/neolithic-scotland-heart-orkney-world-heritage-sites/4413>
- Fig. 30.16** Barnhouse Odin: location and associated structures
ref: Challands, Edmonds and Richards 2005:206
- Fig. 30.17** Odin Stone: reconstruction drawing ref: Challands *et al.* 2005:206
- Fig. 30.18** Watchstone with Ward Hill and Cuilags on Hoy in the background
ref: Tait 2002
- Fig. 30.19** Watchstone view of the winter solstice sunset relationship with Ward Hill and Cuilags on Hoy ref: Tait 2002

- Fig. 30.20** Barnhouse Stone, 700m southeast of the Stenness Standing Stones
ref: <https://www2.stetson.edu/neolithic-studies/standing-stones/barnhouse-stone-orkney-islands-scotland/>
- Fig. 30.21** Barnhouse Stone alignment with Maeshowe entrance (centre background)
ref: <http://www.megalithic.co.uk/article.php?sid=156>
- Fig. 30.22** Ring of Brodgar: aerial view
ref: <https://www.pinterest.com.au/pin/481674122620864210/?lp=true>
- Fig. 30.23** Ring of Brodgar: section of henge standing stones
ref: <http://www.megalithic.co.uk/article.php?sid=139>
- Fig. 30.24** Ring of Brodgar: section of henge standing stones showing closely juxtaposed pair with angled tops opposed marking the southern entrance
ref: <https://hiveminer.com/Tags/menhir%2Csnow>
- Fig. 30.25** Ring of Brodgar: Spatial distribution of standing stone lithologies ref: Downes *et al.* 2013
- Fig. 30.26** Ring of Bookan ref: Orkneyjar 2015
- Fig. 30.27** Ness of Brodgar: (a) location on northern section of the breached Brodgar isthmus; (b) location with geophysical overlay; and (c) current excavation
ref: <http://www.orkney.com/whats-new/ness-of-brodgar-jobs>;
<https://www.pinterest.com.au/pin/355502964308037135/?=true>
- Fig. 30.28** Ness of Brodgar: (a-d) reconstructed impression of complex and particular structures ref: www.willmacneil.com/new_site, <https://www.pinterest.ch/pin/330099847665556543/>
- Fig. 30.29** Ness of Brodgar: (a) plan of excavation trenches and structures identified; and (b) plan of Trench P showing Neolithic buildings (S1/S14/S8/S10) marked by thick walls of carefully laid stone slabs and threshold hearths
ref: British Archaeology Jan/Feb 2013:16; <http://www.nessofbrodgar.co.uk/updated-trench-plan-for-2016/>
- Fig. 30.30** Ness of Brodgar building decoration: pick-dressed red sandstone ref: British Archaeology Jan/Feb 2013:18
- Fig. 30.31** Ness of Brodgar building decoration: wall face with red, black and yellow pigments ref: British Archaeology Jan/Feb 2013:18
- Fig. 30.32** Ness of Brodgar building decoration: pecked cupmarked stone
ref: British Archaeology Jan/Feb 2013
- Fig. 30.33** Ness of Brodgar building decoration: banded entoptic chevron and lozenge motifs incised on stone
ref: British Archaeology Jan/Feb 2013:18; Card 2015; Munro 2013,
<https://www.pinterest.com.au/clairerosilda/ness-of-brodgar-excavations-orkney/?lp=true>
<https://www.orkadian.co.uk>
- Fig. 30.34** Ness of Brodgar: schematic representation of stratigraphic relationships between structures, middens, and other features defining information incorporated into chronological models for the Ness ref: Card *et al.* 2017:9
- Fig. 30.35** Ness of Brodgar: Grooved Ware sherds recovered showing previously unseen red, black and white surface colouring ref: British Archaeology Jan/Feb 2013
- Fig. 30.36** Ness of Brodgar: axes and maceheads ref: Northlink Ferries
- Fig. 30.37** Ness of Brodgar: polished axe ref: British Archaeology Jan/Feb 2013
- Fig. 30.38** Ness of Brodgar: Structure 10 plan and aerial view of excavation ref: Card *et al.* 2017; Scottish Archaeological Research Framework

Chapter 31 MODEL PHASE 3: WESSEX (ENGLAND) SITES OF THE LATE NEOLITHIC AND EARLY BRONZE AGE

The Wessex complex of the Late Neolithic and Early Bronze Age (EBA) extends across the chalk of Wiltshire and Dorset (Fig. 31.1). Henge monuments and stone arrangements of this period succeed an earlier phase characterised by causewayed enclosures and long barrows (Chapter 24 refers). Two sub-sets of stone, timber and earth monuments, the Upper Kennet and the Middle Avon (Figs 31.2, 31.3), have been selected for consideration because of their diversity, possible meaning, and the quality of available evidence. Between them in the Vale of Pewsey is Marden Henge. In the Dorchester sub-set, other similar monuments and regional foci are the Knowlton Circles on Cranbourne Chase to the south, Mount Pleasant and Maumbury Rings in the middle Frome valley in the southwest (Fig. 31.4).

The permanency of these sites contrasts markedly with the ephemeral nature of pit sites of the more mobile earlier phase, which suggest occupation of only months to a couple of years (Pollard and Reynolds 2002:27). The two sub-complexes, Middle Avon and Upper Kennet are the best researched and most well-known, and clearly operated as discrete units within the whole. Both continued the early tradition of assembling large groups from different communities for ceremonies and feasting, particularly at the massive monuments of Avebury, Durrington Walls and Stonehenge. Pollard (2012:96) stated that by the Late Neolithic these two centres had become “potent places with deep and politically complex histories”. Table 31.1 provides a compilation of the known C¹⁴ dates for the sites of the complex.

31.1 UPPER KENNET

The Late Neolithic and EBA sites of the Upper Kennet, constructed between *c.*3000-2200 calBC within an area of *c.*12sqkm, include the Avebury Henge, Silbury Hill, the Sanctuary, the Beckhampton and West Kennet Avenues, the West Kennet Farm Settlement, and the Beckhampton enclosure. In the vicinity there are numerous mid-Neolithic long barrows and EBA burial mounds. This architecture reflects a combination of influence from both earlier and distant monumental traditions, and local developments. Construction, a communal undertaking on a massive scale and over a long period, was seen by Whittle (1997b) to have proceeded in ritual cycles concerning the

sacred realms, the past, and the origins of the world. Parker Pearson (2000) extended this.

Table 31.1 WESSEX COMPLEX REGION: GENERAL TIMELINE

Upper Kennet

c.3325-3215 calBC	West Kennet Palisades	18
c.2580-2470 calBC	Avebury Henge main ditch	19
c.2900-1700 calBC	Avebury Henge stone settings	1
c.2450 calBC	Silbury Hill (I)	17
c.2660-2560 calBC	Beckhampton Enclosure	1
c.2600-2300 calBC	Beckhampton Avenue	1
c.2600-2300 calBC	West Kennet Avenue	1
c.2400 calBC	The Sanctuary	1
c.2425BC	Silbury Hill (II)	17
c.2500-2200BC	West Kennet Farm settlement	18
c.2375BC	Silbury Hill (III)	17

Middle Avon

c.3015-2935 calBC	Stonehenge Stage 1	4
c.2900-2600 calBC	Durrington Walls entrance structures	12
c.2840-2040 calBC	Durrington Walls Northern Circle	12
c.2769-2300 calBC	Stonehenge Stage 2	4
c.2750 calBC	Coneybury Henge	5
c.2630-2440 calBC	Durrington Walls early settlement	7, 12
c.2620-2300 calBC	Durrington Walls bank ditch	12
c.2600-2400 calBC	Durrington Walls entrance midden	12
c.2580-2400 calBC	Durrington Walls Southern Circle	7
c.2500-2400 calBC	Durrington Walls entrance/houses	11
c.2480-2280 calBC	Stonehenge Avenue	4
c.2470-2280 calBC	Bluestone Henge	6
c.2470-2030 calBC	Woodhenge (or)	6
c.2910-2340 calBC	Woodhenge	6
c.2405-2110 calBC	Stonehenge Stage 3	4
c.2300 calBC	Durrington Walls Henge	8
c.2300-2200 calBC	Durrington Walls Henge ditch	10
c.2210-1925 calBC	Stonehenge Stage 4	4
c.2010-1450 calBC	Stonehenge Stage 5	4

Other Regional Sites

c.3000-2000 calBC	Stanton Drew Henge	3
c.2900-2600 calBC	Devil's Quoits Henge	9
c.2400-2375 calBC	Marden Henge	2
c.2400-2290 calBC	Boscombe Bowmen Barrow	15
c.2380-2290 calBC	Amesbury Archer Barrow	15
c.2350-2260 calBC	Companion Barrow	15
c.1900-1700 calBC	Bush Barrow	14
c.1900-1700 calBC	Upton Lovell G2e/Golden Barrow	14
c.1900-1790 calBC	Upton Lovell G2a/Shaman Barrow	13

Refs: 1 Pollard and Reynolds 2002; 2 Leary and Marshall 2012; 3 Oswin *et al.* 2014; 4 Parker Pearson *et al.* 2013; 5 J. Richards 1999; 6 Pollard and Robinson 2007; 7 Parker Pearson 2007; 8 Pitts 2008; 9 Pitts 2009; 10 Parker Pearson *et al.* 2006a; 11 Parker Pearson *et al.* 2006b; 12 French *et al.* 2012; 13 Burnham 2007; 14 Wiltshire Museum Devizes 2015a,b; 15 Fitzpatrick 2011b; 16 Whittle *et al.* 2011; 17 Leary and Marshall 2012; 18 Pitts 2017; 19 Healy 2016

by arguing that the West Kennet palisaded enclosures were circles of the living, while the Avebury Henge circles concerned the ancestors.

After the abandonment of Windmill Hill causewayed enclosure, evidence for occupation is initially less monumental with a series of interconnected lithic scatters accumulated through repeated occupations over time. In addition to those noted earlier on the southern slopes of Windmill Hill, sites have been identified at Avebury Down and along the later West Kennet Avenue (Fig. 31.5). (Thomas 1999:200, 210; Pollard and Reynolds 2002:122-124; Gillings *et al.* 2014). The West Kennet Palisades represent a probable ritual focus. A possible structure or long barrow is inferred for the centre of the later Southern Circle in the henge (Barker *et al.* 2017).

31.1.1 Avebury Down

This extensive scatter is characterised by both Early and Middle-Late Neolithic flints and a relatively large number of ground axes and axe fragments (Fig. 31.6). There are localised concentrations of different categories of material, notably implements and cores, that might be seen as distinct zones of more intensive settlement activity (Whittle *et al.* 2000; Gillings *et al.* 2014). Excavated areas demonstrate stakeholes and pits that contained flints, arrowheads, cattle bone, and potsherds.

31.1.2 West Kennet Occupation Site

The site lies c.700m south of the Avebury Henge at the foot of Waden Hill. A scatter of worked flint and pottery sherds spread over an area of >100 x 40m (Fig. 31.7). The main occupation phase lasted from the late 4th to early 3rd millennia BC before construction of the West Kennet Avenue (Smith 1965:213-216; Pollard and Reynolds 2002:124; Gillings *et al.* 2014). There were several small pits, two larger ones and postholes. The assemblage included chisel arrowheads and distinctive edge-ground tool forms, as well as Peterborough, Grooved Ware and Beaker sherds. There were also several pieces of sarsen and numerous fragments of imported stone, including oolite, ferruginous Greensand, and Niedermendig lava. Recent excavations by Gillings and colleagues (2014) noted that artefact density, compared with that on Windmill Hill, made it one of the most significant in the Avebury landscape. They considered it to be unusual with “fancy” and “accomplished” implement types, including polished-edge knives, scrapers and a fabricator, that implied on-site manufacture. In one of the larger pits a cattle skull had been set upright with an adjacent antler. Axe fragments from Penmaenmawr in North Wales (Group VII) had been placed in two holes.

Despite the presence of postholes no structures were revealed, although Smith (1965) considered a group of five to be supports for a substantial timber setting. Three contained burnt daub, implying a permanent building (Smith 1965:213-216; Pollard and Reynolds 2002:124). The recent excavations identified twelve more probable stakeholes, six of which could have formed one corner of a small enclosure or house, while the others suggested a structural relationship. Gillings and colleagues (2014:28) considered a curved stake hole arrangement with a diameter of c.5m and lacking substantial refuse as a possible house, similar to those at Durrington Walls. The site was seen to clearly comprise an area of Neolithic settlement within the heart of the Avebury landscape, comparison drawn with the Late Neolithic settlement archaeology at Durrington Walls, sealed under the henge bank.

31.1.3 West Kennet Palisaded Enclosures

Two timber-palisaded enclosures lie c.1.5km south-southeast of Avebury (Fig. 31.8a, b). They were built around 3325-3215 calBC, and were linked by at least one radial palisade and similar ceramic assemblages (Barber 2003; Pitts 2017; Pollard and Reynolds 2002:116; Whittle 1997b:164). Enclosure 1 is roughly circular and straddles the present-day course of the Kennet River with an area of c.4.2ha. South of the river it comprises a concentric double line of palisades, 25-30m apart, but there is only one to the north. The Enclosure 2 palisade defines an oval area of c.5.5ha. Within its eastern half are three circular structures and palisades, each of which has concentric outer (30-45m in diameter) and inner walls (10-22m in diameter) (Barber 2003:19-20). The Enclosure 2 inner radial ditches define three small sub-rectangular areas on the eastern side, while another bisects the enclosure. Externally, radiating ditches run from Enclosure 2 to two circular structures, also with two concentric ditches, 220m to the southeast. There is one ditch that links the two enclosures.

Whittle (1997b:156, 164) suggested that the two enclosures may have succeeded or overlapped each other, within a relatively short time, and that a large amount of labour and number of trees were required for their construction. They date to the Middle Neolithic, calibrated at 3325-3215 calBC (Pitts 2017), and are thought to have had a short lifespan of only a few generations before being deliberately destroyed by fire. They had been built in a landscape dominated by long barrows and artefact scatters, the era of cursus monuments and of the circular earthworks, Aubrey Holes and cemetery at Stonehenge.

31.1.4 Avebury Henge

This is located on a north-south ridge of Middle Chalk, close to a River Kennet tributary. It is a roughly circular earthwork, *c.*420m diameter, enclosing *c.*11.5ha with an internal ditch and external bank (Figs 31.9, 31.10). Today, the bank is 4-6m high but originally stood 17m above a flat-bottomed, steep-sided ditch. There are four bank and ditch arcs; and four causewayed entrances, each 15-20m wide. Close to each causeway the ditch is deeper, and banks higher and wider. Construction was probably episodic. The earthwork has an estimated construction date of 2580-2470 calBC (Healy 2016:41-44; Cleal and Pollard 2016:88). A bank in the southeastern and southwestern quadrants is of an earlier phase.

Internally, there are several stone settings. The Outer Circle originally comprised *c.*95-105 sarsen stones set on the inner edge of the ditch and was probably completed shortly after 2600 calBC (Allen 2007; Cleal and Pollard 2016:88). These unmodified stones vary in size and shape, but their placement is ordered (Figs 31.11, 31.12). Some of the largest flank the northern and southern entrances and are set to partially block entry, requiring visitors to take a sinuous route into the henge. Stones #1 and #98 at the southern entrance (Fig. 31.13) and #46 at the northern are 4.0-4.4m tall, while #47 in the north may have stood up to 5.4m. At the eastern entrance the large #73 lies on its side as a probable portal stone. The remainder are less substantial. It is thought that stones of different size and form were deliberately erected in each quadrant, including the 'beaked' stone #14 in the southwest quadrant (Pollard and Reynolds 2002:85-86).

The interior has two stone circles, both *c.*100m in diameter and each originally comprising 25-30 stones. In the centre of the Northern Circle is a Cove, originally a rectangular arrangement of three sarsen slabs open to the northeast and possibly aligned to the northern major lunar standstill (Burl 1979:159). Geophysical survey indicates a façade of smaller stones flanked its front and outlying stones. In the Southern Circle recent geophysical surveys have determined that the central Obelisk stone was in the centre of a rectilinear arrangement of stones, possibly a house or long barrow (Smith 1965:251). Geophysics have revealed earth and timber features elsewhere, including a timber circle *c.*40m diameter in the northeast quadrant adjacent to the Northern Circle that may have been its precursor, comparable with those at Durrington Walls and Mount Pleasant. In the same quadrant is a small crop mark enclosure, probably an oval barrow with an oblong double-ditched feature, *c.*25m across, and a central pit. The interior sectors were weighted through architecture and a nested series of enclosures: the bank

and ditch, the Outer Circle, the Inner Circles and their interior settings (Pollard and Reynolds 2002:86-88).

Excavated artefacts include construction tools, such as antler picks and rakes, which had been deliberately and carefully placed in the ditch base on its completion. These might be an acknowledgement of altering the earth and its symbolic connections. In excavation, items have been found deliberately placed beside stones or in stoneholes. For example, Stone 41 in the outer circle revealed a disturbed grave with fragments of an adult cranium, flint tools and Beaker potsherds, while others had sherds and flints (Smith 1965). The rest of the northwest sector had small caches of worked stone, including a Group VI axe flake from Langdale, fragments of a Group I (Mounts Bay, Cornwall) and a Group VII (Penmaenmawr) axe and sandstone macehead fragment; animal and human bone; and some pottery (Pollard and Reynolds 2002:91-94). In contrast, the southwest sector was relatively clean. In the Southern Circle this depositional practice can also be seen adjacent to several stones and in stoneholes with both potsherds and flints. A human cranium fragment has also been found just north of Stone #102. An 1885 excavation reported 'an urn full of bones' in the centre of the circle near the Obelisk, around which there is a concentration of worked flint and four pits. These items may reference earlier occupations, thus perpetuating particular understandings and earlier traditions.

Avebury represents the accumulation of many elements of regional significance in a single complex by incorporating the Neolithic world ideologically, psychologically, socially, economically and politically. This is evident in the carefully curated assemblages, which may be from earlier occupations or originated elsewhere. These established links with the past by collecting and reproducing social values and representations that were reinforced by ritual. In this way social tensions to retain old ways, while constructing a new architectural complex, were managed. Compared with the earlier Windmill Hill enclosure, however, there was more restriction in terms of the way in which it could be entered and encountered, reflecting not only changed and intensified ideology but also stronger leadership and social control.

31.1.5 West Kennet and Beckhampton Avenues

The West Kennet and Beckhampton Avenues comprise linear settings of paired sarsen stones that lead to the southern and western entrances respectively of the henge. The West Kennet Avenue (Fig. 31.14) extends 2.5km northwest from the Sanctuary with a sharp right turn to enter the henge. It was laid out as two lines of unmodified sarsens in a series of short lengths, defining an avenue about 15-25m wide. These stand 1.5-3.0m tall and

occur at 20-30m intervals (Pollard and Reynolds 2002). Towards the Sanctuary the distance between stones gradually decreases and the avenue narrows. Four graves with human remains, three males and two children, were associated with four of the stoneholes (#18b, #22b, #25b, #29a), while #25a had a small fragment of cranium and #25b fragments of pelvis and femora (Smith 1965:210; Cleal 2008). Beaker sherds accompanied four of these, while #22b probably had a Rinyo-Clacton bowl. These were deliberate burials prior to stone erection. Other stoneholes contained potsherds, flints and a Group 1a axe fragment was found in #31b, probably after the stone had been thrown down.

The length and width of the Beckhampton Avenue are undetermined, although Stukeley (1743) recorded about 30 stones and considered that it went as far as Beckhampton; however, it is known to run at least 1.7km southwest from the henge to the Longstones Cove, just beyond the earlier Beckhampton Enclosure. Excavation has revealed three stoneholes and three buried stones in two parallel lines, the northern one of which is in line with the two massive sarsens called Longstones which were probably the Avenue's terminus (Gillings *et al.* 2000).

Both avenues have little artefactual material except for deliberate deposits, which suggests their purpose was processional. Construction may have been related to that of the stone settings within the henge (Gillings *et al.* 2000; Pollard and Reynolds 2002; Sims 2009). Graves are associated with four of the stones; and a settlement extends across the zone between stone pairs #28-32 (Smith 1965:209-210).

31.1.6 Silbury Hill

Silbury Hill, 1.5km south of Avebury, is a giant artificial conical mound beneath a chalk cone of clay, flints, turf, earth and chalk, surrounded by radially arranged sarsens topped with animal bones and branches, and a ditch (Fig. 31.15). Constructed relatively quickly in three stages between c.2400-2375 calBC (Leary and Marshall 2012), it is 40m tall with a basal diameter of c.160m and a summit platform of c.30m diameter. On the summit was a structure that provided an elevated stage for ritual leaders to observe and be observed (Pollard and Reynolds 2002). This element is the same size as the earliest mound, suggesting elevation of a pre-existing sacred space to provide access to the celestial realm and its spirits. Below it is a terrace backed by a 5m wall cut into white chalk, and facing north towards the henge. The rock and earth matrix extracted from the immediate surrounds may represent the underworld, thus bringing together the three cosmological tiers. Its location adjacent to the Swallowhead springs and where the Kennet River turns

from a north-south to east-west course is of underworld significance (Pollard and Reynolds 2002). The mound can only be seen from the centre of the henge, the Sanctuary and sections of the avenues; it is obscured by hills, perhaps intentionally.

Very few artefacts have been recovered from the site, although pig and sheep bone has been found with cattle, dog, red deer and smaller mammals also present at the summit (Whittle 1997:47-9). Leary and Field (2014:35), however, have stated that the absence of significant animal bone deposits indicates that the summit was kept clean. Pollard and Reynolds (2002:120) suggest that these possibly represent feasting. In the ditch, cattle bone predominated, followed by sheep and pig, their context perhaps representing deliberate deposition.

31.1.7 The Sanctuary

The Sanctuary, 2km southeast of Avebury, has a long history and was repeatedly visited. Location on Overton Hill was probably chosen because of existing associations and commanding views of the surrounding landscape (Fig. 31.16). The structure was continually remodelled. Its significance lay in its nested construction with a series of six concentric circles. The outer stone ring has a diameter of *c.*40m. Internally, there were four concentric rings (B-G) of postholes, defining a symmetrical timber structure, divided into four equal quadrants by corridors leading to the centre (Pitts 2001) and a small inner stone circle with a single central posthole. It was not roofed. The overall structure is comparable to other contemporary timber circles, such as Woodhenge. An entrance to the northwest was slightly offset to West Kennet Avenue. The whole structure was surrounded by an outer ring of postholes. It is conjectured that the postholes represent an initial phase with the stone settings introduced later (Pollard and Reynolds 2002:108).

A standing stone in the southwest was flanked by pairs of postholes, perhaps screen supports. A radial line of stoneholes, tangential to the outer circle to the north of its junction with the Avenue, is aligned towards Avebury. From the outside, this would have presented as a mass of posts that offered limited ways for movement within, suggesting that esoteric knowledge was incorporated and referenced (Pollard and Reynolds 2002). Deposits of chisel arrowheads, deliberately broken Grooved Ware bowls, human, cattle and pig bone in equal numbers, a horse metacarpal, and fragments of Niedermendig lava were placed in particular locations, such as adjacent to large posts or stone, perhaps from construction rituals. Subsequent deposition was concentrated on the eastern side around large posts and later stones of ring C. A human mandible was placed near a post in the southeastern section, and later the body of an adolescent

accompanied by a Beaker pot was buried against stone C12, indicating its ideological significance (Pitts 2001). The working, transformation and formalised deposition of lithic material within such a place imply the process was of significance, possibly relating to social roles and responsibilities. The area around the entrance was kept clean.

31.1.8 West Kennet Farm Settlement

This site straddling the river across the location of the West Kennet Palisades between the Sanctuary and Silbury Hill (Fig. 31.8c) could have had a ceremonial or sacred role. It consists of packed chalk floors, 10cm thick, to the north and south of the river, that are associated with Grooved Ware sherds in a broad scatter. Other finds include flint artefacts and debris, and rare arrowheads, as well as large amounts of animal bone, mainly pig and antler picks. Some bone was articulated and therefore fresh when buried, considered indicative of feasting. The calibrated dates equate with an occupation between 2500 and 2000 calBC (Pitts 2017). It has been suggested that this settlement was occupied before construction began on Silbury Hill and continued after it had finished.

31.1.9 Beckhampton Enclosure

The Beckhampton Enclosure is a 3rd millennium structure sited on level ground, 1.3km southwest of Avebury in Longstones Field. It is a flattened oval c.140m by 110m, with a 45m wide entrance on its eastern side. Associated with it are two sarsens, standing c.4m high, perpendicular to each other and 27m apart, of the Longstones Cove (Gillings *et al.* 2000; Pollard and Reynolds 2002). The structure is defined by a shallow, flat-bottomed ditch no more than 2.1m wide and 1m deep. It was dug as a series of elongated, conjoined pits; it has an internal bank. Immediately after construction, cattle and pig bones and some highly decorated pottery were placed within it, especially flanking the entrance. These are associated with charcoal-rich soil and may reflect some feasting. The lack of internal features and lithic artefacts, and its location adjacent to long barrows, may indicate that the site was associated with the dead. Subsequently, deposits were made of antler picks, a cattle horn core, and a Grooved Ware sherd, after which it was levelled and the ditch infilled, probably ritually (Gillings *et al.* 2000; Pollard and Reynolds 2002). The estimated construction date is 2660-2560 calBC (Healy 2016:44).

31.1.10 Other stone circles

Two other stone circles reported near Avebury historically have been archaeologically verified (Cleal and Pollard 2016:94). Falkner's Circle is about 950m southeast of

Avebury and was c.36m in diameter. Excavations revealed stoneholes associated with flints and Grooved Ware. A circle at Winterbourne Bassett, 5.5km north of the henge, has also been re-located by excavation and could comprise two concentric rings, probably 45m and 71m in diameter (Pollard and Reynolds 2002:110-112).

31.1.11 EBA round barrows

There are over 300 round barrows in the Upper Kennet region, arranged in several cemeteries with some clustering around the Henge and the Sanctuary (Cleal and Pollard 2016:97). None of the burials are particularly rich. The 6b primary burial at West Overton to the north of the Sanctuary contained an adult male with an antler-slate spatula, a bronze awl, flint knife and a Beaker pot (Wiltshire Heritage Museum site entry n.d.). West Overton 1 lies only 80m from the Sanctuary and contained in an oak coffin an adult male accompanied by a bronze dagger, small axe and a pin, as well as an antler; and yielded a date of 2020-1770 calBC (Needham *et al.* 2010).

31.2 MIDDLE AVON

The Middle Avon Group, 28km south of Avebury, is a dense concentration of Neolithic and EBA monuments. It comprises the large henge of Durrington Walls, Stonehenge, the related avenues, Woodhenge, Bluestonehenge, Coneybury, the Bulford Henges and over four hundred round barrows. This area had an extensive, 6th-4th millennia BC, occupation beside the River Avon. The Early Neolithic sites included two causewayed enclosures, Robin Hood's Ball and Larkhill (Thompson *et al.* 2017) north of Stonehenge, the Stonehenge Greater Cursus, and several long barrows, such as North Barrow.

31.2.1 Durrington Walls

Durrington Walls lies 3km to the northeast of Stonehenge near the west bank of the River Avon. This area was the focus of a rapidly changing settlement during the Middle and Late Neolithic.

Pre-Henge Settlement Excavation has revealed extensive areas of Neolithic midden and cultural debris on either side of the avenue, and both under and outside the henge bank near the southeast entrance. Beneath the entrance are the remains of the floors of seven small, square houses (c.5.25m²) with rounded corners; and four and the entrance of a fifth on the east side of the Avenue, with two on opposing avenue banks. House 851 is almost square (4.8m x 5.2m) and aligned cardinally, with its doorway at the western end of its southern wall. The central hearth is set into a plaster floor and there are traces of

wooden furniture and storage spaces. It had low cob walls with wattle and daub, and a small ancillary building. These are separated from the other houses by a fence.

The houses to the east are also square and cardinally aligned, but less well constructed. A pit containing animal bone, potsherds and lithics was dug into the southwest corner of one of these houses after its abandonment. Among this material was an abraded human femur. Two other buildings had pits with a single human bone and two with cattle vertebrae. The houses on the avenue banks are different with centrally placed entrances and plastered walls indicated by a line of stakeholes. They were D-shaped and open on their east side, looking down the Avenue. These houses stood where the henge ditch and bank were later dug (Parker Pearson *et al.* 2007) and appear to be gatehouses, perhaps for some mortuary-related activity (Pryor 2002:138). On the basis of the number of times the chalk plaster floors were renewed, it is thought that the village only lasted a very short time (Gaffney *et al.* 2016). It was abandoned c.2500-2460 calBC.

These excavations have yielded much Grooved Ware, animal bone and stone tools. Rubbish pits and floors contained many flint arrowheads, pig and cattle bone, and were abandoned formally as two had cattle vertebrae placed in the fireplaces (Parker Pearson *et al.* 2008b:158-159). This pre-henge settlement was considered by Parker Pearson (2007:142) to reflect “a large, bustling and mixed community of possibly thousands of people” and a regional focus.

Durrington Walls Henge This henge is oval in plan, measuring c.490m from northwest to southeast and 470m from northeast to southwest, c.18ha in area, and slopes down towards the southeast and the river (Figs 31.17-31.19). It is surrounded by a vertically sided ditch of up to 3-5m wide and up to 6m deep, and an external bank about 3m. There are four entrances in the northwest, northeast, southeast and south. The bank was completed by c. 2480-2450 calBC (Gaffney *et al.* 2016). Geophysics and excavations have revealed a number of internal structures (Parker Pearson *et al.* 2007a:628-633).

Palisaded Enclosure Recent geophysical work (Gaffney *et al.* 2016; Neubauer 2017) has revealed a pre-embankment enclosure of at least 300 posts, spaced about 5m apart in a circle about 450m in diameter (Fig. 31.20). Excavation identified these as pits, 0.5m wide and 1.5m deep, that had supported posts up to 5m in height and weighing up to 3 tonnes. Ramps had been built adjacent to each to enable erection. Animal bones, particularly articulated cattle bone, pieces of sarsen and an iron pyrites nodule were placed in the pits or adjacent to the posts. The posts were taken down after a very short time and the holes deliberately filled with chalk fragments and compacted.

Acquisition of such large and aged timber implies that it was not local but brought from a distance, probably the Upper Avon valleys, and would have required a considerable labour force to acquire, transport and erect. The timber posts may have been relocated to the timber structures found within the later henge.

Internal Buildings Numerous houses have been located in the henge, and several large timber and earth structures (Fig. 31.21). The *Southern Circle* was constructed in two phases (Parker Pearson *et al.* 2013: 168) (Fig. 31.22). It began as a square four-post structure surrounded by a small six-post ring dated to 2630-2460 calBC. The southeast entrance is orientated towards the midwinter sunrise of 3000-2500 calBC. Adjacent to its west is a D-shaped building (c.11x13m) with a plaster floor but no hearth, thought to be a meeting house. The second phase is a six-ring timber circle, 39m in diameter with its long axis aligned northeast-southwest and innermost rings oval. It was not roofed. Its entrance maintained the same alignment and incorporated 1m diameter posts. Overall, its plan is comparable to Stonehenge with the second ring (2E) of 10 large postholes resembling the trilithon horseshoe, while the fourth (2C) comprised a circle of c.30 posts similar to the sarsen circle. Activities in the structure would have been secluded possibly by fencing.

The circle postholes were recut after the structure had become 'ancient and ruinous'. Excavation reveals that these were then deliberately filled first with animal bone and flint with potsherds in the upper layers. This is considered to be in veneration of the structure, its components and the activities that had taken place within (Parker Pearson *et al.* 2007a:628-634; Parker Pearson *et al.* 2008b:158-162; Thomas 2007:147-152).

Northern Circle This lies c.125m from the Southern Circle (Fig.31.21). It has two construction phases, the first of which is characterised by a modest square setting of four large posts similar to the first structure in the Southern Circle. It is also orientated towards the midwinter sunrise of 3000-2500 calBC. This was surrounded by a timber ring, c.15m in diameter. A post-lined avenue runs southwards across a façade of posts towards the Southern Circle. Overall, it is similar to structures south of Woodhenge (Parker Pearson *et al.* 2006a:246, 2008b:161-162; Thomas 2007:149).

Western Enclosures These (Fig. 31.21) comprise at least six penannular ditched enclosures terraced into the slope, predating the henge bank and ditch. Each contains a wattle and daub domestic structure, and they cluster around a roadway leading to a large timber circle and another non-domestic structure south of Woodhenge. In plan, they are similar to houses around the southeastern entrance to the henge and are probably contemporary with them (Thomas 2007:152-157). The largest enclosure is c.40m in diameter with an entrance facing southeast to that of the henge. The others are smaller, c.15-20m in

diameter, each having a single entrance and facing the same direction, except one immediately south of the large circle facing southwest. These two were found to contain a small 4m square building with clay floors and rounded corners not dissimilar to those at the southeastern entrance. The buildings are enclosed by a timber palisade, c.10m in diameter, and have four postholes, presumably roof supports, surrounding a central hearth. The larger building is set within a large terraced platform cut into the slope overlooking the Southern Circle. It has a post façade so closely set that they may have represented the equivalent in timber of the Stonehenge trilithons. The ditch is on the outside of its bank, in contrast to that of the Southern Circle. Both buildings appear to have been kept clean. To the south of the palisade of the larger structure are two pits. One is shallow, containing disarticulated animal bones and abraded pottery, which Parker Pearson and colleagues (2008b:164) suggested may have been accumulated during cleaning, but may also represent an abandonment ritual. The second is neatly cut and circular, containing the carefully placed remains of at least two pigs, partly articulated. The entrance through the palisade had been blocked (Parker Pearson *et al.* 2007, 2008b; Thomas 2007:152-155).

Elements more usually found in monumental contexts had been added to both buildings, emphasising the separation between the small enclosed space and the outside world. Between the palisade and the ditch of the larger structure are three large postholes which apparently formed elements of some form of monumental façade. Furthermore, the sequence of ditch and bank building indicates remodelling to reverse its external bank/internal ditch arrangement, making it more henge-like. On the base of the outer ditch knapped flint and an exhausted core had been deposited together with several large pieces of cattle bone (Parker Pearson *et al.* 2008:163-164; Thomas 2007:152-155). In these early buildings it is apparent that several structures were combined in a single plan to provide spaces for both residence and ritual. Parker Pearson and colleagues (2008:164) regarded these as possible elite residences, shrines or cult houses. Only later did the more complex concentric architecture of the Southern Circle and Woodhenge develop, at a time when the former came to be physically linked to Stonehenge (Parker Pearson *et al.* 2007a:631; 2008:163-164).

Both cattle and pig bones have been examined using isotopic analyses of teeth and found to have been brought live from all over mainland Britain. The pigs were slaughtered at nine months which, given their natural reproductive cycle, would place the time as mid to late December. Lipid residues on pottery has indicated both meat, particularly pig, and dairy products were consumed at feasting events at this time (Craig *et al.* 2015).

There were no cereals, but quantities of hazelnut shells and some fruit seeds as well as some oyster shell.

Durrington Avenue This is constructed of rammed flint and is 170m long and 15m wide with a 5m wide bank of chalk rubble on either side (Fig. 31.21). (Parker Pearson *et al.* 2013:168). It was heavily used and had been resurfaced twice. It leads from a platform with a 5m-long hearth just outside the southeastern entrance to the River Avon which predates the construction of the henge and was associated with Grooved Ware vessels having dairy residues. On either side were scattered large quantities of fragmented animal bone and Grooved Ware pottery. One side was marked by a line of stone uprights. As it runs slightly across a steep slope, its direction is towards the summer solstice sunrise, while in the reverse direction it is within 1° of the mid-summer solstice sunset (Parker Pearson *et al.* 2007a: 633; 2008b:158-159).

31.2.2 Woodhenge

Woodhenge (Fig. 31.23) is a small timber structure, only 60m from the entrance to Durrington Walls. It comprises six oval rings of postholes set within a circular henge, c.85m in diameter; the ditch is 12m wide and 2.4m deep, and the bank is 1m high and c.10m wide. Its entrance is in the northeast. The earthwork axis is off-set to the north from that of the timber rings, as the ditch may have been dug later. The outer timber ring measures 43x40m (Parker Pearson *et al.* 2006, 2008). The symmetrical posthole distribution suggests a single phase of construction, perhaps a circular building; the stepped profiles of some, however, indicate probable post replacement on more than one occasion. It is similar to the Durrington Walls Southern Circle and the Sanctuary, although its posts are more regularly spaced and even-numbered. Two phases of stone arrangements followed (Pollard and Robinson 2007:162).

The structure was constructed over an old tree-hole which had been filled during the Early Neolithic with carinated bowls, capped by rammed chalk and the location marked by four small stones. Similar associations have been noted next to Stonehenge and inferred at Coneybury Henge (Pollard and Robinson 2007:166). Pre-bank deposits included unweathered Grooved Ware sherds, animal bone and ash-filled pits, which are related to feasting. A crouched child was found buried near the centre and a cremation in one posthole. The earthwork entrance was marked by elaborate deposits of human bone, Grooved Ware sherds with circular motifs, carved chalk axes and a cup, and pig mandibles which were concentrated in postholes. A Group 1 axe from Cornwall and a fragment of a greenstone one were also found. Cattle mandibles were restricted to the area around the two stoneholes at the rear of the henge. A possible interpretation of the

ritual deposition is that pigs were related to the newly dead, and cattle to the ancestors (Parker Pearson *et al.* 2006c:251-252; Pollard and Robinson 2007:159).

Dates from the henge ditch and fill material place construction 2470-2010BC during the Late Neolithic (Parker Pearson *et al.* 2006c:246, 2007a:628, 2008b:157; Pollard and Robinson 2007:159-167).

31.2.3 Durrington 68

Immediately south of Woodhenge are three Late Neolithic timber structures, each with four-post settings and two entrance posts. The Durrington 68 structure was orientated to the direction of the midwinter solstice sunrise (Parker Pearson *et al.* 2007). It was surrounded by a sub-rectangular palisade with an entrance marked by pits that had been deliberately infilled to the southeast. Excavated finds included Grooved Ware and animal bone as well as a cremation in an entrance pit. Durrington 70 contained some Beaker and Peterborough Ware sherds and burnt daub.

These have similarities to the Durrington Northern Circle, the first phase of the Southern Circle, and at Wyke Down and Knowth, as well as to the stone houses and Maeshowe-type passage graves in Orkney (Parker Pearson *et al.* 2008b:158; Pollard and Robinson 2007:167).

31.2.4 Stonehenge

Stonehenge is situated in a prominent location on Salisbury Plain (Figs 31.24, 31.25). It is 3km from Durrington Walls and 750m south of the Greater Cursus (Parker Pearson *et al.* 2006a). There are several chronological schemes to demonstrate the architectural and archaeological history of the site with subtle differences between them (e.g., Cleal *et al.* 1995; Parker Pearson 2013; Darvill *et al.* 2012; Darvill 2016; Atkinson 1979).

Currently, five developmental stages are envisaged (Table 31.1).

It was initially constructed between 3015 and 2935 calBC as a circular ditch with internal and external banks, 100m in diameter and with its main entrance to the northeast, a narrower one to the south and a blocked one to the southwest (Fig. 31.26) (Snoeck *et al.* 2018; Parker Pearson *et al.* 2013). The Aubrey Holes, 56 pits each *c.* 1m in diameter, were dug inside of the enclosed area and contained 62 cremated remains of mainly adult males (Willis *et al.* 2017), probably deposited 3030-2935 calBC. Recent isotope studies have indicated that several cremated individuals came from various parts of Britain, some possibly from Wales (Parker Pearson *et al.* 2009). There were few grave goods. Some evidence suggests that the Aubrey Holes had held small bluestones. A series of

postholes forming rectangular structures have been found near the centre associated with two unburnt human bones and are thought to indicate possible excarnation platforms. The northeast entrance includes a rectangular post arrangement and 20m beyond there is a line of postholes. A line of three holes indicate that stones were erected outside the northeast entrance. Three parallel natural ridges approach the entrance and are orientated towards the midsummer sunrise and the moonrise at the northern major lunar standstill. On the southern side, ditch terminals are marked by a cattle skull and two mandibles, and a deer tibia, probably deposited at the same time, after a long period of careful curation (Parker Pearson 2013c; Thomas 2002:172).

Stage 2 (2620-2480 calBC) saw an architectural change with the erection of five sarsen trilithons to form a horseshoe, orientated towards the entrance and the midsummer solstice sunrise (Fig. 31.27). This was surrounded by a double bluestone circle, with stones from the Aubrey Holes, and an outer circle of 30 sarsen stones. The four Station Stones were erected next to the inner bank as corners of a large rectangle framing the central arrangements. The long axis between them is aligned to the southeast on moonrise at the southern major lunar standstill and to the northwest less precisely on the moonset of the northern one, while the short axes are aligned on the solstice axis of the site (Parker Pearson *et al.* 2006c:240; Darvill and Wainwright 2014:19). The Altar Stone was probably erected at this time within the trilithon horseshoe. The Slaughter Stone and the sockets of two stones indicate that the northeast entrance was partially blocked. The Heel Stone was also erected 22m beyond the entrance within a circular ditch. Cremated and unburnt human bone continued to be deposited at the foot of stones or in stoneholes.

The sarsen stones, each weighing up to 40 tonnes and standing *c.*4.1m high, probably came from from Salisbury Plain and the Marlborough Downs to the north. The bluestones (spotted dolerite) came from the Preseli Mountains of Southwest Wales, the closest match for them being outcrops at Carn Goedog and others nearby. The six tonne Triassic red sandstone Altar Stone is believed to derived from the Senni Formation further east, probably the Brecon Beacons (Parker Pearson *et al.* 2015; 2019). Their transport, working and erection represent considerable planning, organisation and effort to monumentalise this important place.

In Stage 3 (2480-2280 calBC) two stones were removed from the entrance and an arc of five bluestones was erected close to one of the trilithons. A deep pit was also dug adjacent to the rear trilithon. A burial was found in the ditch to the west of the northeast entrance. Stage 4 (2270-2020 calBC) witnessed the removal of the bluestone arcs and the rearrangement as a circle over the Q and R holes. An axe fragment from a Group 1

axe was found in fill in one of these holes. An oval of 24 bluestones was erected inside the trilithons, probably using stones from Bluestonehenge. The large pit in the centre was infilled with chalk rubble. Finally, Stage 5 (2020/1630-1520 calBC) witnessed two circles of pits dug around the central complex and left open. Some of the bluestones were utilised for tool manufacture, and some sarsens acquired art motifs.

The Stonehenge Avenue This processional pathway is 2.88km long flanked by banks and outer ditches (Fig. 31.3). Construction dates to 2580-2270 calBC and recutting occurred 2250-2135 calBC (Allen *et al.* 2016). Near the river it is 19.3m wide, broadening to 34.5m between the ditch mid-points, narrowing on the approaches to Stonehenge to c.21.5m (Cleal *et al.* 1995:291-2). It runs northwest from the River Avon for c.1km, passing between two alignments of round barrows, then gently curves to the west for 0.5km to cross the ridge top alignment of the Old and New King Barrows from where Stonehenge is first visible. It then runs straight for 1km, descending into Stonehenge Bottom and the monument can no longer be seen until after the elbow turn and its final southwestern 850m trajectory towards the monument (Cleal *et al.* 1995:40; Parker Pearson *et al.* 2006c; Ruggles 2006). This approach follows natural periglacial ridges and gullies that are coincidentally aligned with the midwinter solstice sunset; therefore, the site was perceived on a hilltop framing the event (Allen *et al.* 2016).

31.2.5 Bluestonehenge

The site lies close to the river and between it and the Avenue (Fig. 31.3). It comprises vestiges of a circle of stoneholes, estimated to be 9.7m in diameter, which was argued to have held bluestones (Allen *et al.* 2016:1000-1005). It is suggested that it was either constructed in the first part of the 3rd millennium and contemporary with the Aubrey Holes bluestone circle at Stonehenge, or that it was built and dismantled after 2465-2295 calBC. Various lithics, a bone point, antler picks, a deer tooth and a pig bone were found in the fill of several stoneholes. Shortly after its closure, the site was surrounded by a henge bank and ditch, c.25m in diameter, with an eastern entrance. The ditch terminals yielded cattle bones, antlers, a quartzite hammerstone, an axehead and two fragments, flints, and grooved Ware sherds with Beaker ones above them. This suggests construction between the end of Grooved Ware at Stonehenge, 2475-2320 calBC, and the commencement of Beaker pottery, 2475-2360 calBC.

Wood charcoal and human bone from the former ground surface inside the circle suggest that bodies were brought to the site for cremation and/or excarnation prior to burial at Stonehenge (Parker Pearson *et al.* 2010). The site almost certainly was an intermediate

station where bodies from Durrington Walls were processed before final burial Parker Pearson *et al.* 2008b:158-159; Parker Pearson *et al.* 2010:2-4).

31.2.6 Coneybury Henge

This henge is sited on a low hill, 1.2km southeast of Stonehenge and can be seen from it (Pollard 2009) (Fig. 31.3). It was constructed over an extensive flint scatter in the centre of which was a four-post structure with two entrance posts, and it was enclosed within a 20x15m area by a fence. These are dated as contemporary with Stonehenge Stage 1. The postholes fills have small quantities of Grooved Ware sherds (Richards 1990). The henge itself is oval 45x55m and surrounds these features. It comprises an oval ditch with a single northeastern entrance and vestiges of an outer bank. The southern section of the ditch is *c.*3m deep, its profile narrow and V-shaped to a flat bottom that may have been kept clean. It contained the remains of feasting with many cattle bones, lithics for butchery and Beaker pottery, as well as the incomplete skeletons of a dog and white-tailed sea eagle. Radiocarbon dating from the base suggests construction *c.*2750 calBC.

31.2.7 Bulford Henges

There are two adjacent henges at Bulford about 1.5km east of Durrington Walls. The western one has a 17.5m diameter with a northern entrance, 4.6m wide (Historic England 2017; Wessex Archaeology website). Its interior has three pits with Late Neolithic pottery, animal bone, flint tools and a stone axe fragment. The eastern henge is *c.*16m in diameter with a northern entrance. Its ditch contains Grooved Ware. Each is surrounded by a later ditch (Historic England 2017).

31.2.8 EBA Barrow Cemeteries

The EBA round barrow is an earth, turf and chalk circular mound surrounded by a ditch containing both single and multiple burials in primary and occasional secondary contexts. There are numerous examples generally arranged in linear cemeteries within the Stonehenge region, five of which are of particular significance to this study. Three, the Amesbury Archer, its Companion and Boscombe Bowmen, were found close to Durrington Walls and *c.*3.5-4.5km to the east and southeast across the River Avon from Stonehenge. All were contained in timber chambers and are possibly contemporary with Stonehenge Phase 3 (Fitzpatrick 2011b; Parker Pearson *et al.* 2007a). The Bush Barrow, (Wilsford Group G5) lies 1km south of Stonehenge in the Normanton Down round barrow cemetery. The Upton Lovell group is 18km to the west and contains the Shaman Barrow (G2a) and Golden Barrow (G2e). While all five sites are within the Stonehenge

area, only the Bush Barrow is privileged to be within the monument's viewshed. Table 31.2 details grave goods.

The *Amesbury Archer* was a rich and powerful person. This unusual adult male, 35-45 years old and 1.75m tall, was found in a timber grave, possibly originally under a mound (Fitzpatrick 2011b). It dates to 2500-2300 calBC. He had been buried with typical Bell Beaker ritual, placed flexed on his left side with head to the northwest. Skeletal pathology indicates a strong individual with a rare condition, congenital calcaneonavicular tarsal bone coalition, causing foot bones to become articulated, giving him a stiff, flat-footed gait. He had also lost his left kneecap, resulting in wasting and a permanent limp, chronic infection and debilitating pain. His acute dental and oral condition would have resulted in pain and a bad smell. Stable isotope analysis on his teeth suggests that he came from central Europe, probably the Alps. The significant grave goods include four boar tusks, a cushion stone for metalworking and two golden hair ornaments (Fitzpatrick 2011b).

Table 31.2 WESSEX COMPLEX REGION: MIDDLE AVON GRAVE GOODS

Amesbury Archer Barrow

stone wrist guards; flint arrowheads; three copper knives; four boar tusks; flint tools, flakes and blanks; an antler tool for pressure flaking; a cushion for working metals; and two gold ornaments, probably for the hair (Fitzpatrick 2011b)

Companion Barrow

flint tools, a boar tusk, and a pair of similar gold ornaments (Fitzpatrick 2011b)

Boscombe Bowmen Barrow

eight Bell Beaker pots; five tanged and barbed arrowheads; flint tools and flakes; a boar tusk; and a toggle (Fitzpatrick 2011b)

Bush Barrow

a lozenge-shaped gold sheet; a gold-studded bronze dagger; two bronze daggers; a gold belt-plate; a stone macehead with five cylindrical bone mounts decorated with zig-zags and bronze rivets; and a bronze axe (Historic England 2014; Wiltshire Museum 2015)

Upton Lovell G2a/Shaman Barrow

a cloak to the edge of which 36 bone points had been sewn; bone points found on his chest were possibly from a necklace; four pierced boar tusks; four axe heads, including a prestigious battle-axe made of black dolerite; a circular polished, milky coloured stone on his chest; a collection of stones, probably a set of metalworker's hammers and grinding stones; four cups made from split flint nodules; necklaces or garment fringes of perforated teeth and bone points reflecting a hunting tradition (www.wiltshireheritage.org.uk/galleries)

Upton Lovell G2e/Golden Barrow

a necklace with more than 1000 amber beads with jet spacers; another of 13 gold drum-shaped beads; a rectangular gold plate; a large gold plaque decorated with incised lines; a shale conical button covered in gold sheet; two other gold button/cones; a grape cup; a collared urn with a smaller vessel inside; a small bronze dagger; and a tanged bronze awl (Historic England 2015e; Wiltshire Museum 2015)

The *Companion* grave is a single burial adjacent to and contemporary with that of the Archer. This young man, 20-25 years old, was also of high status. The two were genetically related because they shared the same foot deformity, but the Companion had grown up in southern England (Fitzpatrick 2011b: 78, 87, 230-236). He was accompanied by a boar tusk, and a pair of similar gold ornaments.

The *Boscombe Bowmen* grave is a collective burial of 7-10 individuals, including three infants, a juvenile and three adult males. Skull and other analyses suggest that the adults had made similar journeys at the same ages and that they were related. The eldest was buried in crouched position with the bones of the others scattered around him and their skulls resting at his feet (Fitzpatrick 2011b). He walked with a limp after a badly broken leg. The most important grave goods are a boar tusk and a bone toggle. Strontium isotope analysis suggests that they had originated in the Lake District, North Wales or Southwest Wales, and had arrived in this district as adults. This dates to 2500-2340 calBC.

The EBA *Bush Barrow* is a large mound, 3m high. It contained an adult male skeleton, laid north to south, with a particularly rich collection of grave goods, including several gold and bronze items and a polished stone macehead (Historic England 2014; Wiltshire Museum 2015; Needham *et al.* 2009). It is one of several rich round barrow graves on Normanton Down, leading Needham and colleagues (2010:31) to conclude that those buried were “influential figures of their time and place”.

The *Upton Lovell G2a/Shaman* grave contained the extended skeleton of a stout male with head towards the north, dressed in a cloak decorated with bone points and boar tusks, and a necklace of bone points. It was accompanied by a wide range of grave goods, including four axes, three sourced to Groups I (Mount’s Bay, Cornwall), IIIa (SW England) and XVIII (Whin Sill) and one of slate (Clough and Cummins 1988:157); and a black dolerite battle axe. A bronze awl and stone cups have been interpreted as a tattooing or medical set. It also contained two sets of two hammerstones, an anvil and a

slate burnisher or touchstone for working metals, particularly gold (Boutoille 2016; Shell 2000).

The *Upton Lovell G2e/Golden Barrow* contained a primary cremation and a secondary one(s). The former was in an oblong cist with no grave goods, while two others were buried near the top of the mound with very rich offerings, including an amber and jet necklace and various gold and bronze objects. Its importance lies in its wealth and that it was a burial within a pre-existing barrow rather than another specially built (Wiltshire Museum 2015).

31.3 VALE OF PEWSEY

Marden Henge is situated in the Vale of Pewsey close to the source of the River Avon in an area with numerous springs. It lies between the two henge complexes of Stonehenge and Avebury (Fig. 31.28). Roughly oval in shape, it has an external bank with internal ditch enclosing 15.7ha. It was built as four conjoined long straight lengths of bank and ditch broken by causeways to the east and north, and possibly the southeast. The River Avon provides a border on the west and south. Antler picks, animal bone, flints, Grooved Ware sherds and the skeleton of a young woman were found in the bank and ditch associated with the northern entrance. The southern entranceway comprised a compacted flint gravel surface that probably led to the river (Leary and Field 2012:55-56).

Internally, the centre contains the ditch that once surrounded a large conical mound, the Hatfield Barrow, that originally stood *c.* 15m high with a basal diameter of *c.* 70m. It had originally contained human bones, as well as animal bones and pottery, and recent excavations have uncovered some calcined animal bone and Grooved Ware (Leary and Field 2012:59). In the southern part there is an internal circular henge of similar size. On its northern bank is a rectangular compacted chalk floor (7.4x5m), with a large, roughly circular sunken area (3.8x 3.3m) that had been dominated by a central circular hearth of calcined chalk surrounded by a gully-like feature. This was associated with decorated Grooved Ware pottery and ash; intense burning was indicated. Another hearth lies outside the building with thick charcoal deposits. Leary and Field (2012:59-63) interpreted this as a sweat lodge or sauna. Nearby is a midden of animal bones, particularly pig, suggesting the remains of a feast as well as pottery, flints and bone needles. A circular structure, defined by a single ring of postholes 10.5m in diameter, was found near the northern entrance (Wainwright 1989:65-66). Grooved Ware, flints and charcoal were found in postholes, pits and on the sub-soil surface.

A smaller henge at Wilsford, 43m internal diameter, lies 1km south, also with a possible avenue to the river having a single entrance to the northeast. In its 15-20m wide and 3m deep ditch a EBA burial of a teenager with an amber spacer necklace was discovered (Leary 2015). South of the river around Wilsford are cropmarks of 15 closely spaced Bronze Age ring ditches ranging from 19-55m (Carpenter and Winter 2011).

REDACTIONS

- Fig. 31.1** Wessex Region ref: Pollard 2012:93
- Fig. 31.2** Upper Kennet sub-set of the Wessex Complex ref: Pollard 2012:94
- Fig. 31.3** Middle Avon-subset of the Wessex Complex: ref: Pollard 2012:95
- Fig. 31.4** Dorchester-subset of the Wessex Complex: ref: Pollard 2012:95
- Fig. 31.5** Location of Avebury Down and West Kennet occupation sites investigated
ref: Gillings *et al.* 2014
- Fig. 31.6** Avebury Down occupation site: lithic scatters in relation to surface collection
ref: Gillings *et al.* 2014
- Fig. 31.7** West Kennet occupation site: excavation trench looking southeast along West Kennet Avenue ref: Gillings *et al.* 2014
- Fig. 31.8** West Kennet palisaded enclosures: (a) features shown in green with West Kennet long barrow in red and detail of structures within the palisaded structures; and (b) settlement house floors shown by circles and the associated animal bone by dots ref: English Heritage 2003; Pitts 2017; <https://www.archaeology.wiki/blog/2017/06/12/earlier-date-ancient-wooden-structures/>
- Fig. 31.9** Avebury Henge: (a) as it appears today and (b) reconstructed impression
ref: <http://www.english-heritage.org.uk/visit/places/avebury/>;
<https://www.pinterest.com.au/pin/288371182359939913/?lp=true>
- Fig. 31.10** Avebury Henge: enclosed Northern and Southern inner megalithic circles
ref: http://www.avebury-web.co.uk/marmalade_man.html
- Fig. 31.11** Avebury Henge: outer ring stones, ditch and bank
ref: <http://mathisencorollary.blogspot.com/2011/06/magnetic-polarity-at-avebury-henge.html>
- Fig. 31.12** Avebury Henge stones
ref: <https://wp.bohan.co/images/AveburyStoneCircle/>
- Fig. 31.13** Avebury Henge: southern entrance (stones 1 and 98)
ref: <https://www.thetimes.co.uk/article/avebury-wooden-circles-800-years-older-than-thought-say-scientists-jrt7bsgnx>
- Fig. 31.14** West Kennet Avenue
ref: http://www.avebury-web.co.uk/wk_avenue/IMAGE020.JPG
- Fig. 31.15** Silbury Hill
ref: <http://www.sacred-sites.org/saved-sacred-sites/silbury-hill/>
- Fig. 31.16** The Sanctuary
ref: <http://www.english-heritage.org.uk/visit/places/the-sanctuary/>
- Fig. 31.17** Durrington Walls Henge: aerial impression showing its relationship to the topography of the River Avon valley
ref: <https://scitechdaily.com/the-stonehenge-hidden-landscapes-project-reveals-a-major-new-prehistoric-stone-monument/>
- Fig. 31.18** Durrington Walls: aerial view showing ditch and bank perimeter
ref: <https://blog.stonehenge-stone-circle.co.uk/2017/05/20/durrington-walls-the-largest-henge-monument-in-britain/>
- Fig. 31.19** Durrington Walls: remains of the extensive ditch and bank
ref: <https://www.nationaltrust.org.uk/stonehenge-landscape/trails/durrington-walls-stonehenge-landscape-walk>

- Fig. 31.20** Durrington Walls: the massive features surrounding the monument, earlier thought to be a line of sarsen standing stones, were recently identified as tree posts
ref: <https://www.archaeology.org/news/3669-150908-standing-stones-durrington-walls>
- Fig. 31.21** Durrington Walls: plan showing internal Northern Circle (green), Southern Circle (red) and Western Enclosures (blue); the Avenue leading to the River Avon from the henge's southeastern entrance; and Woodhenge outside to the south
ref: Parker Pearson *et al.* 2006c:246
- Fig. 31.22** Durrington Walls: reconstruction of Southern timber circle sited within the eastern entrance
ref: https://www.researchgate.net/figure/Full-size-reconstruction-of-the-Southern-Circle-constructed-for-the-Time-Team-TV_fig6_228804259
- Fig. 31.23** Woodhenge: aerial view
ref: <https://www.pinterest.com.au/pin/157837161917872489/?lp=true>
- Fig. 31.24** Stonehenge
ref: <https://www.sciencealert.com/stonehenge-site-ancient-burial-ground-dead-came-from-as-far-as-wales-anthropology>
- Fig. 31.25** Stonehenge: aerial view in its restored setting
ref: <http://www.english-heritage.org.uk/visit/places/stonehenge/>
- Fig. 31.26** Stonehenge: plan showing the banks and ditch, evidence of inner timber structures and arrangement of Aubrey holes
ref: Parker Pearson *et al.* 2013
- Fig. 31.27** Stonehenge: plan showing the arrangements of sarsens and bluestones
ref: Tilley *et al.* 2007:191
- Fig. 31.28** Marden Henge: structure plan showing entrances and internal features
ref: Leary and Field 2012

Chapter 32 MODEL PHASE 3 WESSEX COMPLEX (ENGLAND) DISCUSSION AND INTERPRETATION

32.1 SETTLEMENT

Settlement in the Late Neolithic and Early Bronze Age (EBA) in Wessex represents an intensification of the size and new types of community structures in similar, but slightly different, locations. These were substantial buildings, such as timber halls, stone circles, henges and tall solid earthen mounds, designed to last a long period of time and/or were periodically changed architecturally, became permanent and monumental fixtures in the landscape. Minor buildings with specific uses, such as the ‘sauna’ constructed on the bank of an internal henge at Marden (Leary and Field 2012), provided a community facility not identified at other sites. The earlier practice of situating community structures on exposed hilltops, river floodplains and close to the headwaters and springs in riverine locations, continued in similar topographical places.

The labour demands for such projects were extensive and it is envisaged that large numbers of people were engaged from the local region and further afield, presumably working during slack times in the agricultural and pastoral year. Nevertheless, some form of worker settlement was needed to house them. Once constructed, these monuments would also have attracted people to participate in festivals, ceremonies and rituals that took place within them who would also have required housing. The initial settlements are characterised by midden and flint scatters; and pits and post- and stake-hole settings indicative of temporary dwellings, sometimes of wattle and daub. Later ones have more substantial houses with corner posts and prepared floors. Whether these were occupied throughout the year is not known. Throughout the region there is a lack of evidence for permanent Late Neolithic and EBA farming villages, suggesting that a semi-mobile lifestyle continued with small-scale agriculture and pastoralism.

32.1.1 Upper Kennet

Following the abandonment of Windmill Hill, one settlement focus was the West Kennet Palisades on the river floodplain near to the West and East Kennet long barrows. It consisted of one large circular and one large oval enclosure which required great amounts of labour to erect and which were deliberately burnt down relatively soon afterwards. Their occupation period is c.3325-3215 calBC. The second focus was Avebury, particularly adjacent to the confluence of the Upper Kennet and Winterbourne where a

rectangular stone setting, probably a house or long barrow, was constructed focussing on the Obelisk. Around 2900 calBC construction began on the ditch and bank defining the large henge and its stone settings which was completed c.2600 calBC. Its large temporary labour force was probably housed in three adjacent settlements, now characterised by lithic scatters and pits, that remained in use throughout the construction period. Other major projects included construction of the timber and stone rings of the Sanctuary and establishment of the West Kennet and Beckhampton Avenues. These were equally labour intensive. The former avenue ran through one of the village locations destroying it.

Lower down the valley and beside the Swallowhead springs, the massive Silbury Hill mound was constructed in the second half of the 25th century calBC and completed in the late 24th or early 23rd (Marshall *et al.* 2013:111). A settlement with structural floors and Grooved Ware sherd scatter to house workers was constructed nearby over the former Palisades location during this period (Pitts 2017).

A third settlement area was to the west of Avebury where there had been a number of long barrows. After 2600 calBC this became the location of the Beckhampton Enclosure and Longstones Cove to which an avenue came from the henge. The temporal relationships between these sites is not well known nor its overall longevity.

Pollard and Reynolds (2002:16) suggested that Avebury's location on the Winterbourne marked a "gateway" from the north to the southeast and west. The general location of the palisades and Silbury Hill reveals a preference for riverine locations, particularly with springs, minor watercourses, and former channels on the narrow floodplain. A similar relationship is noted also for Marden and Durrington Walls henges and the large henges of Devil's Quoits and Dorchester Big Rings in the Upper Thames valley to the north. The construction of large earthen mounds seems to be a local trait with three recorded at Silbury Hill near to the Avebury Henge, at Marden within the henge, and at Marlborough (Leary *et al.* 2013), all in a similar riverine location.

32.1.2 Middle Avon

A similar pattern of construction and settlement is documented for the Middle Avon region. This area of riverside and the adjacent Salisbury Plain was a focus of settlement and activity from the Early Neolithic onwards. First, the settlement pattern was characterised by the causewayed enclosures, Robin Hood's Ball and Larkhill which, like Windmill Hill, would have required much planning and labour to construct and probably served as regional settlement centres. These were followed in the Middle Neolithic

(3600-3000 calBC) by long barrows and the Greater and Lesser Cursuses, also requiring planning and large labour investment. Housing probably occurred within the flint scatters on King Barrow ridge and Durrington Walls (Parker Pearson *et al.* 2013:162).

Towards the end of this period four settlement foci were constructed. Stonehenge Stage 1 henge, the Aubrey Holes and a probable bluestone ring were established about 3015-2935 calBC on an exposed ridge with periglacial ridges in line with the setting of the midwinter solstice sun. Its purpose is related not only to the calendrical event but also to the disposal of the dead. Within a flint scatter 1.2km to the southeast, a four-post structure within a fenced enclosure was constructed, around which Coneybury henge was subsequently dug. A third settlement remained on King Barrow Ridge, where pits and stakeholes have been found. The fourth focus was Bluestonehenge adjacent to the River Avon to the south, where a bluestone circle was erected. These ceremonial structures having required labour investment, particularly to move the stones from Preseli and erect them in these sites, suggests that this area was perceived as being of great social and cultural significance. There is, however, no firm evidence of where the constructors or pilgrims were housed.

Around 2600 calBC, major changes occurred at these locations. Stonehenge was intensively remodelled as Stage 2 into a more monumental ceremonial structure. This involved erection of the trilithon horseshoe, the four Station Stones, the Heel Stone and Slaughter Stones with sarsens brought from Salisbury Plain and the Marlborough Downs near Avebury, as well as the Altar Stone from the Brecon Beacons. In addition, the bluestones were taken from the Aubrey Holes and re-erected in a double circle within the trilithon courtyard. This redevelopment involved large numbers of people in planning, transport and construction, signifying the importance of this place regionally.

Intensification and monumentalisation of the central area were undertaken to re-emphasise the importance of the place for the disposal of the dead and to affirm the significance of the midwinter sunset solstitial alignment as well as its reciprocal, the midsummer sunrise, to those activities. It also added monumental site-lines to the important lunar major standstills, which must have been equally important.

Construction of the Avenue at this time from Bluestonehenge by the river to Stonehenge also involved a large labour force over time. It emphasised that the importance of the latter monument necessitated a ceremonial routeway to experience the natural phenomena and festivals that took place there.

From the late 27th century calBC and contemporary with these developments, monumental timber structures, the Northern and Southern Circles, and a housing settlement began to be built adjacent to the river at Durrington Walls about 3km northeast of Stonehenge. Both timber circles had an initial square four-post setting, followed by circular post arrangement. Two of the six rings of the Southern Circle display similarities in timber placement to the stone settings at Stonehenge, i.e., ring 2E was horseshoe-shaped, like the sarsen, opening to the southeast; and 2D had 30 posts mimicking the sarsen circle. They served as communal halls and were orientated towards the midwinter solstice sunrise. A third timber hall, Woodhenge, was a six-ringed structure, only about 80m south of the Southern Circle but orientated towards the midsummer solstice sunrise. At this time too, a palisade was erected around the main part of the complex, but not Woodhenge, which was quickly replaced by a massive henge ditch and bank (Gaffney 2015). An avenue was constructed from the southeast entrance of the henge to the river, destroying in part some of the housing outside the enclosure. Many houses remained within the henge and were subject to reflooring. Several ditched enclosures were constructed around timber-posted wattle and daub structures with domestic deposits, although two had been kept clean of these, suggesting some special use. Pits adjacent to one contained deliberately placed pigs.

Further changes occurred in Stage 3 at Stonehenge that saw erection of a bluestone arc in the centre, while near the rear trilithon a deep pit was dug, the purpose of which is not known. During the succeeding Stage 4 the bluestone arcs were removed as were the stones of Bluestonehenge. Both sets of stones were used to define an oval within the trilithon arrangement.

32.2 Ideological

The ideological aspects of this phase as evidenced by this Wessex case study are interwoven and addressed using several sub-headings.

32.2.1 Placement in and Articulation with the Landscape

Location is a critical element of understanding any settlement. While the provision of water and food resources is generally understood to be important for residential settlements, ideological considerations are paramount in determining the location and placement of monumental ceremonial structures. Two basic topographical locations are important locators for this phase. One is elevated hill and ridge tops, which are significant because of the height, shape and overall command of landscape to the horizon; not only having a visual catchment but also capable of being seen from a distance. The

ideological importance of high places is proximity to the sky. The other location is riverine or lakes, including floodplains and terraces with springs and residual fluvial features periodically flooded. Ideologically, water and, therefore, these places are portals to the underworld. Throughout the British Neolithic, locations such as the River Thames have been favoured to construct sites for the performance of ceremony and for the ritual deposition of prestigious artefacts and human bones (Richards 1996).

The sites discussed in both Model Phases 2 and Phase 3 illustrate these patterns. The riverine location is shown at Avebury henge, the West Kennet Palisades and Silbury Hill, as well as at Marden, Bluestonehenge and Durrington Walls, although the last is in a steep valley running down towards the Avon. The exposed hilltop with extensive views characterises both Stonehenge and Coneybury henge and, to some extent, the Sanctuary. The Stonehenge location was naturally marked by a series of periglacial gullies and ridges that trended uphill to the southwest and towards the midwinter solstice sunset. This must have been perceived as culturally and cosmologically significant.

The large mounds of Silbury Hill, Marden and Marlborough demonstrate by their height and size the characteristics of an artificial sacred mountain reaching to the sky, but their riverine location belies underworld connotations. In other words, those sites embody the concept of a three-tier cosmology. It has been argued that at Avebury the banks resemble the surrounding topography and could be conceived as a bounded microcosm of its world, thus placing the henge at its centre (Watson 2001). Such an interpretation is enhanced by the depth of its ditch and its potential underworld understandings, particularly when containing standing water, further invoking the three-tier cosmological image.

32.2.2 Solar and Lunar Alignments

While Stonehenge and other sites in the Middle Avon have convincing evidence for a variety of solar and lunar alignments (Table 32.1), Avebury has none (Ruggles 2016). Burl (1979:158), however, has indicated that the Cove probably was orientated towards the northernmost moon rising at the Major Lunar Standstill. Table 32.1 refers.

**Table 32.1 WERSSEX COMPLEX REGION
SOLAR AND LUNAR ALIGNMENTS**

Alignments	Sites
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<u>Solar</u>	
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JSSR	Stonehenge central stone arrangements from Stage 1 onwards Stonehenge Station Stones short axis Woodhenge
JSSS	Durrington Avenue
DSSR	Durrington Walls Southern Circle Durrington Walls Northern Circle Durrington 68
DSSS	Stonehenge Avenue approaching the monument Stonehenge central stone arrangements from Stage 1 onwards. Woodhenge

Lunar

Northern Major Lunar Standstill rise	Stonehenge Avenue ridges Avebury Cove — possibly
Southern Major Lunar Standstill rise	Stonehenge Station Stones long axis
Northern Major Lunar Standstill set	Stonehenge Station Stones long axis

The sun and the moon and their extreme positions are considered to be critical to the cosmology and ideology of these societies (Ruggles 1999). The alignments for both the midsummer and midwinter solstitial events form the basis of an annual calendar, feasting and celebration, particularly in the Middle Avon at Stonehenge, Durrington Walls and Woodhenge. The major lunar standstill with its 18.6-year cycle must also have been important in Wessex at this time, as it was in many other prehistoric cultures.

32.2.3 Disposition of the Dead and Burial Practices

It is clear that the fundamental aspect of these Wessex sites is concerned with the disposal of the dead in places of high cultural and ideological significance. The Avebury complex in the Middle Neolithic was characterised by several long barrows, with West Kennet containing both cremated remains and disarticulated inhumations of at least 46 individuals. Evidence for this phase, however, is not extensive, but includes caches with human bone near the Obelisk in the henge's southern circle as well as placements of a mandible and other bones in specific places in the Sanctuary, particularly associated with posts or stones, and along the West Kennet Avenue.

Salisbury Plain around Stonehenge was the focus of prehistoric burial throughout the Neolithic and EBA, and within 5km of Stonehenge itself there are several long barrows. Isotope analyses of an individual buried at West Amesbury Farm, 1.5km distant, dating to

3240-3110 calBC, suggest he came from Ireland (Mays *et al.* 2018). This implies not only his mobility but that something had attracted him the location, perhaps the ideological importance of Stonehenge. At Stonehenge in Stage 1, two types of disposal are thought to be present. In the Aubrey Holes were placed cremated bones of many individuals, some of whom came from other parts of Britain, including Wales. In the centre, two unburnt bones and the rectangular arrangements of postholes have been interpreted as evidence for excarnation. Both cremated and unburnt human bone continued to be deposited in Stage 2 at the foot of stones, possibly prior to erection. In Stage 3 burial practice changed to inhumation with a male interred in the ditch near the northeast entrance. At Bluestonehenge, Parker Pearson and colleagues noted that human bone and charcoal lay on the surface and was therefore contemporary with Stonehenge Stage 1, suggesting either cremation or excarnation was also carried out there. Another probable type of disposal is the deposition of burnt and cremated human bone in the River Avon (Parker Pearson *et al.* 2006; 2010).

In Stage 2 at Durrington Walls in the pre-henge settlement, a single human bone was associated with each of three houses; and a cremation in a pit at Woodhenge that probably held a stone (Parker Pearson *et al.* 2008:159, Parker Pearson 2013:168-9). The deposition of single human bones in pits is unusual and must have some form of ideological meaning, perhaps commemorating a relative who had inhabited that place. Woodhenge also has evidence of a human mandible placed at the foot of a post and an adolescent buried adjacent to a stone.

Burial practices changed around the beginning of the EBA in both the Upper Kennet and Middle Avon areas, with inhumations and cremations in round barrows. Both Avebury and Stonehenge are surrounded by numerous examples, often arranged in cemetery groups prominently located on ridges and hillsides but with many situated at a discrete distance. Only 20 are visible from Stonehenge. The burials within them are often accompanied by rich grave goods, including pottery, metal and stone objects, such as at Bush Barrow, only 1km to the south of Stonehenge (Needham *et al.* 2009). During this period of Stage 4 at Stonehenge, burial no longer occurred within the monument but was moved to these new locations around it. This distribution pattern attests to the continued veneration of the henges but in a slightly restructured way. During this period at Avebury, however, some human bone was deposited in the henge ditch (Cleal and Pollard 2016:89); and at Wilsford Henge near Marden, a complete burial was placed in its ditch suggesting that the spatial relationship between ancestors and henges continued. Such difference between places of the living and dead has been linked to a broad segregation of Grooved Ware with timber monuments and non-funerary contexts; and of early Beaker

pottery with stone monuments and contexts for funerary purposes and commemorating ancestors (Leary and Field 2012; Parker Pearson *et al.* 2007:633-634).

32.2.4 Feasting and Ritual Deposits

Feasting and the deliberate deposition of its remains, as well as the placement of offerings, are interrelated elements of ritual behaviour associated with ideological practice and ceremony in both areas during this period.

Evidence for feasting is generally, but not exclusively, found in pits and middens associated with houses, timber structures and henge and enclosure ditches, and also was found next to the sauna house at Marden. It is difficult to distinguish between domestic and ritual deposits, although pit and midden location as well as ordered arrangement of the different components provide some clues. The evidence is mainly in the form of animal bone, often burnt and butchered and occasionally articulated, and pottery vessel types. These are often found with lithics, some associated with butchery, antler picks from construction and other materials.

In the Upper Kennet, feasting has been inferred at Beckhampton Enclosure on the basis of charcoal rich soil and a small amount of cattle and pig bone. At West Kennet Farm Settlement many pits contain large quantities of pig bone and some cattle, some of it articulated and therefore fresh at burial, also suggesting ritual commensalism.

In the Middle Avon at Durrington Walls, large-scale ritual commensalism was identified first on the basis of the large amount of domestic pig and pig bones and pottery from excavations in the Northern and Southern Circles (Wainwright and Longworth 1971). Recent excavations have confirmed this (Parker Pearson *et al.* 2006c). The pigs and cattle had been brought from many parts of the country, killed by arrow at c.9 months old, butchered and barbecued (Albarela and Payne 2005; Viner *et al.* 2010). Lipid analysis indicated that the Grooved Ware pots of different sizes had been used for cooking pigs and other ruminants (presumably cattle), and for dairy products (Craig *et al.* 2015). The disposal location is important in understanding feasting patterns; Craig and colleagues concluded that pits dug in house floors on abandonment contained bones of older pigs, while those in the middens were killed at c.9 months, i.e., in midwinter. The middens also contained more sherds in which ruminant products, i.e., beef and milk, had been cooked. Other evidence for feasting includes numerous hearths and large pots.

At nearby Woodhenge, evidence for feasting is found in pits filled with ash and animal bone underneath the henge bank. Animal bones from the ditch at Coneybury Henge

reveal more cattle than pig, and that these were deposited with Beaker pottery and stone butchery tools suggesting large-scale consumption. At Stonehenge in Stage 1, cattle bone was deliberately placed near ditch terminal deposits. Pollard and Ruggles (2001:76) suggested these and those of pig may not constitute feasting but that bones had been brought in from elsewhere for deliberate deposition.

The deliberate placement of ritual offerings in both areas and throughout the sequence displays patterns of assemblage composition and spatial distribution within sites which probably have ideological and cosmological implications (Pollard and Ruggles 2001). The assemblages generally comprise flints, worked lithics, axe fragments, potsherds, animal bones, including wild animals, and even human bone. Other items include carved chalk items, antler picks and seashell. These occur in pits, ditches, at the foot of posts or stones, in the fill of natural holes and those left after timber or stone removal, near entrances, and in site centres or generally across a site (Table 32.2). At Woodhenge (Fig. 32.1), the deliberate deposits of Grooved Ware, flints, worked chalk and animal bones are associated mainly with the postholes of circle C (Pollard 1995). The meaning of the individual items and such depositional patterns, however, remains difficult to determine. Carved phalli in chalk, however, beside stone 57 in the sarsen trilithon horseshoe at Stonehenge, and in flint with flint balls and pelvis-shaped nodule at the southeast entrance to Durrington Walls, might suggest fertility rites or ritual sexual activities at these sites (Cleal *et al.* 1995:404; Parker Pearson *et al.* 2006).

**Table 32.2 WESSEX COMPLEX REGION
RITUAL DEPOSIT LOCATIONS AND ASSEMBLAGES**

Category	Site	Location in Site	Assemblage
<u>Pits</u>	Avebury Down	Within flint scatter and area of stakeholes	Six pits: worked flints, cattle bone, sherds
	West Kennet Ave occupation site	Across site	Pits with cattle skulls, antler, axe fragments, arrowheads, flints and imported stone, sherds
	Avebury	Henge northwest quadrant	Worked stone, flints, Animal bone, human bone and sherds
	Durrington Walls Pre-henge houses	Under henge bank and alongside Avenue	Animal bone and flint arrowheads in house; pits: two with cattle vertebrae, three with single human bone
	Durrington Walls	Outside east entrance	Flint balls, phallus and nodules

	Durrington Walls Palisaded Enclosure		Articulated cattle bone, pieces of sarsen and pyrites in pits and adjacent to posts, then deliberately filled with chalk
	Durrington 68		Grooved Ware and animal bone
	Bulford Henge West	Inside henge	Three pits with pottery, animal bone, flints and axe fragment
	Numerous locations overlooking river, including Ratfyn	Cliff top	Wood ash/charcoal, flint tools and axes, sarsen decorated pottery, animal bone, boar tusks, seashell; bear scapula
<u>Ditches or pits by entrance</u>	Avebury	Ditch	Deliberately placed antler picks and flints
	Beckhampton Enclosure	Entrance	Cattle, pig and decorated pottery; also antler picks, cattle horn core
	Durrington Walls Palisaded Enclosure	SE entrance	Human bone, Grooved Ware sherds, chalk axes, pig mandibles in postholes
	Durrington Walls Western Enclosure	Outside entrance	Two pits: animal bones and abraded pottery; two partly articulated pigs
	Durrington 68	Entrance	Several pits: animal bone, flints and a cremation in one
	Stonehenge		Cattle bone in ditch
	Bluestonehenge	Ditch terminal	Cattle bones, antlers, quartzite hammerstone, flints, Grooved Ware and later Beaker sherds
	Coneybury	In ditch by entrance	Cattle bones, lithics and Beaker sherds, dog; sea eagle in ditch
	Marden Henge	North entrance	Antler picks, lithics, Grooved Ware and human skeleton
<u>At foot of posts stones</u>	Avebury Henge	Stonehole 41	Adult cranium and rib <u>or</u> fragments, Beaker potsherds, flints
		Others	Potsherds and flints
	Avebury Henge Southern Circle	Stoneholes	Potsherds and flints
	West Kennet Avenue	With standing stones and stone holes	Human remains in five stoneholes with sherds
	The Sanctuary	Around posts or holes	Human remains with potsherds
	Durrington Walls		Articulated cattle bone,

	Palisaded Enclosure		pieces of sarsen and pyrites in pits and adjacent to posts – then deliberately filled with chalk
	Woodhenge	Under post	Cremation in posthole C14
	Bluestonehenge		Lithics, antler picks, deer tooth, pig bone
	Bulford	Standing stone	EBA burial with ceramic and rock crystal
<u>Natural hole fill</u>	Woodhenge	Tree-hole in centre	Carinated bowls and topped with chalk
<u>Fill in holes after timber or stone removal</u>	Durrington Walls Palisaded Enclosure	Postholes	Articulated cattle bone, pieces of sarsen and pyrites in pits and adjacent to posts
		Southern Circle postholes	Animal bones, flint and bone tools, then sherds and fine topsoil
	Woodhenge	At rear	Cattle mandibles by two stoneholes
	Coneybury	Postholes	Grooved Ware
<u>Centre of circle/ Feature</u>	Avebury Henge Southern Circle	In centre	Urn with bones
	Woodhenge	Tree-hole in centre	Carinated bowls and topped with chalk
		In centre	Child burial
	Wilsford Henge	In centre	EBA adolescent burial with Amber spacer necklace

One practice that has persisted into this phase of the model is the placement of cattle crania and/or other bones in ditch terminals beside entrances with lithics and sherds, a pattern already mentioned at Windmill Hill and also noted in several long barrows. The best evidence is at Stonehenge, where in Stage 1 large cattle mandibles were placed on either side of the southern entrance, a skull on the west side of the southwestern, while the main northeastern one had a red deer pelvis and pig bone on its western side (Pollard and Ruggles 2001). It continued into Stage 2 with cattle crania flanking the northeastern entrance and cattle bones associated with the other two. Other animal remains associated with entrances included piglet skeletons, fox, red deer and bird bone. This pattern is also recorded at Beckhampton Enclosure, Bluestonehenge and Coneybury Henge, and at Marden where there was also a slightly later human burial. For timber buildings, pits at their entrances contained a similar assemblage, although at Durrington Walls southeast entrance, the Western Enclosure and Durrington 68, pigs replaced cattle.

This pattern may represent some form of threshold ritual of passing from the profane into the sacred realm of the monument. Cleal and colleagues (1995:69) reported fire evidence in the ditch base either side of the main entrance at Stonehenge, that further demonstrates some form of ritual demarcation of the threshold. Access to the henge was also partially blocked by lines of posts in Stage 1 and in the following stage these were replaced by three large sarsen stones. In Stage 3, however, such barriers are not present.

Several other ritual practices can be identified in the deposits from this model phase in Wessex. For example, a foundation or site dedicatory event is indicated by the infilling of a tree hollow in the centre of Woodhenge with a number of carinated bowls. It was then deliberately covered with white chalk and further marked by four stones. This suggests that the tree itself had possibly been a focus of ceremony prior to the construction of the timber structure. Arrowheads, sherds of Grooved Ware bowls, animal bones and Niedermendig lava pieces placed deliberately in chosen locations across the Sanctuary are also considered part of dedicatory rituals. The initial ditch depositions, previously mentioned, and even the cremations and other deposits in the Aubrey Holes at Stonehenge, may also be part of such an act of site consecration encircling the very important centre.

As already noted, abandonment events that followed a final feast can be inferred at Durrington Walls in the pits dug in houses of pre-henge and henge settlements and pits associated with Western Enclosure timber structures. There are also commemoration events in which a place continued to be venerated after abandonment. For example, there are examples of deliberate deposits in fill after the posts have decayed at the Durrington Walls Palisaded Enclosure and Southern Circle, and Coneybury, and after stone removal at Woodhenge.

32.2.5 Bluestone Objects

A further ideological role considered important for Stonehenge is provided by the Preseli bluestones utilised in its various construction phases and at Bluestonehenge, and fabricated into various artefacts, including axes, discs and amulets found at the site (Cleal *et al.* 1995:375-385). These are not only significant for their colour and shininess, particularly when freshly worked, but having originated from a prominent, and probably sacred, mountain in Southwest Wales where there is a long, perhaps historic, tradition of the healing powers of natural springs. Darvill and Wainwright (2014:19-24) regarded them as central to understanding the site, hypothesising healing in the general sense of both medical and pastoral care and that the stones were agents in the promotion of well-being and fecundity. The portable artefacts and fragments may have been used as

portalling devices or amulets. Darvill (2016:113-114) suggested that these had “special power and meanings” and were taken to various sites across Wessex, including a piece of bluestone and three flakes found on the summit of Silbury Hill and others in the ditch fills at Windmill Hill (Leary and Field 2014; Smith 1965:114). Thomas (1999:178) saw the bluestones embodying the spirit and powers of their distant source and legitimating activities in the ceremonial centre of Stonehenge.

32.2.6 Avenues and Procession

Avenues are defined on either side by parallel banks with external ditches or lines of standing stones, along which ceremonial processions occurred. They either connected important henge monuments to other local sites, such as at Avebury, or to a nearby river, as at Durrington Walls, Stonehenge, Marden and Mount Pleasant. Their purpose and the interpretation of how avenues and individual sites were integrated into the landscape has been the focus of much discussion over the years. These have involved questions about the direction of movement along them and the nature of procession and ceremony; and the experience of walking them, while observing topography, monuments and solar or lunar phenomena.

For the Middle Avon, the most plausible arguments have been developed, tested and refined by Parker Pearson and various colleagues (e.g., Parker Pearson and Ramilisonina 1998; Parker Pearson *et al.* 2006c; Parker Pearson *et al.* 2009). This was based initially on an ethnographic analogy concerning Malagasy funerary rituals and the persistent role in many cultures of rivers to be crossed or travelled as metaphors for the journey of the dead to the land of the ancestors (Eck 1987: 424). By comparing the archaeology of Durrington Walls and Stonehenge, they noted detailed similarities in architectural plan, but with construction in timber at one and stone the other, as well as there being differences in content and amount of pottery types, animal bones and human bones. Also noted was the orientation and alignment of their approaching avenues suggesting the same solstitial event but at different ends of the day (Table 32.1). The architectural similarities may indicate the same or similar ceremonies at each site. It was concluded that the Durrington Walls complex could be considered the ‘domain of the living’ on the basis of its evidence of intensive feasting, but very little for burials and human bones. They added that its wooden architecture with its decaying qualities reflected the ephemeral nature of human life. In contrast, Stonehenge was largely devoid of evidence for feasting and that animal bone had been used as discrete offerings in selected places. There were, however, significant numbers of cremation burials and several disarticulated human bones in particular places, and Beaker pottery that is usually found in funerary

contexts. Furthermore, its construction and remodelling in stone over 1000 years reflects the permanency of stone and the enduring presence of the ancestors (Table 32.3). Thus, Stonehenge was characterised as the ‘domain of the ancestors.’ They conceived that the ceremony was therefore funerary and began at Durrington Walls, and travelled to Stonehenge to its west by both avenues and a connecting 3km length of the River Avon.

**Table 32.3 WESSEX COMPLEX REGION
DOMAINS OF THE LIVING AND OF THE ANCESTORS**

Durrington Walls complex <i>Domain of the Living</i>	Stonehenge <i>Domain of the Ancestors</i>
<u>Architecture</u> Timber structures Southern Circle ring 2E of 10 large postholes Southern Circle ring 2C with 30 postholes	Stone structures Trilithon horseshoe Sarsen Circle
<u>Avenue alignments</u> SE entrance and Durrington Avenue to Aligned to DSSS	Final stretch of Avenue into monument aligned with DSSR
<u>Animal bone</u> Mainly pig, also cattle; feasting evidence	Few, mainly cattle placed in important places
<u>Human bone</u> Very little	Over 200 cremation burials; some disarticulated human bone in centre
<u>Ceramics</u> Southern Circle predominantly Grooved Ware with a few Beaker	Mainly Beaker

For this celebration, the dead had been brought to Durrington Walls from many parts of Britain, probably already as cremated ashes, disarticulated bone or freshly dead bodies, along with pigs and cattle to be slaughtered for the feast. Pig age at slaughter and the orientation of the Durrington Avenue indicates that this took place at dawn on the midwinter solstice. The procession comprised only a privileged few who accompanied the human remains and carried other items as offerings. It left the Southern Circle at dawn and travelled a short distance along the avenue to the river, where it boarded boats to travel the sharp river meanders in a gorge bounded by steep chalk cliffs. During this part of the journey, the participant would have experienced countless changes of orientation and light within an enclosed landscape with no long vistas. Parker Pearson and his colleagues have suggested that this stretch of the river was a liminal zone between the domains of the living and the dead, where most of the dead may have been deposited. Several ash pits line the cliff tops along both sides of the river. These were dug and filled

as single events that may have occurred as part of these midwinter festivities to acknowledge the passing of the procession or at some other propitious time. Later in the EBA round barrows were built on the cliffs overlooking the river.

The river leg ended on the north bank adjacent to Bluestonehenge, where the participants and human remains were disembarked. The latter were probably placed within the small circle where there is some evidence for cremation and/or excarnation. This was subsequently abandoned, the stones removed and the site encircled with a henge. From there the entourage with the remains entered the Stonehenge Avenue en route to their final destination. It gently climbed out of the valley to reach the King Barrow ridge from where Stonehenge could be seen for the first time. During the EBA, on this length of the avenue, participants would have passed through two lines of round barrows and then a third on King Barrow ridge itself, thus associating with and acknowledging the dead.

During the descent into Stonehenge Bottom, the monument gradually disappeared from view and remained so until 50m after the procession had turned at the elbow onto the final straight. From that point Stonehenge appears in view and over the last 450m dominates it, this enhanced by the avenue's slight narrowing. As already mentioned, this original natural alignment is orientated precisely on the midwinter solstice sunset of 3000-2500 calBC. The journey from Durrington Walls to Stonehenge thus lasted from dawn to dusk on this auspicious day. In Stonehenge Stage 1 the ceremony ended with the ritual burial of cremated remains and some grave goods in the Aubrey Holes inside the henge and in association with the original bluestone circle. It is argued that this burial practice and procession continued for over 500 years after which limited burials only were placed in the ditch (Willis *et al.* 2016). The monument continued, however, to be remodelled and enhanced to retain memory as a place for significant and 'eternal ancestors.' The placement of EBA round barrows surrounding this location served to memorialise its ancestral heritage.

While only a privileged few participated in the procession and ceremonial rituals, the proceedings could have been observed from a distance. Parker Pearson and his colleagues (2006) had noted that Larkhill just above Durrington Walls affords a spectacular vista and that Stonehenge lies c.2.6km to the southwest. They considered that the procession may have begun there prior to descending into Durrington Walls. It is more likely, however, that those not permitted to accompany the procession could have watched it from afar as it reached the monument. They, too, would have observed the December solstice sun setting through it as the ceremony arrived.

In the Upper Kennet, two avenues radiate to the south and west of Avebury Henge to the timber and stone building of the Sanctuary and the Longstones Cove respectively, prescribing to some form of orderly procession into and out of the henge (Pollard and Reynolds 2002:105). They date later than the construction of the henge, and it has been suggested that they ‘monumentalised existing pathways’ between these sites (Cleal and Pollard 2016:91). The nature of the processions along them, however, is much debated.

Pollard and Reynolds (2002:102) noted that the Beckhampton Avenue passed between two earlier long barrows and the Enclosure, while the West Kennet Avenue crossed the location of the Avenue Occupation site and terminated in the Sanctuary, itself a location of earlier occupation. They also noted that on the final approach to Avebury from the south, Windmill Hill was ‘framed’ on the horizon by the Avenue. They suggested that such references to the past imply the importance of the biography of place and memory, and therefore were a ‘narrative experience’ for participants. While these reference places along each avenue, they do not provide further reasons for ceremonial procession.

Parker Pearson and Ramilisonina (1998:319-322) considered this question in the light of their hypotheses regarding Stonehenge. They proposed that the Sanctuary was a place where the worlds of the dead and the living overlapped, and that the dead were placed there prior to their removal to Avebury which they considered to be the ‘circles of the ancestors.’ This argument, however, does not stand up to close scrutiny, as there is only one grave at the Sanctuary and few other human remains, and the nearby cemetery dates much later than its occupation. There are also only small amounts of human bone known from Avebury, although the bone cache found near the Obelisk in the centre of the Southern Circle might be indicative of some formal deposition. The graves and the majority of human bone at the Sanctuary, Avebury, and along the Avenue are found at the foot of stones or in post- or stoneholes, indicating veneration of those uprights and places acknowledged before and after any procession and along the route itself.

Sims (2008, 2009, 2010) has speculated that the direction of the procession was from Beckhampton through Avebury and on to the Sanctuary. He based this idea on speculation that Silbury Hill played an important role in ceremony during this period, and observed that it could have been seen from only seven locations along this route. He conjectured that this journey and its observations represented “a facsimile of the moon entering and returning from the underworld”. He also suggested that astronomical alignments between pairs of stones along West Kennet Avenue revealed both solstitial and lunar standstill properties, which he related to “a male-dominated cattle herder society ... appropriating and subverting a lunar-governed ritual cycle onto a lunar-solar

cosmology”. While phenomenological studies can offer insights into archaeological issues, particularly those concerning travelling through a monument or landscape (e.g., Tilley 1992) and astronomical alignments can be demonstrated, Sims’ evidence and ideas do not seem to be supported by the archaeological record.

Despite speculation, the direction and type of the processions at Avebury remain unresolved. Undoubtedly, it was concerned with ideological practice, the nature of which may be become apparent through further excavation in the henge.

32.2.7 Evidence for Shamanism

While the presence of priests or shamans has been ruled out by Parker Pearson (2007:142), Woodward (2000) has commented that, although excavations reveal artefacts that could be termed shamanic, it is difficult to identify a shaman or anyone with particular power who orchestrated ideology and ceremony and encouraged the building of these monuments. In this section that evidence is evaluated to establish the potential presence of shamans or shamanistic practices in the archaeology discussed. This is presented in two parts. The first deals with the Late Neolithic period of monument construction and is concerned with deliberately placed artefacts, their characteristics and motifs. The second discusses EBA burials that have been identified as probable elite graves or even those of shamans themselves.

construction In Chapter 8 it was noted that indirect evidence for shamanism takes many forms. The monumental nature of ceremonial places, including solar and lunar alignments and ritual deposition, are clearly related to calendrical rituals and the prevailing world-view, while the henges and stone circles would have provided arenas for such activities and locations for special deposition of important bones and objects. One specific architectural feature at Marden, a sauna on the bank of the inner henge, possibly indicates the practice of ritual cleansing and purification and a means of achieving ASC. Its use was certainly related to the rituals and ceremonies that took place within that henge and to the ritual commensalism which took place around it. Leary and Field (2012:63) speculated that the burnt flint layer at Woodhenge may represent ‘proxy evidence’ for a similar structure.

For the Early Neolithic, Reynolds (2013) argued that human cranium and mandible curation and their subsequent deposition in the Hambledon Hill causewayed enclosure is indicative of shamanic activity. Similar practices occur at Windmill Hill and elsewhere. Therefore, shamanism could be argued to have been a pre-existing practice throughout the region; however, at this time, no individual shaman can be identified.

For the Late Neolithic, the deliberate deposition of human remains in graves beside or under standing stones in circles or avenues implies some form of dedication and ancestral recognition for the stone itself, a practice that was culturally orchestrated and relatively common. Furthermore, placement of isolated human bones at Stonehenge in Stage 1 as well as the cremated remains in the Aubrey Holes can also be interpreted as evidence for such activity and the consecration of that place as one of reverence and memory.

shamanism There are particular artefacts with traits at these Wessex sites that might indicate shamanistic practice. For example, Parker Pearson has commented that a polished banded gneiss macehead and a small bowl that had probably contained incense or hallucinogens, found adjacent to Aubrey Hole 14 and 15 at Stonehenge, are potentially objects of shamanic paraphernalia (Cleal *et al.* 1995:389, 394; Kennedy 2013). Polished stone axes with their different colours and shiny qualities, imported from many British quarries that lie in distinctive and dramatic landscapes, and found on many important sites, may have been used shamanistically as healing items. The same argument can be made for use of Preseli bluestone at Stonehenge and in its vicinity. Similarly, sharp artefacts made of flint with its translucent and shiny qualities, and those of chalk with bright white coloration, may also have had shamanistic connotation. In addition, worked chalk phalli, possibly shamanic objects of sexual tenor, have been found at Stonehenge beside Stone 57 in the trilithon horseshoe, at Durrington Walls, and at Windmill Hill. A chalk plaque with an incised entoptic chevron motif was found in the ditch near the blocked southern entrance to Stonehenge, two in a pit on Kings Barrow Ridge, and also at Woodhenge and Durrington Walls (Cleal *et al.* 1995:403; Teather 2007:219). Other chalk items include axes, one also beside Stone 57 at Stonehenge and another in the ditch, two at Woodhenge, and one at Durrington Walls; cups from Stonehenge, Woodhenge and Durrington Walls; and three discs or pendants from Stonehenge and one from Woodhenge. Entoptic motifs on decorated pottery and stone objects indicative of ASC experience are regarded as shamanistic. These occur on highly decorated sherds from the Beckhampton Enclosure/Longstones and Durrington Walls (Figs 32.2a, b)

As stated previously, many EBA round barrows and flat graves, particularly around Stonehenge, display rich grave goods, characteristic of the Bell Beaker Set including a copper knife, flint arrowheads, bow-shaped pendant, copper spearheads, and a Bell Beaker and other pottery (Fitzpatrick 2009, 2013). They generally contain evidence of archery, tool making and metal-working, as well as items of personal adornment. This suggests that those buried were of distinguished and influential status within society. Among them are several that have slightly different assemblages, implying their occupants had special skills. This was recognised by Piggott (1938), who remarked that

many EBA Wessex graves include similar paraphernalia: beaded necklaces made from exotic “magical” substances, such as gold, bronze, amber, faience and jet; complex multi-coloured pendants; gold items; polished stone palettes; and special miniature vessels stone or clay used for the burning of “peculiar substances”. Woodward (2002:120-121) noted other common items, including white quartz, rock crystals, shiny stones, fossils, shells, boar tusks, carnivore teeth, accessory cups, and bone tweezers. These may be interpreted as sacra used in rituals and ceremonies.

Shamanism is also potentially indicated by certain graves analysed in this study: the Amesbury Archer; his Companion; the Boscombe Bowmen; and the Upton Lovell G2a, originally designated a shaman burial by Piggott (1962:94). Primary individuals in another two, Bush Barrow (Wilsford G5) and Upton Lovell G2e, are considered to be members of an elite who had appropriated aspects of shamanism. Such identification involves various items of data from these graves. First, the skeletal pathology of both the Amesbury Archer and his Companion, as well as one of the primary Boscombe Bowmen burial, yield direct evidence of physical features that distinguished them from the general population. They each walked with a limp, while the Archer also would also have had a foul odour resulting from a dental abscess. These conditions would have clearly differentiated these individuals and given them the potential for being perceived as having ‘special powers’. Furthermore, isotope analysis indicated that the Archer had come from the Alpine region of southern Germany or Switzerland, and had lived in Britain for some time. His close relative, the Companion, had been brought up in southern England. The Boscombe Bowmen were also foreigners to the district, isotope analyses indicating that they were from the west of Britain, probably Wales or the Lake District, and had come to live in the vicinity of Stonehenge later in life (Fitzpatrick 2011).

Therefore, these individuals could have been regarded as exotic, non-local people with different experiences, practices and skills, adding to their prestige.

Second, indirect evidence for shamanism can be assessed in each case. For the elaborate Upton Lovell G2a grave, Piggott (1962:93-94) noted that the arrangement of the perforated bone points and boar tusks found on the legs of the person suggested they had been attached to a cloak worn by a religious specialist or shaman, such as those in Siberia. The grave is also similar in content to Mesolithic shaman graves in northern Europe (Fitzpatrick 2011). The bronze awl and flint cups could have been tools used in tattooing or medicine. Several hammerstones and an anvil were also recognised as metalworking tools. Recent analyses have indicated that a slate turnstone or burnisher and the round anvil, found on the chest, had traces of gold from the working of a thin

gold sheet (Shell 2000; Boutoille 2016). While the Bell Beaker Set generally contained metal working tools, the evidence in this grave is more extensive than many, suggesting that this individual was a master craftsman. Given the relative novelty of metalworking in Britain at the time, a person engaged in the manufacture of bright and shiny objects would have been revered, as is noted in many other cultures, as a shaman (Eliade 1978).

The indirect evidence from the Amesbury Archer burial (Figs 32.3-32.4) includes a pair of gold ornaments, probably worn in the hair or on clothing, and a hammer-headed antler pin, as well as a cushion stone or anvil for metal-working (found at chest height) a perforated oyster shell, and copper knives. Fitzpatrick (2011) has suggested that the four boar tusks were probably used for burnishing/polishing metals and the oyster shell for crimping metal. Hunter and Woodward (2015), however, considered them not as tools but ornaments, probably worn from rubbing on clothing (Fig. 32.5). Nevertheless, the quantity of grave goods and their overall richness implies that this man not only had considerable status but probably operated as a shaman. His relative, the Companion, was buried nearby with similar gold ornaments and a boar tusk but fewer offerings, suggesting he continued in the roles of his predecessor. The collective grave of the Boscombe Bowmen also contained items, including a boar tusk and a rare antler pendant, that may reference status and possible shamanism.

The Bush Barrow burial also included items suggestive of appropriated shamanism among those underlining the individual's social status. An assemblage found behind the skeleton comprised a polished fossil stromatoporoid macehead with a copper-alloy ornament on top and attached with a copper pin; three zig-zag-shaped bone end-mounts; three cylindrical bone medial-mounts carved with sharp zig-zags; numerous bone rings; and a lozenge-shaped gold plaque. On the basis of comparisons with other EBA artefacts, Needham and colleagues (2010) have reconstructed the artefact as a ceremonial stone-mace or sceptre, clearly a symbol of authority and special powers (Figs. 32.6-32.7). The entoptic zig-zags and the fossilised stone macehead are both indicative of aspects of shamanistic symbolism, as is the similar pattern of gold studs on a copper dagger. Appropriated shamanism might also be identified among the grave goods at Upton Lovell G2e or the Golden Barrow (Figs. 32.8-32.10). These include a pair of gold bosses and flat pommels with vestiges of a wooden shaft, implying two sceptres or staffs; gold beads, that were probably also small containers; and a 'grape cup,' that probably held incense or oils. Similar cups have also been found at Wilsford G7 barrow and another with EBA burials at Windmill Hill (Piggott 1938; Needham *et al.* 2010:27).

Further probable evidence of shamanistic artefacts is a set of four bone tablets found in a cremation burial at Wilsford Barrow 49 in the Lake group, 2.5km south of Stonehenge, of which three are decorated with stars and crosses on both surfaces, the fourth being plain (Woodward 2002:120-121). While they show no use-wear, Cunington thought they might have been used for divination (Hunter and Woodward 2015:404). Another burial, Newton Barrow, 6.9km south of Stonehenge, contained a primary skeleton together with 16 perforated wolf and two dog teeth, as well as a globular amber bead. It has been suggested these objects represent shamanic costuming (Piggott 1938:105; Woodward 2000:119-120).

32.3 Socio-political

32.3.1 Late Neolithic

Renfrew (1973) suggested that Neolithic Wessex could be considered as a series of ranked societies or chiefdoms (Figs 32.11-32.13). In his model it was proposed that these began to emerge in the Early Neolithic and developed into chiefdoms in the Late Neolithic, focussed on the major henges of Avebury, Marden, Durrington Walls, Knowlton and Mount Pleasant, each with a large territory. He argued that these were characterised by the large-scale organisation of labour, redistribution of food and some form of central leadership. Mackie (1977) considered that these societies were run by priest-chiefs who were specialists in astronomy, magic and religious ritual, as well as political leaders.

The focus of socio-political life was on ceremonies and rituals practised at the henges and related structures, that seemingly were calendrically coordinated and devoted to reverence for the dead and their transformation into ancestors. The construction of monuments required considerable planning and organisation. This suggests some form of socio-political authority that could muster a large seasonal labour force to assemble the resources and build or modify the structure, while also being able to feed the labourers. The scale of such sites suggests that competition within and between different regions must have intensified at this time and may well have been reflected in the staged nature of construction (Bradley 2007:141-142; Barrett 1994; Lewis-Williams and Pearce 2005:200).

The regional mobile lifestyle suggests a social structure of independent, territorially-based groups of extended families. As noted earlier, relations with other groups would have been necessary on a regular basis for ritual, ceremony and disposal of the dead, when groups assembled at an auspicious time and in a special place. While Whittle and

Pollard (1998:232) have questioned how social order would have been maintained in such circumstances, it is argued that community co-operation was probably imperative, as people were engaging in activities of religious significance and in something beyond their experience (Richards 1996b:193). Whittle (1997b:165-166) agreed that the motivation and mobilisation of labour for site construction could have come about through the force of shared belief under the control of a progressively narrower elite. It is argued that motivation would be a function of intergroup competition. In contrast, Barrett (1994:29-32) did not regard the henges as monuments reflecting such a society, suggesting that they had been constructed over a long period and relied on communal obligations and traditions. He thought that an established elite did not initiate large building projects but was created by them.

Unfortunately, it is impossible to know whether sites were built with a large labour force over a relatively period or with a smaller one over a much longer one. The knowledge, however, that at Durrington Walls there was a considerable settlement, seasonally occupied at a specific time of the year, and that this coincided with the construction and modifications at Stonehenge, suggests that the workforce co-ordination by some form of elite leader. There are no specific graves during this period at Stonehenge, Durrington Walls or Avebury to identify such a person, but the presence of a limited number of cremations that came from several parts of Britain imply there was some selection in who was buried at Stonehenge, perhaps on the basis of socio-political position.

Participation in ceremonies at the Upper Kennet and Middle Avon sites also was apparently socially selective. Feasting took place before the ceremonies and it is evident that large numbers of people assembled at Durrington Walls for feasting prior to the departure of the procession to Stonehenge. It is argued, however, that access to the significant sites, such as the Southern Circle, Woodhenge and the Sanctuary, as well as to the processions and finally into Stonehenge itself, was highly privileged and available only to a few. As mentioned, those accompanying the participants at Durrington-Stonehenge ceremonies, after feasting and the departure of the procession, probably only watched from a distance as it approached its destination.

32.3.2 Early Bronze Age

Renfrew (1973:552-553) noted that the regional territoriality of the Late Neolithic was continued quite clearly into the EBA as evidenced by the number and density of round barrows around the major Wessex henges, especially in the Middle Avon around Stonehenge and Durrington Walls, in the Upper Kennet and Marden regions. Woodward

(2000:103) suggested that the richness of particular graves may have been designed to display social status within the community. She further implied that society might have been based on family-based groups of roughly equal status, where differences in individual social standing were observed through the wearing of emblems or exotic equipment, and the conspicuous disposal of valuable goods with burials, revealing both social hierarchy and heterarchy. The former ceremonial centres, therefore, remained socially and politically important, surrounded by these rich graves considered to be those of the local and regional elite. As mentioned, the Upton Lovell G2e and Bush Barrow with considerable pieces of gold costuming and necklaces are considered tombs of important leaders who had appropriated shamanism as part of their political strategy of control over their people. The Amesbury Archer clearly performed as a shaman and metal worker, but was buried with the greatest amount of grave goods.

32.4 Economic

The settlement and subsistence indicate that populations remained relatively mobile and economic practices were very varied (Appendix H). Monument building, however, drew large numbers of people into the region seasonally. Participation in ceremonies would have had the same effect. Furthermore, construction led to economic intensification to feed the large labour force. This would have increased large-scale production of pigs and cattle and probably cereal production, both locally and regionally. It is known that both cattle and pigs were also moved on the hoof to Durrington Walls for slaughter; cattle were also milked for dairy products. Despite the lack of major deposits, a similar situation is thought to have prevailed in Upper Kennet sites. While no cereals were found at Durrington Walls and Avebury, there is evidence of ploughing under long barrows, indicative of field cultivation. At Durrington Walls there is also no grinding equipment for processing cereals, but Craig and colleagues (2015:1103) argue that flour, bread and beer may have been brought to the site. Both Durrington Walls and sites in the Avebury area have quantities of charred hazelnut shells and evidence for fruit consumption.

32.5 Distant Contact

The Wessex henges and in particular the widespread cultural importance of Stonehenge attracted people and objects not only from throughout the region but also from other parts of Britain and even Europe.

For the Late Neolithic, the Durrington Walls-Stonehenge complex reveals evidence of people and animals from different parts of Britain. For example, the cremated remains of mainly adults found in the Aubrey Holes are thought to have been not only locals but also

people from Wales and other parts of Britain. However, there is direct evidence that the pig and cattle bones from Durrington Walls indicate large numbers of live animals had been brought there on the hoof from elsewhere at specific times of the year. Strontium isotope analyses have shown that cattle came from as far away as Wales, Cornwall and northern Britain (Craig *et al.* 2015; Chan *et al.* 2016; Snoeck *et al.* 2018).

A number of lithic artefacts, including stone axes and fragments, maceheads and querns show participation in networks of long-distance exchange. The Upper Kennet sites have materials from Mounts Bay, Callington and Marazion (Cornwall), Penmaenmawr (north Wales), Hyssington (Shropshire), Great Langdale (Cumbria) and Whin Sill (Northumberland) (Clough and Cummins 1988: 156-160; Field 2009). Fragments of Niedermendig lava from Germany have also been identified from the West Kennet Avenue occupation site and West Field, and a jade axe fragment from northern Italy from Beckhampton associated with a Cornish greenstone axe (Walker 2015:86). In the Upper Avon, Stonehenge itself has axe and other stone fragments from three Cornish groups (I, Ia, III), Great Langdale, Whin Sill and Preseli, as well as a piece of Niedermendig lava from Germany (Cleal *et al.* 1995:394). Other stone materials include oolite and other limestone from Frome-Bath-Atworth; Portland chert from Dorset; and sandstone (Pollard and Reynolds 2002:124). As mentioned, the importation of Preseli bluestones as well as sarsens from Marlborough Downs also represent distant contact in their acquisition, transportation and erection. All examples imply direct association with those regions through visitors, trade or exchange, as well as a means of incorporating culturally important knowledge of these significant places into the social, cultural and political fabric of Wessex and these monuments in particular.

For the EBA, Piggott (1938) drew Continental parallels with the Wessex Culture group of graves clustered around Stonehenge containing objects of great rarity and richness. In this he saw evidence of elites and chiefs connected in trade with Brittany, Scandinavia and central Europe. Needham (2000) considered that objects might have moved in both directions. Bradley (2007:143) argued that the first Bell Beakers were associated with the development of round barrow burials and the introduction of metalworking, which must have resulted from contacts with mainland Europe. The Bell Beaker period has been considered to be one of mobility throughout central and northwestern Europe, and its arrival in Britain and Ireland characterised as a migration. Certainly, people did arrive from the Continent, but there was a degree of acculturation between the local population and the immigrants leading to cultural changes during this period, whether stimulated by trading contacts or migration.

The cultural importance of Stonehenge continued to attract many people to the Middle Avon region. Both the Amesbury Archer and the Boscombe Bowmen had travelled from distant parts; the former from the sub-alpine region of southern Germany, while the latter came from the west of Britain; and both had settled in the vicinity of Stonehenge later in life. Their associated grave goods imply not only metallurgical skills but also cultural associations with continental Europe from Iberia to Germany.

The sources of raw materials used in objects found in the graves analysed provide some indication of distant contact. For example, the raw materials for the jet and amber necklace at Upton Lovell G2e would have been sourced from the North Yorkshire coast and the Baltic or East Anglian coast respectively. The objects buried with the Amesbury Archer are principally western Bell Beaker in style, notably the pottery and arrowheads and possibly the gold ornaments, with widespread 'international' types such as the stone bracers. The gold items were probably manufactured with sheet metal from Spanish or French ores, although those of the Companion may have been made from Irish ores. The metal in the copper knives is related to ores from the Lower Rhine, France and Spain (Fitzpatrick 2013:125, 138). As already mentioned, the stone axes and battle-axes found with the Upton Lovell shaman grave came from Cornwall and Northumberland.

32.6 CONCLUSION

The discussion of Wessex Phase 3 sites and artefactual evidence implies an intensification of ideopolitical activity that resulted in slightly different regional developments in sedentism and its manifestation. This almost certainly reflected the influence of shamanistic practices, whether by shamans themselves or by others who had appropriated such behaviours.

REDACTIONS

- Fig. 32.1** Woodhenge: location of deliberate placements ref: Harding 2006:77 after Pollard 1996
- Fig. 32.2** Wessex entoptic imagery: (a) Upper Kennet/Beckhampton Enclosure sherd with busy dot motif pattern ref: University of Leicester; (b) Middle Avon/Durrington Walls sherd with complex nested chevron and concentric circle motifs ref: Botfield 2102:
- Fig. 32.3** Amesbury Archer artefacts: (a) gold ornaments; and (b) hammer-headed antler pin ref: Fitzpatrick 2011b
- Fig. 32.4** Amesbury Archer artefacts: (a) metalworking cushion stone; and (b) copper knives ref: <https://www.wessexarch.co.uk/news/amesbury-archer-pilgrim-or-magician>; <https://www.pinterest.com.au/pin/493636809148726446/>
- Fig. 32.5** Amesbury Archer: type of costume indicated by animal bone and tusks in the grave associated with the skeleton ref: Guerilla Archaeology: WordPress.com
- Fig. 32.6** Bush Barrow gold, stone and bone artefacts: (a) larger lozenge; (c) smaller lozenge; (d) fragments of gagger pommel inlaid with gold wire studs; (e) shaft mounts (on modern shaft); (f) macehead ref: Needham *et al.* 2010 (photographs David Bukach and University of Birmingham)
- Fig. 32.7** Bush Barrow copper and bronze artefacts: (a) axehead; (b) rivet group with blade fragments, hooked wire and wood; (c) flat dagger; (d) mid-rib dagger ref: Needham *et al.* 2010 (photographs David Bukach and University of Birmingham)
- Fig. 32.8** Golden Barrow artefacts: (a) amber necklace; and (b) bracelet of gold cylinders ref: <https://www.pinterest.com.au/pin/155937205821283065/?lp=true>; <https://thothistheibis.wordpress.com/2012/06/>
- Fig. 32.9** Golden Barrow: (a) gold button; and (b) incense burner ref: <https://thothistheibis.wordpress.com/2012/06/>
- Fig. 32.10** Golden Barrow artefacts: (a) conical gold boss; and (b) gold plaque ref: <https://thothistheibis.wordpress.com/2012/06/>
- Fig. 32.11** Wessex: locations of Neolithic long barrows (dots) on the chalklands of the west Salisbury Plain with unweighted Thiessen polygons drawn to delineate 'territories' each with one barrow ref: Renfrew 1973:545
- Fig. 32.12** Wessex: the major henge monuments of Dorset and Wiltshire (triangles) in relation to the earlier Neolithic enclosures (circles). The large monuments at Stonehenge and Silbury Hill are also shown. Each area formerly served by a causewayed enclosure now has a major henge, except the west part of the Salisbury Plain which is now apparently united with the eastern part ref: Renfrew 1973:551
- Fig. 32.13** Wessex: distribution of the EBA round barrows on the chalklands of Dorset and Wiltshire (after Fleming 1971) in relation to the principal monuments of the Late Neolithic. The four main clusters suggest the persistence of regional divisions ref: Renfrew 1973:553

Chapter 33 CONFORMITY WITH GENERAL MODEL

The role of ideology and shamanistic ideas in the transitional process towards sedentism is demonstrated in terms of the continuing key expectation for each model phase.

33.1 PHASE 1

Knap of Howar

The Orkney house, with its cruciform spatial arrangement, is viewed as a shamanistically inspired construct of architecture and cosmology. Cosmological reference gave everyday activities ontological status, bringing legitimacy to particular actions. The internal sense of order established house sacredness and it became an instrument of social manipulation and control.

Entrance to the smaller House 2 from the outside or from House 1 established a high level of internal privacy by permitting access only to the outer of its three rooms, making the inner two zones exclusive. Such spatial weighting signals shamanic presence, as do the apparent functional differences.

Deliberate and formal sealing of House 2, effectively isolating it from both House 1 and the outside world, strongly suggests that it had been concerned with something special, exclusive and ideologically 'dangerous' that needed to be contained and therefore was shaman-related. Bones, probably human, from a stone slab-covered pit in the inner zone support this interpretation.

The distinctive Unstan Ware with finely executed entoptic decoration had a special function. Given its predominance in mortuary assemblages, the few at Knap of Howar suggest ritualistic use, perhaps death or ancestor related, associated with shamans. Mallets found with perforated heads seen as prototypes of the power-related mace are considered ideological and indicate shamanic presence. The Papa Westray North stalled cairn, a communal focus for Knap of Howar and possibly other settlements on the island, bound people by the same ideology and shamanic influence.

The Orcadian Early Neolithic, while evidencing isolated dual-structure farmsteads associated with particular tombs, saw emergence of small dispersed villages in the same ideological context. Ritual practice may have been undertaken by itinerant shamans using one structure of the former; or in the latter, a special unit within a village cluster.

Both would have seen shamanic influence of social, economic and political activity. In this was potential for competition between shamans to bring together and control separate communities through proximity and shared practices, this resulting in larger settlements and/or a tight network of related small sites. Socio-political manipulation in would have been facilitated by strategic use of ideology.

33.2 PHASE 2

The three sites present this Phase as a development of the ideology-sedentism nexus, demonstrating the strong influence of ideology and its use in establishing and extending social control.

33.2.1 Kilverstone and Etton

Shamanism is identified in the repeated aggregation and pits at Kilverstone and also in the monumental constructions and associated pits within the Maxey Complex.

Pit digging, deliberate deposition and rapid back-filling are considered ideopolitically controlled behaviours and, as such, shamanistically influenced. Consistency in these respects during the site occupation implies exertion of ongoing social pressure. Content suggests feasting with associated ritual being used to mitigate scalar stress among the communities aggregating and to encourage cohesion. The smaller pit clusters, particularly those with intercutting and superimposition, reflect repeated positioning of a single structure in the same place and its occupation by an individual. These are seen to indicate shamans isolating themselves and establishing an exclusion zone around them.

The pieces of a polished stone axe made of exotic Langdale stone would have had significant ideological value and, as such, been shaman related, curated, managed, and used manipulatively. Tying shamanic presence and influence to the site, they may have been deliberately and publicly deposited to this association. A similar situation pertained at Etton but with the axe fragments concerned having originated predominantly from other distant sources. Apart from these fragments, the contents of Kilverstone pits had been obtained locally (Garrow 2006:147). This suggests the model phase here to have been socio-politically parochial with respect to both individual settlements and the infrequent association of communities with causewayed enclosures; but in terms of the overall axe distribution, these settlements were linked to large-scale networks, this possibly providing the context for close supervision of exchange by particular individuals within their territory. The more complex Northborough enclosure appears to have been designed for much larger groups than Etton. This, as well as possibly reflecting regional

population increase or an extended catchment, indicates that an increasing number of communities were now being brought together for ritual and other behaviour. Entoptic motifs on pottery point to shamanism in community behaviour.

Rather than being one of a dispersed number that came together periodically for various purposes and with no evidence of human burial or disposal, these sites were integrated within a network focused on a causewayed enclosure complex operating as a central place for a range of activity previously undertaken in various locations of aggregation. Particularly obvious at Etton was ritual behaviour that, while including pit deposition, did so on a greater scale and involving a wider range of objects. Death clearly played an important part in Etton ritual; however, given that human remains were few, bodies must also have been disposed of elsewhere. Evidence of abrasion and canid gnawing indicates excarnation. With a complete burial at Etton Woodgate, Etton, then, was a place of transition. Only certain individuals were disposed of within settlements or enclosures, probably because they had become powerful supernatural entities needing to be placated and controlled. It also suggests that these individuals had been known as living people with particular status. Post-death 'processing' signals perception of both an afterlife and need to cater for the dead.

The amount of material culture deposited at Etton was not sufficient to estimate length of occupation. Rather than it being a central place where large groups of dispersed people regularly gathered, this probably only occurred every few years. Causewayed enclosures acted as central places, and while pit sites, such as Kilverstone, were settlements peripheral to them, they may also have had some degree of local importance within the socio-political. This suggests that the causewayed enclosure may have been introduced as a new element to ideologically counter the independence of settlements and particular individuals within them; or to maintain power relationships and provide opportunity for social manipulation when the social order was under stress and the predominant ideology questioned.

33.2.2 Windmill Hill

Development of Windmill Hill points to a particularly strong attachment to the location. The preparedness of people from within its catchment to occupy it longer and more regularly is evidenced by domestic equipment and evidence of conspicuous consumption and other ritual behaviour. It reflects the importance of particular regional sites in the socio-political landscape, as already observed in East Anglia.

The enclosure probably reflected people's worldview and is seen as a strategy for exerting social control over widely separated regional groups not necessarily otherwise closely associated. It points to communal aggregation on a greater scale and for longer periods, and involvement in new ideological activity. The well-planned, closely directed construction and depositional behaviour is indicative of shamanistic influence and direction. With its ideological focus and dominating physical prominence, the enclosure was the central element of the socio-political landscape developed by, and providing opportunity for, community manipulation.

Developments here were more specific, more contextualised and more personalised than at Maxey. Leaders drew on the power of ancestors through deposition of human bone, curated and sourced elsewhere, to legitimise their authority. Concentration of long barrows in the area augmented the use and purpose to Windmill Hill.

Aggregating large groups centralised co-ordinated social, economic, political and ideological activity necessitated full-time religious management, permitting emergence of elites within communities because of the need of administrative support by dominating individuals.

Given the widespread and distant sources of items deposited within the enclosure, there may have been intended competition with and countering of similar centralising tendencies towards social control in adjoining regions. The exotic nature of artefacts not only reflects visitors and/or exchange with distant regions, but also important cultural knowledge of them and its transfer to both Wessex and East Anglia.

33.2.3 Skara Brae and Pre-Monumental Barnhouse

Skara Brae and pre-monumental Barnhouse show progression to significant established villages. Both exhibit definite site integrity in terms of tight clustering of structures and successive rebuilding. Their similarity extends to discernibly different, special purpose buildings, these paired and isolated and reflecting shamanistic influence. House-related, cosmologically derived sense of order as an instrument of community manipulation and control continues. This is evident in Skara Brae House 7 and Barnhouse House 2 where it dictated movement of people and permitted them to witness some events and be excluded from others.

Ideologically engendered perception of 'place' reflecting shamanistic manipulation is evident. Barnhouse shows it strongly in the unusual internal organisation of House 2, reflecting aspects of passage grave architecture. At Skara Brae it lies in prolific and

prominent entoptic decoration, identifying liminal thresholds and controlling movement; and with the only burial being in the House 7 cist. Furthermore, their material contents and house fittings do not suggest normal domestic occupation: rather, together with their degree of isolation within each settlement constituting purposeful exclusion, they indicate strong shamanic presence. Fires, located at the threshold and building centre, played a major role in activities which were restricted to individuals with special shaman-related skills, possibly those involving natural-to-cultural transformation.

The peripheral nature and architecture of these houses underline their ambiguity within the community while being culturally separated from it as a place for referencing the dead or ancestors. They both have features associated with passage graves providing powerful symbolism invoking this. At the same time, other elements, such as the weighting of internal space and passages that ensured a qualitatively different experience, clearly resonate with restriction, power and authority typical of ritualised life. Shamanistic domains are therefore indicated, with related practices seen to indicate one or more powerful individuals through whom community control was effected.

Both settlements suggest determined individuality and underlying ideopolitical purpose, but were different. Skara Brae was possibly a powerful, ideologically important religious community; its entoptic imagery and liminal thresholds suggest concern with ideology *per se* and ensure that its application and influence throughout the archipelago was not exclusive to non-domestic structures. At Barnhouse, also ideologically powerful and with a regional focus, it was employed to effect control socially, politically and economically. This, and its close association with Maeshowe, point to an appreciation of death and ancestors having been a central influence manipulated shamanistically.

33.3 PHASE 3

The size and nature of the Wessex and Brodgar Complexes illustrate the degree to which ideology intensified in this Phase. The evidence confirms that where ideology is evident in the archaeological record, shamanistic practices were influential; and emphasises the ideological context of settlement foci, networks and controlling agencies.

While variation was apparent in the extent to which a more settled way of life was achieved, the overall effect was to bring dispersed communities together longer-term into specific culturally-charged locations. Each Complex was associated with some form of settled life. Full-time sedentism was preceded by permanent ceremonial structures and as ideological foci. The evidence also indicated that settled life did not necessarily

equate precisely with the criteria for settled life, i.e., living permanently in durable structures on one site; rather, there was flexibility in the way these might be exhibited.

The Complexes were ideologically designed to revere the dead as ancestors within generally accepted cosmological beliefs and practices. The selected ceremonial locations were considered to be traditionally important places to be enhanced monumentally. In doing so, they extended ideo-political control over large numbers of people occupying different positions along the sedentism continuum, as seen with the difference in between settlement types at Durrington Walls, around Avebury and in Orkney. Construction materials point to a focus referencing people from widely dispersed and distant locations, and not just parochial. In short, associated sedentism might be termed 'psychological' in that people, while continuing to pursue a way of life that involved an element of mobility, were ideologically tied to the Complexes. This permitted effective social control in a semi-sedentary context.

The monuments were the domains of powerful individuals and/or groups exploiting shamanistic practices to establish power relations, their presence and influence reflected in the treatment of those selected to make them ancestors, and entoptic decoration of tombs and related artefacts. Astronomical orientation of monuments points to concern for control over the knowledge and ordering of time linked to the ancestral world that the structures 'captured' to determine the organisation of the ceremonial round. By merging the concepts of ancestral, celestial and temporal power, those in control could claim their authority to be quasi-divine.

Societies associated with these Complexes appear to have been unified and stable, with monument building the focus for ritualised competition, possibly associated with changing ideology. Shamanistic behaviour appears prominent in this. The participatory and staged nature of monument construction left it open for uneasy competition between participating groups and their leaders, especially with respect to the impressiveness of their respective contributions. Massive, ideology-related monuments, construction of which required co-operation and contribution of substantial energy expenditure in labour and resources on the part of regional communities, could only have resulted from centralised political authority, and the firm basis of this was ideology. These projects constituted a particularly effective strategy for ensuring regular aggregation of communities on a regional basis, engendering cohesion, and encouraging settled life of some form.

PART D

CONCLUDING STATEMENT

D Study Review and Assessment

Chapter 34 STUDY REVIEW AND ASSESSMENT

34.1 MODELLING

Development of a general model to explain the transition to sedentism, one applicable to any situation, has been this study's purpose. The underlying premise saw sedentism having emerged as the strategy employed by powerful individuals to achieve social control, this based on institutionalisation and manipulation of ideology. Accordingly, the ideopolitical nature of cultural elements — social, economic, and political — integral to the transition has been explored among societies who experienced the profound changes involved. Shamanism was considered to be the driving force behind the transitional process; and the apparent all-pervasive nature of ideology during the transition evident from the Southwest Asia research reinforced this, facilitated and maintained by the generation of ongoing socio-ideological stress.

Support for the model is seen in the positive correlation between the key trends of decreasing mobility; the importance of 'place'; intensification and manipulation of ideology; and increasing social complexity and individuality. As emphasised throughout, ritual specialists, be they shamans or individuals appropriating shamanism, are perceived as providing the essential conduit between people and the controlling supernatural powers, and exercising significant social power. Integration of ideological practice and understandings in all aspects of cultural behaviour, together with ritual and ceremonial activity designed to maintain harmony with the supernatural realm, points to shamanism having had particularly strong influence on transitional developments, intensifying progressively to provide the foundation for eventual powerful ceremonial centres. People are seen to have been circumscribed both psychologically and ideologically. As stated by Emerson *et al.* (1999:250), the creation of hierarchically institutionalised inequality raised questions of power and ideology — i.e., domination as ideological manipulation and physical coercion. The active role of ideology as a force of social control and power is identified.

Commonality in ideology manifestation, such as observance of cosmological principles, 'place', formal site planning, relationship with the ancestors, social inclusion and exclusion, and monumental architecture, confirmed ideopolitical control. The influence of ideology was clear with site selection in Phase 1, increasing in intensity during Phase 2 with the appearance of villages, and significantly more so with the megalithic foci of regional settlement in Phase 3. The higher levels of the latter was reflected in wider

territory and larger number of communities under centralised social control. These developments paralleled progressive reduction in mobility and change in the way people came together and remained so. Even where communities were not large, there was regular and co-operative aggregation, the motivation being ideology-based as was leadership and co-ordination.

The major tenet of the three-phase transitional model presented is that where ideology is evident in the archaeology, shamanism was influential and pivotal. SWA research identified a nexus between increasing intensity of shamanistically manipulated ideology and progressive decrease in mobility during the transitional process leading to permanent settlement. The BI case study confirmed this, emphasising the ideological context of the central foci and controlling agencies of sites. Behavioural trends became more developed throughout the Phase 1-3 sequence, despite site context and location. While some variation was evident among the subregions in a number of aspects, particularly in the nature of the more settled way of life achieved, the overall effect in each was to bring dispersed communities together long-term, ideopolitically controlled in geographically confined contexts, by site or wider location. People were being aggregated more regularly and co-operatively, this clearly facilitated by ideology. The British data, however, while validating the model, also indicated that settled life did not necessarily equate precisely with the criteria of settled life having people living permanently in durable structures on the one site; rather, there was flexibility in the way these might be exhibited. This is evident with the Wessex, Orkney and Boyne complexes: monumental central places commanding within their respective ideological catchments communities involved in a range of mixed-farming pursuits. Probably germane was the immediate siting of the complexes (e.g., the chalk uplands of Wessex) not being as conducive subsistence-wise to occupation as were the fertile soils of the riverine lowlands (e.g., the Greensand bench of the Vale of Pewsey) highly suitable for agriculture and settlement.

34.2 SEDENTISM

34.2.1 The Other Dimension

With permanent settlements in Southern England noticeably absent, yet cultural behaviour tending to proceed in accordance with the model, the thought arose as to what 'sedentism' might have meant in the minds of the people, and, in particular, those of pursuing social control. If, rather than a permanent physical occupation of one site it was a psychological concept whereby otherwise dispersed, independent groups identified in some sense as a cohesive, co-operative communities while retaining some degree of mobility but within a more limited area, then it would follow that shamanistic objectives

could still be achieved and relationships with particular ‘places’ maintained through incorporation in the reduced zone of mobility. With ideology seamlessly embedded in all aspects of life, such communities would have been manipulated in the same way as those more sedentary. This scenario, in which permanency relates to repeated use of a combination of a small number of associated sites, all of which tended to be utilised year-round and jointly constituted the ‘settlement’, accords with the literature relating to the British Isles (Bradley 1978); and, indeed, Eastern North America (Mehrer 1995). Achieving social control, however, would have been more difficult where the resource base was ‘on the hoof’, as appears to have been the case in Southern England, and to some degree in the Boyne.

34.2.2 Recognising Incipient Sedentism

Edwards (1989:38) has written about problems in recognising early trends toward sedentism, pointing out that many of the material markers show overlap with former Pleistocene sites or recent mobile sites, making difficult their identification as novel developments. He considered that it may be necessary to concede that the characteristics of early sedentary sites near the mobile/sedentary transition were strongly influenced by particularistic local, historic developments, rather than characteristics stemming from universal organisational principles underlying sedentism. He saw it difficult to discern any of the latter which have been unequivocally identified. The findings of this study, however, would suggest otherwise. First, it has focused on ideology and related behaviour through its physical manifestation, rather than the appearance of sedentism *per se*. Second, it has identified incipient trends in the transition to sedentism by working backwards from later periods in the transitional process, by which time they had become more readily identifiable.

34.3 COMMENT

34.3.1 The General Model

Development of the model has permitted identification and explanation of diverse but interrelated data, showing them to represent parts of a coherent, rational whole — a shamanistically manipulated, transitional process. Its various expectations translate as relating to shamanistic objectives. As a result of cultural, environmental and historical factors, it was not expected that all features incorporated in a model based on data from one region, Southwest Asia, would necessarily be present in the transitional process of other regions. What **was**

expected was that particular features and combinations thereof would underline similar, general trends leading to sedentism regardless of location.

Approaching sedentism from a perspective centring on the emergence of behaviour and practices of shamans and subsequently others as influential individuals in their own right, and arguing that this has been a common factor operative in all centres that experienced this cultural development, poses the questions of how such dominance and manipulation could have grown out of a hunter-gatherer society traditionally held to be egalitarian; and how sedentism could have emerged in so many widely separated and environmentally different locations worldwide. These issues have been effectively addressed.

Developing the model, however, has not simply been a reconceptualisation of the sedentism–food production nexus, the institutionalisation of social inequality, or the coupling of social differentiation and hierarchy. Diversity has had to be accommodated. This emphasised the fact that to work, the model had to be general; and that the key elements can vary in nature while having the same end result. The BI archaeology supports the model and its application to the developmental complexity evident there in distinctive regional variation.

34.3.2 Last Words

Many will regard this study as having been hurried, and ideas and directions argued too far. Provocative conclusions, however, stimulate formulation of even more provocative problems which, in turn, encourage thinking outside the traditional envelope through a critical and analytical approach.

The study has put paid to the views noted earlier that “the soul leaves no skeleton” or was “a code in their minds, and we can’t predict it or produce it again”. At the same time it has validated the Noble and Davidson (1996:227) argument that an archaeological record does not speak for itself and must be interpreted; and that of Paddayya (1980:624), who considered the archaeological record can be made to yield information about the nonmaterial aspects of past cultural systems. The approach taken has moved away from dealing with material evidence alone, as if it were some externalised and objective record of a past human process, and permitted, in the words of Barrett (2005:35), “recognition that the material was implicated in the creation of past human subjectivities”. The archaeology has been teased out to support the proposition that shamanism lay behind and provided the impetus for the transition to sedentism.

APPENDICES

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DEMARRAIS, CASTILLO AND EARLE (1996) MATERIALISATION OF IDEOLOGY COMMENTATOR COMMENT

Criado (1996:54-55) ... DeMarrais *et al.* deal only with the processes of materialisation that effect ideological finality; and that in taking into account the relationship between ideology and thought it was important to recognise that materialisation is not just an active process, instrumental to institutionalising and extending an ideological domination, but also allows the objectification and expression of thought. Materialisation of the mind is a means by which symbols can become a practical condition of the production and reproduction of social reality.

Frizzi (1996:61) ... While societies have various sources of power, it is ideology that gives them consistency and continuity.

D'Altroy (1996:55) ... Ideas do not need to be converted into material form to provide social power. Reference to authority, such as genealogical reckoning or citation of origin myths, may carry powerful weight in political negotiation but may not be visually evident.

Gilman (1996:57) ... The significance of coercion as a power source in that it has been directly enshrined in, for example, the consecration of weapons in burials; blood glyphs on stelae; and ritual sacrifice.

Hodder (1996:57-58) ... In addition to emphasising individual agents when accounting for social change, there is need to talk about the individuals themselves. While ceremonial events and other materialisation can create a shared experience, they can also divide. Additionally, material symbols can become distant from their producer or “author”; and through time it becomes “notoriously difficult” to control other readings and interpretations of the same monument or artefact. It is not enough to control materials; meanings, too, have to be maintained in the face of alternative and contested interpretation. DeMarrais *et al.* do mention repetition, staging, skilled performance, drama, acting and narrative; which are essential building blocks in the transformation of a cognitive model into a lived experience.

Schortman *et al.* (1996:62) ... While symbolic representations are resources used by elites to gain and protect power, icons/physical symbols, once materialised, have lives of

their own. They are always subject to open or surreptitious interpretation and can become weapons of the weak.

Trigger (1996:63) ... Religion was important in the early civilisations not simply because it legitimated the power of elites but because it placed human society in a cosmic framework which defined the rights, duties and responsibilities of its various orders.

Zeitlin (1996:64) ... Materialisation of ideology is a powerful tool enabling a society's elite to establish and maintain a desired order of political economy, but uneasy about the argument that power through control of ideology depends primarily on materialisation. While domination of commerce and large-scale labour efforts does endow the elite with a power-conferring monopoly over exotic or monumental materialisations of ideology, it is also the case that among the oppressed of a society the communication of ideologies of resistance and rebellion through speech, dramatization, dance, and the like, can be equally compelling non-materialised sources of power.

LEPENSKI VIR IDEOLOGICAL RELATIONSHIPS

Lepenski Vir lies on a narrow raised terrace of the Danube River backed by difficult terrain within the Djerdap Gorge (otherwise known as the Iron Gates). The site overlooks and gets its name from the great whirlpool in the middle of the Gorge. On the opposite bank and overlooking the site is Treskavac, a bare cliff rising to 679m above the river (Fig. B.1) (Srejović 1972:11-34, 45-46). Given worldview understandings, it is reasonable to see the river, but particularly the whirlpool and the dominating bare cliff, having established the location as a 'place', and one engendering ever-present social tension. Srejović has commented that the restricted nature of the site would have provided "no atmosphere of complete security, for the wayward river must have appeared as a continually present danger". Furthermore, the 'greatness' of the whirlpool and the dominating presence of Treskavac would have served to emphasise the special nature – the sacredness — of the site. Attention focuses on the first two occupational levels, Proto-Lepenski Vir and Lepenski Vir 1.

The first settlement at the site, Proto-Lepenski Vir, covers a concave strip along the river bank for about 90m, its width in the central part being about 12m gradually decreasing towards the periphery. Boundaries of this occupation are irregular and dwellings appear to have been temporary and "impoverished". The evidence is that they were rounded, forming a circle, an ellipse or some allied shape — most probably egg-shaped — fitting into the pockets and recesses of the rock shelf on which they sat (Srejović 1972:45-47). About 20 dwellings have been identified which, with reuse of the limited plots at this confined site completely compressed by the natural surroundings, would suggest occupation by more than one band of people.

Lepenski Vir 1 occupation followed, its first building phase (LV1a) consisting of a dense mass of at least eighty-five structures in an area of *c.*2000m² indicative of a considerable increase in the number of people aggregating the site. This phase also saw a change in the basic form of architecture from circular to trapezoidal that was to remain unaltered during the subsequent four phases of that occupation level (Fig. B.2). This is considered not to have been a sign of creative incapacity but acceptance of objective values at the time of the initial cultural upsurge. Dissatisfaction with the existing conditions of life resulted in the people creating a new world primarily expressed in fresh architectural forms (Srejović 1972:49-50). While this change was not only dramatic, but clearly one

of significance, Srejović (1972:50, 77) saw it simply representing a sudden change in the relationship between people and their surroundings. He added that the shape has no model in nature, and that it was “useless” to seek the source of inspiration for the architecture in any of the earlier or contemporary cultures of the Eurasian region.

It appears glaringly obvious, however, that the *trapezoidal or fan-like house shape reflects that of the Treskavac cliff face* — a deliberate attempt by the people to establish a close relationship with the spirit world that would have been perceived manifest in it (i.e., by symbolically bringing the feature into their dwellings). This they emphasised by using stone of the colours to be observed in the cliff. The same ideology can also be discerned in the egg-like shape of the remains of the Proto-Lepenski Vir settlement (i.e., narrowing to the top, flaring at the bottom); and in the trapezoidal shape of the rock slabs selected for hearth construction at the time. Particularly noticeable is the appearance, beginning in LV1a and continuing through the subsequent phases LV1b, LV1c, LV1d and LV1e, of dwellings/structures much larger than others and centrally located. It can readily be seen that: LV1a has one (No.54a); LV1b has one (No.54) superimposed on No.54a of the previous phase; LV1c has one (No.54) but with three others (No.27b, No.37, No.3) emerging as a middle level of structures in terms of size; LV1d has two (No.27a, No.37), apparently equal in importance; and LV1e has a wide range of structure size but with a single, very much larger unit (No.57).

Given the apparent role played by ideology throughout all phases of Lepenski Vir occupation, it is reasonable to look for it in the nature and purpose of these larger structures. Of particular interest is evidence for personal and group individuality. In the case of the sole large structures, if they did not accommodate a single person or family group, access would have been restricted because not everyone in the respective communities could fit into them at any one time. Association with shamans alone or influential community members as emerging elites are strong possibilities. More than one such structure suggests heterarchy and competition, particularly where the site plan exhibits polarisation as with LV1d. In this context, LV1a-LV1d would appear to represent continuum development. The single, central, but very much larger dominating structure in LV1e, suggests changed ideology and return to strong, single-level social control of the settlement.

REDACTIONS

Fig. B.1 Lepenski Vir site (Serbia) ref: Srejović 1972

Fig. B.2 Lepenski Vir site (Serbia) settlement patterns during occupation phases LV1a-LV1e
ref: Srejović 1972

**THE SACRED IN HUMAN EVOLUTION
ROY RAPPAPORT POSITIONS**

Rappaport (R) positions 1-35 summarised from his 1971b paper are set out below.

Page numbers referencing the respective views are indicated.

-
- R1 Corrective programs undertaken to return deviating components of adaptive systems to a safer state, make compensating changes elsewhere in the system or initiate changes in organisation (p24).

 - R2 As living systems increase in complexity there is increasing differentiation of special purpose subsystems within them. Concomitant with this progressive segregation of subsystems there is also likely to be progressive centralisation of control functions (p24).

 - R3 Romer’s Rule quoted states that “the initial survival value of a favourable innovation is conservative in that it renders possible the maintenance of a traditional way of life in the face of changed circumstances” (p24).

 - R4 Rituals are conventional acts of display through which one or more participants transmit information concerning their particular states either to themselves or to one or more of their participants (p25).

 - R5 Both content and occurrence of rituals may be of importance in communication. As far as content is concerned, information concerning social arrangements may be communicated in the course of public rituals, as may quantitative information. The role of ritual occurrence is more subtle. It may be a simple quantitative representation of complex quantitative information; or put differently, the occurrence of ritual might summarise complex analogic information and translate it into a simple digital symbol. The virtue of ritual is that it reduces ambiguity in information, enhances operation of communication systems, and aids in the transduction of information between unlike systems (p26).

 - R6 Whereas other modes of communication are more or less strictly discursive (i.e., use of language), ritual is, in part, nondiscursive. The nondiscursive aspects of a ritual (e.g., music, special postures, gestures or body movements) are likely to evoke in participants and observers strong emotional states (e.g., reverence, ecstasy, commitment). Hence, to transmit a message in ritual is not only to transmit the information contained in that message but also to transmit a nondiscursive or emotional message about that information. The medium is not the message; it is a metamessage (p28).

 - R7 To sanctify messages is to certify them by associating them with the unquestionable truthfulness of ultimate sacred propositions (p29).

 - R8 Religious rituals are more special. They are sacred, and the sanctity of the ritual also constitutes a metamessage concerning social information transmitted in the ritual. Their sacredness relates to the quality of

unquestionable truthfulness imputed by the faithful to unverifiable propositions (p28).

- R9 Religious rituals always include, in addition to messages of social import, implicit or explicit reference to some idea, doctrine or supernatural entity. The explicit purpose of such (ultimately sacred) propositions is to worship the deities named or to affirm the doctrine enunciated (p29).
- R10 Ultimate sacred propositions have no material referents. They are not amenable to verification, but neither are they vulnerable to falsification (p29).
- R11 Ultimate sacred propositions may, outside rituals, sanctify messages directly important in the regulation of society. The sacred thus escapes from strictly religious contexts; and messages concerning economic arrangements, political authorities and other social conventions may, in fact very likely will, be sanctified (p29).
- R12 Human organisation is based upon language (i.e., symbolic communication). In symbolic communication, signals are only conventionally related, and not intrinsic, to their referents. The advantage of symbolic communication is that it frees signals from the constraints of the present and permits discourse upon the past, future, distant, imaginary, and hoped for. However, if signals are only conventionally related to their referents, they can occur in the absence of their referents, and their referents may occur without a signal being transmitted. Therefore, lying becomes possible (p29-30).
- R13 The operation of any society depends upon some degree of orderliness and predictability. To the extent that people are more willing to accept sanctified than unsanctified messages as true, their responses to the former will tend to be predictable and the operation of society orderly (p30).
- R14 What seems common to religious experiences is that they are not discursive. They are emotional. Since they are not discursive they cannot be discredited by reason. The truth of such an experience seems to the communicant to be sufficiently demonstrated by its mere occurrence, and since a sacred proposition or its symbol (e.g., the cross) is taken to be intrinsic to the experience, the sacred proposition partakes of this often powerful and compelling sense of truth (p31).
- R15 In the course of human evolution, problems seem to have emerged with social differentiation and craft and subsistence specialisation. When discrete social groups become closely identified with particular special-purpose subsystems of a society, they tend or attempt to elevate the more or less narrowly defined interests of their group to positions of predominance in the larger system of which they are merely parts (p33).
- R16 Sanctity has quite clearly had an important, even predominant, role to play in containing the self-interest pursuits of individuals and social groups, and in supporting conventions regulating society. These are problems inherent in hierarchical relations (p33).
- R17 Domains of the lowest-order controls include the concrete variables of the general physical, biological and social environment. Those of the higher-order controls include outputs of the controls on the next lower-order for which they set output reference values. For instance, a production quota (an output reference value) is not likely to be set within a production system but to emanate from the controls of a more inclusive system (a subsistence

system) which regulates relations among the outputs and demands of its several subsystems (p34).

- R18 Cognised models in higher-order controls are likely to contain more abstract and fewer concrete terms than do those of lower-order controls (p34).
- R19 The contents of the cognised models which maintain community coherence within viable limits are likely to include yet more abstract terms such as honour, prestige, and freedom; and gods, ghosts and demons. In other words, the higher the level of control, the greater the importance of moral and mythic terms in its cognised model; and the more arbitrary the particular control mechanism (p34).
- R20 Arbitrariness invites criticism and recalcitrance; however, to phrase regulation in moral or mythic terms (i.e., to sanctify it) is to place it beyond criticism and to define recalcitrance as sacrilege. Sanctification transforms the arbitrary into the necessary, and regulatory mechanisms which are arbitrary are likely to be sanctified (p35).
- R21 The structure of control hierarchies is heterarchical (p35).
- R22 Through sanctification the purposes of higher-order systems may be injected into lower-order systems. Sanctification operates as a counterthrust to attempts by other individuals or social groups to promote their own purposes and achieve positions of dominance in higher-level systems. In slightly different terms, sanctity helps to keep subsystems in their places (p36).
- R23 To invest social conventions with sanctity is to hide their arbitrariness in a cloak of seeming necessity (p36).
- R24 Conventions, to the extent sanctified, are likely to be taken by those subject to them to be as 'natural' as if they were genetically determined. Indeed, they seem not to be mere conventions but reflections of human nature, and those who flaunt them are considered less than human (p36).
- R25 To sanctify conventions is also to ameliorate, at least partially, the conflict between the individual and society. Interests and needs of the society are presented to the individual as his own ultimate interests and needs, and his inconveniences and sacrifices on behalf of the society rewarded symbolically. Recalcitrance, selfishness and resentment thus are rewarded by docility, compliance, co-operation, altruism, commitment and enthusiasm (p36).
- R26 In accordance with Romer's Rule, while the initial survival value of the concept of the sacred was conservative, it subsequently made possible the great range of new organisational forms based upon symbolic rather than genetic specification and transmission (p37).
- R27 The role of sanctity changes in the course of sociocultural evolution. In many technologically simple societies there are no authorities with sufficient power (i.e., men, resources and organisation) to coerce compliance with the norms of proper social behaviour. In such societies, sanctification of norms goes far to ensure that they are honoured. Sanctity, thus, is a functional equivalent of political power among some people. We can distinguish among past and present human societies a continuum from those governed largely by sacred convention (e.g., Australian Aborigines and New Guinea Highlanders), through societies in which authorities have little power but claim great sanctity. This continuum seems to be correlated with

technological development which is expected. Technological development places increasingly powerful means of coercion in the hands of authorities, and very powerful authorities consequently have less need for sanctity than weaker ones (p37).

- R28 As well as their informational aspects, rituals may do more than communicate information. They may constitute corrective programs (i.e., sets of actions such as food distribution or sacrifices) which return deviating variables to desired states. In some cases, ritual regulation is time-dependent (i.e., undertaken at fixed intervals); in others it is variable-dependent (i.e., in response to changes in the state of a regulated variable). The virtue of regulation through religious ritual is that the activities of large numbers of people may be governed in accordance with sanctified conventions in the absence of powerful authorities or even of discrete human authorities of any kind. As such, it is plausible to argue that religious ritual played an important role in social and ecological regulation during a time in human history when the arbitrariness of social conventions was increasing but it was not yet possible for authorities, if they existed at all, to enforce compliance (p38).
- R29 Discrete authorities who can respond immediately, proportionally, and perhaps in innovative ways to systemic disturbance, are much finer regulating mechanisms than ritual cycles, and the emergence of such authorities surely constituted an evolutionary advance in which sanctification also played a part. Messages such as “The chief has great mana’ and “Pharaoh is the living Horus” imply, at the least, that the directives of the authorities named are to be obeyed. Such messages further indicate that the regulatory prerogatives of these authorities stood at least partially on sanctity rather than power. Sanctity, it may be suggested, has permitted the progressive centralisation of regulatory hierarchies in circumstances in which the ability of authorities to aggregate power is limited (p39).
- R30 Sanctity may have permitted the emergence of discrete authorities. It is important to remember that archaic states were, at least at the outset, theocratic. Furthermore, it can be argued that their sanctity made it possible for early authorities to begin to command men and control resources that eventually provided them or their successors with actual power (p39).
- R31 Sanctity is much less expensive than police, and no society can stand only upon the threat of force. The observation is that sanctification presents to the individual as his own goals those of the society (p39).
- R32 In technologically simple societies whose authorities, in the complete or relative absence of power, stand upon their sanctity, the sacred and the numinous form part of an encompassing cybernetic loop which maintains homeostasis among variables critical to the group’s survival. In such societies the prerogatives of the authority derive from association with ultimate sacred propositions, but the unquestionable status of the latter depends upon the sense of the numinous, the affective religious experiences of the faithful. Inasmuch as the religious experience is an intrinsic part of the more inclusive emotional dynamics of the organism, it is at least plausible to assume that religious experiences are affected by material conditions. In technologically undeveloped societies, however, the latter are at least partially a function of the control hierarchy that the religious experience itself supports. It may be that the willingness, indeed ability, of members of the congregation to affirm through religious experience the propositions that sanctify the control hierarchy, is in some degree a function of the hierarchy in

maintaining homeostasis in and around those variables crucial to the congregation's survival (p40).

- R33 Should the authority be ineffective or repressive for a protracted period, it may be faced with a revitalistic movement. In such, men sometimes withdraw the emotional support generated in their religious experiences from the sacred propositions ratifying existing authorities or regulatory institutions, and bestow it upon new sacred propositions, enunciated by prophets, mystics or messiahs, legitimising new authorities or institutions (p40).
- R34 When because of technological development it became possible for authorities to stand upon power rather than sanctity, they did not dispense entirely with sanctity. Rather, the relationship between sanctity and authority changed. Whereas the unquestionable status of ultimate sacred propositions previously rested upon affirmation through religious experiences of the faithful, it now came to rest, overtly or covertly, upon force. Whereas previously authority was contingent upon its sanctification, sanctity now became the instrument of authority (p41).
- R35 Revitalistic movements have frequently been as maladaptive as those to which they are a response, but nevertheless they may be regarded as a means, as old as religion (which is possibly to say as old as man), by which social systems that have become too rigid to correct themselves by other procedures are ultimately corrected (p42).

THE SACRED IN HUMAN EVOLUTION ROY RAPPAPORT AND STUDY MODEL PARALLELS

Summarised versions of Rappaport's views (R1-35) from his 1971b paper provided at Appendix C, are set out below couched in terms of power being wielded in a community by an agent of influence. Underlinings and italicised inclusions serve to reflect study context without altering the Rappaport statement concerned.

.....

- R1 Action taken to introduce new behaviour or bring that existing into line with desired objectives (*e.g., by changing traditional subsistence practice*), while maintaining system homeostasis, requires compensating changes elsewhere in the social system, or changes in organisation.
- R2 As social systems increase in complexity there is increasing differentiation of special purpose subsystems (*and associated individuals/groups*) and progressive centralisation of control within (*and by*) them.
- R3 Acceptance of innovation in a social system depends on its conservativeness in that it initially renders possible continuation of the traditional way of life in the face of changed circumstances (*e.g., encouragement by shamans and other agents of influence for surplus production and/or the foregoing of some resources, and the introduction of storage for their personal appropriation, needing to be couched initially in terms of community subsistence stability*).
- R4 Rituals are conventional acts of display through which participants transmit information concerning their particular states (*e.g., shamans in trances; emotional behaviour of other agents of influence*).
- R5 The virtue of ritual is that it enhances communication by reducing ambiguity in the information (message) being transmitted and aiding transduction of information between unlike systems (*e.g., the perceived cosmos and the real world*).
- R6 Ritual is, in part, nondiscursive and includes elements such as music and dance likely to evoke in participants and observers strong emotional states such as reverence, ecstasy and commitment. Hence, ritually transmitting a message (information) also tends to send an emotional message (or metamessage) about the information concerned (*i.e., engendering in participants binding emotional co-operation in programs promoted by shamans*).
- R7 To sanctify sentences is to certify them by association with the unquestionable truthfulness of ultimate sacred propositions (*i.e., they become directives, though subtly so, that must be carried out*).

- R8 Religious rituals are special in that they are sacred. Their sanctity constitutes a metamessage concerning the social information transmitted and relates to the unquestionable truthfulness imputed by the faithful to unverifiable propositions (*i.e., providing the firm basis for exploitation, on which shamans and other agents of influence depended*).
- R9 Religious rituals always include, in addition to messages of social import, implicit or explicit reference to some idea, doctrine or supernatural entity to affirm the doctrine enunciated (*i.e., shamans were able to exploit their believed capacity not only to physically contact the controlling supernatural beings but also to argue and mediate. Agents of influence came to assume their own divinity*).
- R10 Ultimate sacred propositions have no material referents. They are not amenable to verification, but neither are they vulnerable to falsification (*i.e., an unassailable strategic platform for community manipulation*).
- R11 Ultimate sacred propositions may, outside rituals, sanctify messages directly important in the regulation of society. The sacred, therefore, escapes from strictly religious contexts, and messages concerning economic arrangements, political authority and other social conventions may, and in fact very likely will, be sanctified. (*i.e., manipulative programs across the spectrum of community activity would be assured of adoption regardless of apparent arbitrariness or obvious exploitation*).
- R12 Symbolic communication frees signals from the constraints of what is present and permits discourse upon the past, future, distant, imaginary and desired. However, if signals are only conventionally related to their referents, they can occur in their absence, and referents may occur without a signal being transmitted thus making lying possible (*i.e., agents of influence could provide their directives with whatever backing/justification considered necessary to ensure co-operative compliance*).
- R13 To the extent that people are willing to accept sanctified messages as true, their responses will tend to be predictable and the operation of society orderly (*i.e., it was possible not only to alter traditional behaviour but to do so in terms of a strategically planned overarching program of change*).
- R14 Since religious experiences are emotional and not discursive, they cannot be discredited by reason. Their perceived sacredness makes for a powerful and compelling (*i.e., motivating*) sense of truth.
- R15, 21 In hierarchical social structures when discrete groups for some reason become influential in their own right, they tend or attempt to elevate their status and more or less narrowly defined interests to positions of predominance and control. The structure of such control hierarchies is heterarchical, *resulting in a number of competing groups within communities*. Sanctity may have permitted the progressive heterarchical development (*as a result of the part played by particular groups, such as having earlier been in the service of shamans*) limiting the ability of authorities to accumulate power.

- R16 Sanctity has an important, even predominant, role to play in assisting leaders in hierarchical situations to contain the self-interested pursuits of social groups and other individuals, and in supporting conventions regulating society. Sanctification operates as a counterthrust to attempts by other individuals or social groups to promote their own purposes and achieve positions of dominance in higher-level systems (i.e., it helps to keep subsystems in their places). *This provided substantial support for agents of influence in maintaining their position of supreme authority.*
- R17 Control of the lowest-order of authorities (power) in a society relates to the concrete variables of the general physical, biological and social environment. Higher-order authorities control the output of the next lower-order for which they set output levels and values. *Agents of influence were able to tailor resources/wealth production to their needs (e.g., prestige-earning redistribution and gifting).*
- R18, 19 More abstract and fewer concrete terms are likely to be associated with rituals concerned with higher-order authority than for lower-order control. Rituals which maintain community coherence within viable limits are likely to even more abstract terms such as honour, prestige, and freedom, and gods, ghosts and demons (i.e., the higher the level of control, the greater the importance of moral and mythic terms, and the more arbitrary the particular control mechanism). *Such abstractness would have heightened perceived importance of directives given and strategies introduced by shamans, countering any perceived arbitrariness or unfair imposition.*
- R20, 23 Arbitrariness in regulation invites criticism and recalcitrance from community members affected; however, when such regulation is couched in moral or mythic terms (i.e., sanctified) it is placed beyond criticism and any recalcitrance considered sacrilege. Sanctification transforms the arbitrary into the necessary. To invest social conventions with sanctity is to hide their arbitrariness in a cloak of seeming necessity. *Without this facility there would have been no community coherence, co-operation or, indeed, aggregation. Groups would simply have opted for the traditional response to pressure being put on them — fissioning.*
- R22 Through sanctification the purposes of higher-order authority may be injected into lower-order systems (e.g., *production of high value nonutilitarian goods for trading and extending political and ideological influence*).
- R24 Sanctified social conventions are likely to be taken by those subject to them as ‘natural’, as if they were genetically determined, not mere conventions but reflections of human nature; and people not conforming considered to be less than human. *Such conventions included internal spatial arrangements of dwellings and related people protocols, and the inclusiveness/exclusiveness of sacred locations (e.g., ceremonial centres).*

- R25 To sanctify conventions is also to ameliorate, at least partially, conflict between the individual and society. The interests and needs of society are presented to the individual as ultimately being his own, and his inconveniences and sacrifices on behalf of society symbolically rewarded. *In this way, people could be convinced that they were working not only co-operatively but directly with the controlling supernatural entities in terms of what the latter wanted/required.*
- R26 The concept of the sacred made possible a great range of new organisational forms based upon symbolic rather than genetic specification and transmission. *Being sacred released directives and desired outcomes from traditional constraints, and justified as well as authorised new and different approaches to behaviour.*
- R27 Sanctity is a functional equivalent of political power among some people. *In many technologically simple societies there are no authorities with sufficient power (i.e., men, resources and organisation) to coerce compliance. The traditional hunter-gatherer way of life did not require the political authority demanded by such radical a change to traditional behaviour represented by sedentism. Strategies not known before had to be developed and implemented with people never having experienced the change and change processes involved.*
- R27 Technological development places increasingly powerful means of coercion in the hands of authorities, and very powerful authorities consequently have less need for sanctity than weaker ones. *The ability to create megalithic structures never before seen would have confirmed in the minds of the general populace not only the capability of those concerned but also their considerable power and authority.*
- R28 Religious ritual played an important role in social and ecological regulation during a time in human history when the arbitrariness of social conventions was increasing but it was not yet possible for authorities, if they existed at all, to enforce compliance. *For this reason, action by shamans early in the transitional process encouraging people to aggregate is seen to have been ritually based.*
- R29 Discrete authorities, who can respond immediately and perhaps in innovative ways to systemic social disturbance, are much finer societal regulating mechanisms than ritual cycles (*i.e., responses and actions can be better tailored to particular situations than ritual messages and performances*). The emergence of such authorities (*agents of influence such as shamans and elites*) constituted an evolutionary advance in which sanctification also played a part. Their regulatory prerogatives stood at least partially on sanctity.
- R30 Sanctity may have permitted (*did permit*) emergence of discrete authorities and made possible for them to begin to control people (and elites) and resources, eventually providing them with actual power. *It was, however, the combination*

of cunning with sanctity that made for real effectiveness in control and manipulation, and permitted consolidation of powerful positions.

- R31 Sanctity is much less expensive than police, and no society can stand only upon the threat of force. The observation is that with sanctification the individual perceives his goals to be those of society. *This study sees it more likely that while the individual may represent his goals in this way there are more ambitious selfish motives involved.*
- R32 In technologically simple societies the unquestionable status of the ultimate sacred propositions depends on the sense of the numinous, the affective religious experiences of the faithful. *This provided the springboard for shamans to emerge from traditional hunter-gatherer society and assume the role of conduit to the controlling supernatural entities.*
- R34 With technological development it became possible for authorities to stand on power rather than sanctity, which now became the instrument of that power and authority. *This occurred together with the assumption of divinity on the part of those concerned.*
- R33 Authority, ineffective or repressive for a protracted period, may be faced with a revitalistic movement. *This is seen to be evidenced in significant changes to behaviour reflected in moving from the general exclusiveness of passage tombs as ceremonial loci to the more open and inclusive nature of henges.*
- R33 Revitalistic movements withdraw support based on earlier religious experience and sacred propositions, and bestow it upon new sacred propositions — enunciated by prophets, mystics or messiahs — legitimizing new authorities or institutions. *These are reflected in developments resulting from ideas acquired externally through long-distance contact (e.g., megalithic ceremonial complexes, metalworking skills).*
- R35 Revitalistic movements are a means by which social systems that have become too rigid to correct themselves by other procedures are ultimately corrected (*e.g., by introduction of new relationships with the dead*).

IDEOLOGY: THESIS FRAME OF REFERENCE**1 SETTLEMENT**

- a. association of sites with features known to have supernatural connotation:
 - water locations (e.g., on rivers and coasts; between fresh and salt water; adjacent to rapids, whirlpools and springs)
 - locations adjacent to/with visual access to natural (ideological/sacred) features (e.g., caves; mountain peaks; high vantage points; burials)
- b. particular sites growing in size and importance at the expense of others
- c. sites being occupied for longer periods by increasingly large numbers of people despite social and other factors that would tend to militate against this
- d. area zoning within sites suggesting (among other things) different levels of inclusion and activity
- e. sites incorporating an open central zone with non-domestic features to provide for communal activity
- f. planning of sites indicating centralised influence on decision-making
- g. central-place settlement patterning
- h. structures differing in size, shape, layout and content to those domestic, suggesting different functions and special occupants (e.g., shamans; hierarchic and heterarchic leaders)
- i. structural features exhibiting worldview influences (e.g., conforming to the cardinal directions)
- j. isolated structures suggesting isolation of particular individuals, practices and objects
- k. effort having been put into special features (e.g., drains to ensure effective disposal of 'polluting' waste from structures)

2 IDEOLOGICAL

- a. ritual, as relatively standardised religious acts which, if performed sufficiently often during occupation of a site, will appear in the archaeological record as a patterned behaviour (e.g., burial practice; visual imagery; caching and pit deposition)
- b. concern for liminal elements, especially the 'dead' as ancestors (e.g., presence of appearance of human remains in various forms at occupation sites)
- c. public architecture, impressive and obviously designed to be so:
 - functioning as a stage or backdrop for ritual displays considered important for the community to witness/experience

- identifying sacred space within the landscape
 - legitimising community 'rights' to the land by metaphorically converting nature and wilderness to culture and community
 - linking people to supernatural patronage
 - being used as a stage setting by shamans and other agents of influence for making statements about their ability to influence supernatural forces
 - being perceived as incorporating some form of power associated directly with the individuals responsible for their creation
- d. objects displaying unnecessary, non-domestic features (e.g., highly decorated and delicate ceramics)
 - e. monumental visual imagery (e.g., colossal heads; statues; altars; stelae) being employed to emphasise leadership and power, and the ideological basis for these
 - f. visual imagery (e.g., within structures; on ceramics)
 - g. task specialisation and zones specialising in production of non-utilitarian items employed in ideological administration on a regional basis

3 POLITICAL

- a. progressive change from mobility to a more sedentary way of life in association with extended periods of aggregation at sites with special physical features (e.g., caves; springs) providing evidence of ritual activity (e.g., burials; rock art)
- b. people contributing labour to create megalithic monuments without apparent coercion, this despite leaders such as priest-chiefs in all probability being awesome figures with their perceived supernatural power augmented by that of ancestors
- c. visual imagery and monuments combining depiction of individuals with supernatural representations
- d. leaders fusing sacred and secular attributes by assuming divinity and mythological/ancestor association
- e. in parallel to leaders increasing their role in maintenance of cosmic order, elites assuming authority to oversee kin-group relations among their constituents in maintaining social order
- f. widespread cultural conformity suggesting regional domination
- g. public buildings demonstrating some degree of formalised group behaviour
- h. public works projects implying community solidarity and ties with the land
- i. public architecture located on highest-level sites
- j. change in political regime reflected in the appearance/display (e.g., on equipment and monuments; in visual imagery) of the new kinds of power objects as symbols of office; and reformulation or rapid transformation of ideologies

4 SOCIAL

- a. leadership expressed in monumental structures (e.g., ceremonial centres; tombs); visual imagery (e.g., motifs and hieroglyphics); spectacular buried offerings; statues of individuals holding objects of power as symbols of office, particularly links to the supernatural; and rich iconographies
- b. presence and practices of powerful agents being indicated by particular paraphernalia; esoteric knowledge; exotic objects; visual art; and rich graves attesting to the esteem in which these individuals were held
- c. impressive costly and extravagant behaviour/displays such as expensive conspicuous consumption, costly rituals and sacrifices

5 ECONOMIC

In addition to the above direct lines of evidence for ideology in the archaeological record, a number of other features indirectly reflect the operation of ideology. These particularly concern political economy as defined and discussed by Kolata (1992:69-70): the aggregate processes of production, distribution and consumption by which populations reproduce the biological and cultural bases of society. Core elements are the mechanisms of resource production and allocation which may involve and integrate a variety of processes that do not necessarily partake intimately in the technoeconomy of production itself (e.g., the emergence and promotion of class stratification and status legitimisation, together with the panoply of economic self-interests by individuals and groups, and the generation of religious and cult behaviour to modulate group action).

5.1 Subsistence

- a. change in foraging from general hunting-gathering to intensive, broad-spectrum practices, and collection economies
- b. creation of wealth: encouragement of surpluses by influential agents (e.g., for feasting; appropriation)
- c. combination of productive activity: a mixture of agriculture and pastoralism

5.2 Technology

- a. innovation in equipment making for more effective hunting and gathering
- b. investment in pits and hearths
- c. innovation in production processes (e.g., storage; preservation)
- d. equipment associated with new subsistence practices
- e. production of high value and finely crafted objects

6 DISTANT CONTACT

- a. long-distance trade and exchange in esoteric/abstract ideas and information and exotic items.
- b. successful leaders co-ordinating and controlling interregional exchange with their peers; and sponsoring, if not dominating, long-distance trade in pursuit of sumptuary items related to status and rank

- c. unequal access to certain statuses in the society as a source of power for leaders such as the right to obtain, control, use or display certain items: raw materials (e.g., obsidian and greenstone); symbolic equipment/artefacts (e.g., religious ceramics); and substances/compounds (e.g., alcohol; tobacco; hallucinogens; precious metals)
- d. spectacular buried offerings in graves of leaders emphasising control over the importation of exotic objects/material, as well as preoccupation with supernatural power
- e. exotic items being used for community manipulation (e.g., to establish and communicate order)
- f. intra- and extra-regional exchange networks being used to extend influence/domination politically, economically and ideologically

SEDENTISM ARCHAEOLOGICAL CORRELATES

Views listed below under the respective headings represent the wide range of behaviours considered archaeological correlates of sedentism. Not all are likely to be present at any one site or in any one settlement pattern; and while no one on its own is either sufficient or necessary for recognising sedentariness, a number in conjunction can provide a strong case for settled life, particularly when in the context of sites a developmental sequence highlighting change in them over time. That said, all face some level of disagreement and divided opinion. Bellwood (2005:23), for example, recommended caution when determining whether sedentism can be firmly demonstrated, commenting that the regularly used biological indicators (e.g., bones of migratory bird species, and age profiles of mammal species with seasonal reproduction cycles) can sometimes give ambiguous results; yet Bar-Yosef and Meadow (1995:51) stated definitively that decisions in this regard need to be based solely on such biological evidence and not the presence or absence of features such as durable structures, storage facilities, burials and heavy equipment.

Correlates can be seen to fall into two broad categories: initial behavioural change in the context of pre-existing, ongoing circumstances; and subsequent developments in the context of new circumstances that are the consequence of decreasing mobility/ progression towards a sedentary way of life. It is clear that some fit well with a number of the headings used.

Where a source is not referenced, the correlate is the view of this thesis or considered to be widely accepted.

1 GENERAL CHANGE

1.1 People Behaviour

- activities that benefit from economy of scale (Lightfoot and Jewett 1982:11)
- diet change accompanied by new developments/innovation such as groundstone technology for seed grinding (Harris 1977:410)
- more complex organisational structures such as those associated with ceremonialism (Lightfoot and Jewett 1982:12-13; Service 1975:292)
- corporate endeavour such as that involved in monumental/megalithic architecture

1.2 People Circumstance

- increased social status and wealth/possession accumulation (Redman 1978:111; Smith 1976:26 and Watanabe 1968:73)
- increased complexity of political organisation due to the need to manage an increased number of people (Beardsley *et al.* 1956:150); to organise and regulate trade in subsistence and luxury goods to tie settlements

together (Rafferty 1985:141); and because of increasing ritual activity (Drennan 1976:352)

- social controls to define individual roles, social boundaries, territories, group affiliations and shared values as a result of closer contact with other communities within aggregations (Wright and Garrard 2002:277)
- health issues including increased morbidity and infant mortality, birth defects and incapacitating injury; and greater likelihood of disease arising from poor hygienic conditions through refuse accumulation (Hitchcock 1982:254-256; Taylor 1977:147-148; Watanabe 1968:74, 1977:31)
- overall increase (critical disjunction) in richness and magnitude of previously known items in the material assemblage (Edwards 1989:9, 11, 35)
- artefacts requiring an investment of labour which would be less likely in nonsedentary context
 - Rafferty (1978) referred to ceremonial structures such as mounds; Rice (1975:97, 222-226) to kivas; Beardsley *et al.* (1956:300) to heavy artefacts, pottery and storage facilities; and Schroeder (1965:300) to communal structures
 - art and symbolic objects (Hardy-Smith and Edwards 2004:258)
- more varied and numerous artefacts (Rafferty 1985:132-135; Redman 1978:107; Schiffer 1975)
 - Edwards (1989:9) noted that innovations inherent in the Natufian of Southwest Asia were seen most clearly in their diverse and extensive assemblages of flaked stone, bone, shell and groundstone implement types
- very heavy individual objects (e.g., manuports)
- larger amounts of raw material (e.g., stone) being brought on-site

2 SETTLEMENT

2.1 Nature

- periods of prolonged aggregation
 - formal artefacts of standardised morphology: curated in that they have been carefully carried from site to site, mended as necessary; possibly of relative rareness because they have a long life span; highly visible and of symbolic significance; intensified ritual in the form of decorated objects, art and ritualistic paraphernalia and artefacts of religious symbolism (e.g., rattles, modified quartz crystals, unusual stones) as this time is when most ritualistic and ceremonial activity occurs (Wadley 1987, 1989)
 - Straus (1975-76:146) also referred to the possible “magico-religious enculturational significance” of such times
 - Conkey (1980:611) spoke of the reflection of importance of ecological actors in resourcing aggregation over long periods and hence the large amount and extremely varied nature of resource

remains in the archaeological record than at other sites; decorated mobiliary and parietal artefacts; and assemblages of more different classes and features (e.g., hearths, pits) and greater diversity within these than in other assemblages

- location in relation to particular landscape elements (e.g., rivers, springs, lakes, coast) encouraged by decreasing mobility (Kesarwani 1987:70)
- ecotonal locations where several microenvironments meet permitting the resources of all to be exploited from one site (Clarke 1968:335-336; Flannery and Coe 1968; Rice 1975:97-98; Watanabe 1968:72)
- the presence of deep, dark midden deposits (Lightfoot and Jewett 1982:25-26; Rafferty 1978; Whitlam 1981:64)
- new types of settlement such as base camps (Rafferty 1985:128); ceremonial/cultic centres

2.2 Pattern

- site area: early Natufian patterns, for example, regularly attain thousands of square metres, an increase of at least an order of magnitude when compared to the sizes of preceding Epipalaeolithic settlements; succeeding early Neolithic PPNA and PPNB sites exhibited considerable further increases (Bar-Yosef 1981; Fletcher 1986)
- change in site distribution (Rafferty 1985:128)
- particular sites growing at the expense of/subsuming a number of others in the same region (Edwards 1989:10)
- nucleation where resources are concentrated and abundant due to their diversity or high productivity (Johnson 1977:489-490; Whitlam 1981; Yesner 1980)
- linkage of sites in different microenvironments into a trade network so that each has access to resources in all (Flannery and Coe 1968; Rice 1975:97)
- formal/community planning with dwellings not randomly placed but oriented in some consistent manner to one another (Beardsley *et al.* 1956:141, 143)
 - Rafferty (1985:131) considered this to aid in distinguishing a site that was continuously occupied from one that was repeatedly abandoned and reoccupied without regard to the placement of previous structures

2.3 Architecture

- durable structures
 - presence of structural dwellings supplemented by seasonal huts/sites or open-air sites (Edwards 1989:10; Kesarwani 1987:73)
 - use of pise, mud or mud bricks in construction (Kesarwani 1987:73)
 - semisubterranean/pit dwellings with significant amounts of cultural artefacts (Kesarwani 1987:73)

- greater comfort inherent in more substantial dwellings (Redman 1987:111; Smith 1976:26 and Watanabe 1968:73)
- Rafferty (1985:129) stated that people moving less frequently are expected to build more substantial houses even though they may not be settled year-round
- Edwards (1989:10) noted that while few pre-Natufian sites have yielded evidence of footings of stone structures, or even impressions of postholes to suggest durable shelters, there are some with fragments of curvilinear stone structures and many substantive elements of the later Natufian period (e.g., basalt vessels and pestles, bladelets bearing silica sheen) and evidence of the practice of subfloor burial
- communal structures such as kivas and ceremonial mounds (Beardsley *et al.* 1956:141, 143; Rafferty 1978; Rice 1975:97, 222-226)
 - Rafferty (1985:132) saw this argument as likely to apply to both dispersed and nucleated patterns as many have evidence of special places such as mounds, plazas and shrines, but noted that these are not present or easily identified until a site hierarchy has begun to develop in the settlement pattern
- structural superimposition: construction of new units or rebuilding in the same position as earlier ones, implying long-term knowledge of the position and function of previously occupied structures through long-term site occupation
- orientation to the cardinal points, astronomical features/events and ideologically important landscape elements
- correlation of house shape with settled life
 - circular dwellings are more commonly found in nonsedentary settlement patterns and rectangular houses among sedentary groups (Flannery 1973b:7; Robbins 1966; Whiting and Ayres 1968); both are readily extended to add rooms for different activities, storage or accommodate larger family units (Flannery 1972b:17)
 - incorporation of activity areas (e.g., cooking, production, storage)
 - entrances oriented to open central zones of settlements (or away from them for privacy purposes)
- structure maintenance over long periods with stratigraphic evidence for repeated occupations
- structure agglomeration
- energy/effort requirements for construction and making/accessing raw material (e.g., pise, mud brick, stone)
- architecture not related to subsistence pursuits (e.g., monumental megalithic structures)

3 POLITICAL

3.1 Power and Authority

- hierarchical and heterarchical development
 - power relations are predicated on systems that are ranked and reranked in their importance (as opposed to being counterpoised) by individuals, groups and organisations as conditions change (Crumley 1995:3)
 - while power relations in some societies are characterised by hierarchy, it is equally true that conditions, federations and other examples of shared or counterpoised power such as heterarchy exist (Crumley 1995:3)

3.2 Administration

- adjudication mechanisms required for interpersonal conflict, both within and between hunter-gatherer groups (Hitchcock 1982:254-256)
- effective management/control required for expanding, expanded community units (Lewis 1975:423; White 1977:100-102)

4 IDEOLOGICAL

4.1 Nature

- worldview (e.g., symbolism, structures, imagery)
- conceptualisation of/negotiation with the supernatural
- identification of 'places': locations of special ideological significance

4.2 Practice

- intensification of public ritual/ceremony (Lightfoot and Jewett 1982:11)
- integrated settlement: small settlements tied together ideologically in order to maintain social units (Stark 1981:364; Voorhies 1978:18); this might be applied to nucleated patterns (Drennan 1976:352)
- symbolism reflected in parietal and mobilier art
- shamanistic behaviour central to all activity
- burial
 - large cemeteries (Kesarwani 1987:67): Edwards (1989:9, 12) stated that Natufian occupations of Southwest Asia were accompanied by a great increase in burials and in terms of the number of individuals per interment
 - burial of nonsedentary hunter-gatherers rarely displays more than age and sex differences in grave accompaniments (Binford 1971:18-20; Rothschild 1979)
 - mortuary practice involving elaborate and lengthy rituals: Edwards (1989:9, 12) commented that Natufian rituals were more elaborate

than those known earlier in terms of body orientation, grave position with respect to other features, and the number and placement of grave goods

5 SOCIAL

5.1 Demography

- mobility reduction in any context will result in pressures on human groups and can lead to sedentism; it appears that substantial mobility was not reduced until the number of groups in a region reached a saturation distribution, thus reducing mobility options (Hitchcock 1982:234, 248)
- population increase at sites is reflected in various ways: structure number and type; occupational deposit (number of strata, extent, depth); occupation of new areas; use of microniches (desert, coast, forest); shift towards more eclectic food gathering patterns; concentration on water-based resources; shift from large to small animals and use of secondary foods; beginning of food preparation; specialised tools; storage facilities; bones of a large number of hunted animals; and parietal art and other non-utilitarian activities (Kesarwani 1987:71)

5.2 Social Relations

- linkages: family/extended family/kin
- restriction in the range of social relationships (Baxter 1975:224)
- conflict/dispute: greater aggregation of people requires more effort to support them resulting in more frequent conflict (Hitchcock 1982:236; Bender 1978b:213; Lightfoot and Jewett 1982:11-12; Smith 1976:26)
- attitudes of territorial identification, demarcation and ownership (Edwards 1989:37; Flannery 1972c:28-29; Hitchcock 1982:251; Smith 1972:17, 1976:26)
- need for co-operation: sharing, planning and knowledge (Kesarwani 1987:69)
 - Wiessner (1977) emphasised the importance of sharing among hunter-gatherers, noting its crucial importance in maintaining social alliances and reducing resource availability risk
- the Hitchcock study (1982:251-256) has shown that as competition for residential space increases with social development and, later, logistical space:
 - groups are forced more and more to change their sharing patterns
 - internal networks become more restricted, and there is a shift from generalised to balanced reciprocity (i.e., most sharing is done among close kin usually within extended families; long distance exchange groups become more common)
 - changes in the size of sharing networks are correlated, at least in part, with changes in marriage rules among the more sedentary people of the study; there is more preferential first-cross-cousin marriage than with mobile groups, and a higher rate of polygamy;

increased residential stability may result in a reduction of marriage networks (Yellen and Harpending 1972:248-249); evidence for such a shift has been found among the !Kung, with distances between marriage partners being greater among mobile than sedentary groups

- status and wealth differences emerge as sharing networks become more restricted
- group and personal individualisation/identification reflected in:
 - measures to provide privacy and independence
 - more restricted status and wealth differences (Hitchcock 1982:255-256)
 - hierarchical and heterarchical development
 - isolation of dwellings of individuals and groups within settlements
 - competition, territoriality and property ownership/rights over resource space and sites (Blintiff 1999:511; Flannery 1972c:28-29; Hitchcock 1982:250-251, 255)
- external relations
 - negotiation and exchange/trade with other communities/regions
 - the Hitchcock study (1982:254-256) indicated that with progressive sedentism there was an increase in scheduling and interpersonal conflicts, both within and between hunter-gatherer groups, necessitating mechanisms to adjudicate disputes

5.3 Role Differentiation

- a major contrast is seen between mobile and sedentary lifestyles in the area of work which has implications for sex-role differentiation and child socialisation
 - in the sedentary context, labour time increases, tasks become differentiated and children are brought increasingly into the labour force as young girls begin to oversee their younger siblings and boys' work often takes them away from home (Draper 1975a, b; Draper and Cashan 1974)
 - with adoption of a changed subsistence base (to meat eating) there appeared a sexual division of labour: women and children spent their time collecting fruits and tubers, etc., and men engaged in animal hunting (Kesarwani 1987:69)
- group cohesion requires leadership to mediate in social conflict (Bender 1978b:213)

5.4 Social Differentiation (individual and group)

- group and personal individualisation/identification

- status and wealth differences (Hitchcock 1982:255-256)
- isolation within communities
- material and symbolic identification
 - Wright and Garrard (2002:277) suggested that increased stone bead production at Early Late Neolithic sites in Jordan made it possible to define a greater number of 'signatures' or non-verbal messages conveying an individual's place in his/her social milieu (i.e., a greater number of statuses, roles and social personae such as age, gender and political/group affiliation could be defined for a given individual) as well as forming an arena for expressing individual identity
 - body decoration (Kesarwani 1987:70)
- wealth accumulation
 - the Hitchcock study (1982:255-256) indicated that with increased sedentism sharing networks became more restricted and status and wealth differences began to emerge

5.5 Social Complexity

- diversification of the division of labour with varying degrees of exclusiveness: potters, traders, metal workers, ceramic modellers, farmers, leaders, ritual specialists (Kesarwani 1987:70)
- rise of specialised social and economic roles with sedentism reinforces trends towards increasing social complexity that have social consequences, including the rise of specialists; the Hitchcock study (1982:252-253) showed that with sedentism:
 - a specialised leader emerged who became more and more important in decision-making
 - there was a sense of increasing ritualisation in various aspects of life
- Hitchcock (1982:252-253) was of the view that the rise of specialised social and economic roles with sedentism also leads to organisational changes in labour, especially in terms of an increase in complexity and social consequences, including the rise of economic specialists; his study showed that
 - among the sedentary group a specialised hunt leader emerged; this individual gradually became more and more important in decision-making; also, with sedentism, traditional medical practitioners became increasingly more important in group affairs; dances and curing over which doctors preside have become large communal affairs, and there was a sense of increasing ritualisation of various other aspects of life
 - when people elected their leader, several people were considered, including a hunt leader, a traditional doctor, and an individual who had worked in mines and been to both government and tribal meetings; the last was chosen primarily because of his acquaintance with the ways of the outside world, and began to adjudicate disputes

5.6 Social Organisation

- the complexity of material culture implies far greater sophistication of social organisation than previously existing
- competition and territoriality
 - the Hitchcock study (1982:250-251, 255) reported that an increasing level of sedentism was associated with competition over resource space, reduction in range size and progressive territoriality; and that ownership of agricultural lands, herds and fishing sites together with crowding of settlements are clearly factors which favour more territorial demarcation
 - Blintiff (1999) suggested that in areas where there is no “hot spot” or concentration of resources, there is no motivation to lay claim to it and become territorial; however, where areas of high productivity exist and are predictable, the motivation may well emerge; there are degrees of predictability versus density/scarcity between these; as Blintiff commented (1999:511): “at one end of the spectrum, human groups can have fluid membership and no specific attachment to particular areas of the landscape; at the other, the human group can become largely endogamous, with fixed membership and economic behaviour highly localised on a territory largely or wholly claimed by the group for itself”.
- property and hereditary ownership rights
 - Flannery (1972c:28-29) was of the view that to reinforce control over localised resource areas, an ideology might be developed that emphasises the maintenance of land across generations
 - the Hitchcock study (1982:251) indicated that lineal inheritance patterns became more common with sedentism, at least in part because of the increased value of goods owned by households

5.7 Social Problems

- conflict/dispute
 - scheduling and interpersonal conflicts, both within and between hunter-gatherer groups with progression towards sedentism, necessitated mechanisms to adjudicate disputes (Hitchcock 1982:255-256)
- health issues
 - nutritional problems are greater in settled situations (Taylor 1977:147-148)
 - poor hygienic conditions and nutritional problems are often correlated with high rates of infective disease (Robson and Wadsworth 1977:196)
 - the Hitchcock study (1982:254-256) showed that with sedentism malnutrition and illness became common; infant mortality rates were higher; morbidity levels were also higher; venereal disease

more prevalent; and a larger number of individuals appeared to suffer from birth defects and seriously incapacitating injuries

- Taylor (1977:147-148) noted that for the Australian Aborigines nutritional problems are greater in settled situations; the Hitchcock study (1982:255) showed that both health and nutritional statuses of settled populations were poorer than those of mobile groups

6 ECONOMIC

6.1 Subsistence Practice

- fine-grained adaptation to the local environment
- habitat deterioration (cutting, burning, grazing) and overexploitation leading to a decline in hunting and gathering, new/alternative subsistence strategies and increased residential stability (Hitchcock 1982:243, 246)
- increasing dependence on domesticated plants and animals (Rafferty 1985:144)
- storage
 - an increasing degree of sedentism sees more emphasis placed on construction and maintenance of food storage facilities (e.g., clay-lined pits, pots, granaries) which lengthen the use-life of material goods and subsistence items enabling groups to reside in specific localities for longer periods (Flannery 1972b; Hitchcock 1982:246; Kesarwani 1987:73; Lightfoot and Jewett 1982:11-12)
 - Testart (1982:525) associated intensive food storage with sedentism and population increase, enabling the latter to stabilise at a higher level of density
- changed resource acquisition techniques
 - change from exploitation of a narrow range of resources to a broader spectrum of edible wild products (progressively greater amounts of small animals such as land snails, fish and shellfish, and birds) including grains and nuts (Flannery 1969:77; Kesarwani 1987:70)
 - change from K-selected animals (i.e., large game) to r-selected resources such as shellfish and grass seeds capable of rapid production and in large numbers (Hayden 1981:523-528)
 - redistribution without which people might have had to continue their annual cycle of movement to obtain their basic needs (Rafferty 1985:132)
 - use of pack animals to facilitate gathering of larger amounts of bush food to extend the effective range of foraging (Hitchcock 1982:246)
- seasonality of resource acquisition: direct confirmation by such evidence that a site was used in each season would provide strong support for continuous occupation (Rafferty 1985:135)

- ceremonial structures may have had as an important purpose redistribution of subsistence goods among sedentary people spread over a number of different environmental zones: posited in Southwest USA (Plog 1974:125-127; Rice 1975:97), in highland Mexico (Flannery and Coe 1968), and in the Mayan lowlands (Rathje 1978)
- the Hitchcock study (1982:254-256) showed that with sedentism, as family size began to grow labour effort went up

7 OTHER

7.1 Trade/Exchange/Distant Contact

- trade necessary where group territory decreases and people become dependent on resources from external sources
- greater number and types of material goods, often accompanied by increased trade and ceremonial activity (Rafferty 1985:129)
- increased trade in association with surplus production of goods (Lightfoot and Jewett 1982:110)
 - in Jordan, Wright and Garrard (2002:267, 274) found that stone bead production at early Late Neolithic sites appears to have been on a larger scale (i.e., diversity in individual beads and raw material used) and associated with more specialised, craft-related wider exchange networks and separate occupational structures
 - more specialised, craft-related activity and larger scale production in separate locations/structures within sites and associated with wider exchange networks (Keraswani 1987:70, 120; Wright and Garrard 2002:267, 274, 281-282)
- ceremonial structures may have served as focal points for deposition and redistribution of exotic luxury goods and materials obtained from distant sources (Rafferty 1985:131)
- dependence on new resources more localised and at least equally productive as those previously used through reorganisation of energy capture
- development of specialised hard-to-transport technologies (Redman 1987:11; Smith 1976:26 and Watanabe 1968:73)
- caching of raw materials, tools and equipment

7.2 Material Assemblage

- rich and varied artefact assemblages including long-lived items due to the entire range of yearly production and maintenance activity being carried out at the one site and its being occupied for extended periods (Kesarwani 1987:73; Rafferty 1985:129, 135)
- expansion of technological innovation/technocomplexes
 - specialised tools, equipment and facilities such as pestles, mortars, hoes, sickles, traps, fish weirs, ovens, canoes, ceramic kilns and containers (Kesarwani 1987:69-70)

- new hunting techniques and more effective weapons for killing animals such as harpoons and the bow and arrow (Kesarwani:1987:69-70)
- storage facilities with emphasis on food items (Flannery 1969; Harris 1977:410)
- food-processing, preservation and cooking practices and equipment (Rafferty 1985:120)

7.3 Plant and Animal

- use of secondary animal products (milk, wool, horns) as well as meat
- use of animals for traction, transport
- commensals
 - it is argued that commensals (e.g., mice) cannot colonise garbage dumps unless food is available year-round, implying sedentary settlement; these species are seen to gain an advantage over non-commensal populations as a result of human habitation providing a constant supply of food, a predator-protected environment and a deterrent to other co-existing species (Hesse 1979; Phillips 1979:319; Tchernov 1984, 1991)
 - Lieberman (1991:53-54) was of the view that evidence for the season of death of animals exploited indicated seasonal hunting, and in the context of other data can constitute relatively convincing argument for sedentism

7.4 Refuse Management

- the various types of refuse/discards are defined as primary (intentional discard of items at or near end of use-life; secondary (discard of items in areas other than where they were used; *de facto* (tools, facilities and other cultural materials that, although still usable, are abandoned within activity areas; provisional (items with potential value or large hindrance value, are usually stored in out-of-the-way places such as long walls; and abandoned (sometimes used to describe the condition of primary or secondary refuse prior to and during site abandonment (Hardy-Smith and Edwards 2004:255)
- a more sedentary way of life brought with it the problem of refuse accumulation and the need for strategies to manage it
 - Rathje and Murphy (1992:32-33) commented that by the PPNB period in Southwest Asia, for example, dwellings were cleanly maintained
 - Stevenson (1982) reported that aside from the actual length of residential stays, anticipated length of occupation has proved to be an important variable in conditioning refuse disposal, with gradual, planned abandonment and anticipated return resulting in high levels of *de facto* refuse (i.e., usable equipment left in the activity area) including numerous cached items
 - for Kutse hunter-gatherer communities in the Kalahari Desert of southern Africa, Kent (1993:55-560) has shown that shorter

occupations led to smaller, less diverse artefact inventories than those resulting from longer residential visits

- the distribution of artefacts within a site may provide evidence of sedentism
 - Rick (1977:8-9) provided evidence that large and offensive (e.g., sharp, smelly) artefacts were removed from the main habitation area of a Peruvian site, and cited this as evidence of sedentariness because such artefacts tend to become more of a problem as they accumulate and as people have to live with them for longer periods
 - Schlanger and Wilshusen (1993:90) provided an example from the North American Southwest of anticipated return being directly proportional to large sizes of inventory material
 - it has been observed that in hunter-gatherer sites where mobility is practised but refuse disposal is considered a relatively unimportant activity, large cumbersome items are often cleared away from communal living areas or thoroughfares (Hardy-Smith and Edwards 2004:264)
 - Baker (1975:11) concluded that “it seems reasonable to suggest that an item will be placed in storage only when return to an activity area is anticipated”.

ANATOLIAN LAKE DISTRICT REGION SITES

OCCUPATION PHASES AND CHRONOLOGY (ref. Duru 1999)

Hacilar is northwest of Höyücek. Occupation levels identified are divided into three phases with calibrated C¹⁴ dates:

Late Neolithic	Level IX 5393BC Level VII. 5820BC Level VI 5399, 5590BC <i>hiatus</i>
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Early Neolithic Levels I-VII (Level V 6750BC)

Erbaba is east of Höyücek. Three occupation layers (Levels I-III, youngest to oldest) above virgin soil have been distinguished, the only date considered reliable being from Level III:

Late Neolithic	Levels I-II
Early Neolithic	Level III 6690-6430BC
Virgin soil	

From the standpoint of pottery, the excavators correlate the earliest phase at Erbaba (5780, 5600BC) with Çatalhöyük levels VIII-O, and the its latest levels (5620BC) with Hacilar LN Levels IX-VI.

Kuruçay, NNW of Höyücek and immediately northeast of Hacilar, has Early Neolithic through Early Bronze Age occupations with available calibrated C¹⁴ dates:

Early Bronze Age	Levels 1-2
.....	<i>hiatus</i>
Late Chalcolithic	Levels 3, 3A, 4, 5, 6, 6A
Early Chalcolithic	Levels 7-10
Late Neolithic	Level 11 5990BC
Early Neolithic	Level 12 6190BC, 6080BC
.....	<i>hiatus</i>
Early Neolithic	Level 13
Virgin soil	

Bademağacı, southwest of Höyücek, immediately northeast of Hacilar, has Early Neolithic through Early Bronze Age occupations with available C¹⁴ dates:

Early Bronze Age 11	Levels 1-3
Early Bronze Age 1	Levels 4-5
.....	<i>hiatus</i>
Early Chalcolithic	
Late Neolithic	ECh/LN Levels 1-5
Early Neolithic	EN levels 1-5 c.7100-5800BC
?	
Virgin soil	

LAKE DISTRICT SITES

HACILAR, ERBABA, BADEMAGACI AND KURUÇAY

OCCUPATION LEVELS, PHASES AND CHRONOLOGY ref. Duru 1999

Hacilar is northwest of Höyücek. Occupation levels identified are divided into three phases with calibrated C¹⁴ dates:

Late Neolithic	Level IX 5393BC
	Level VII 5820BC
	Level VI 5399BC, 5590BC
..... <i>hiatus</i>	
Early Neolithic	Levels I-VII (Level V 6750BC)

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Early Bronze Ages Levels 1-2	
..... <i>hiatus</i>	
Late Chalcolithic	Levels 3, 3A, 4, 5, 6, 6A
..... <i>hiatus</i>	
Early Chalcolithic Levels 7-10	
Late Neolithic	Level 11 5990BC
Early Neolithic	Level 12 6190BC, 6080BC
..... <i>hiatus</i>	
Early Neolithic	Level 13
Virgin soil	

Bademağacı, southwest of Höyücek, immediately northeast of Hacilar, has Early Neolithic through Early Bronze Age occupations with available C¹⁴ dates:

Early Bronze Age 11	Levels 1-3
Early Bronze Age 1	Levels 4-5
..... <i>hiatus</i>	
Early Chalcolithic	
Late Neolithic	ECh/LN Levels 1-5
Early Neolithic	EN levels 1-5 c.7100-5800BC
?	
Virgin soil	

BRITISH ISLES MESOLITHIC-NEOLITHIC SITES**Howick, Northumberland** (ref. Waddington *et al.* 2003)

- . coastal edge location
- . primary construction of site dated to c.7800 cal BC; range 8240-7080 cal BC
- . permanent or semi-permanent occupation strongly suggested by settlement complexity and robust structural form, the lack of any observable hiatus in stratigraphy, and successive rebuilding of the site strongly
- . substantial circular structure 6m diameter; postholes, stakeholes, linear slots and evidence of timber; sunken floor; pits, one of which had been clearly associated with heating/fire-based activities with clay included, possibly to intensify temperature; sequence of hearths; abundant material remains, including flint, ochre and charred organic material
- . flint industry a typical late Mesolithic narrow-blade one with a range of artefact types (including scrapers, awls, microliths, some blades with probable burin removals, and a variety of retouched and edge-trimmed flakes) made on locally available raw material
- . charred organic remains included shells of hazelnuts and marine molluscs, the latter collected as either decoration, food, or bait for fishing
- . identifiable burnt bone included wild boar, fox, and a canid (either wolf or domestic dog)
- . a group of five Bronze Age burial cists located to the northeast; only one contained surviving bone (fragments of an infant's skull), and none had grave goods; pottery sherds associated with one; roughouts, possibly for axeheads or small battle axes, were on top of a number of cists; presence of smoothed cobbles and ochre considered to provide evidence of unusual (in regional context) votive deposits

Presence of Mesolithic to Bronze Age remains on the same site is evidenced elsewhere in Northumberland: Low Hauxley; Goatscrag, Ross Links, and Birkside Fell (Waddington *et al.* 2003:6).

Horton, Berkshire (ref. Barclay *et al.* 2012:1-2; Barclay and Chaffey 2014:24-30)

- . river site (Thames) within a pocket of land bounded by a meander
- . occupational continuity Mesolithic-Early Bronze Age (and subsequently Iron Age and Roman-British periods); earliest archaeology surviving *in situ* consists of clusters of Mesolithic flints (flakes, cores and blades) while there is evidence of Mesolithic activity elsewhere in this zone along the river; close nearby are a causewayed enclosure, oval barrows and a U-shaped enclosure
- . four certain examples of Neolithic houses displaying two different construction styles; two survive as no more than groups of post-holes, while the other two have gully foundations indicating the course of the external wall, and presence of an internal partition dividing both buildings into two rooms; all four are roughly based around six posts

- two structures: (A) post-built rectangular structure 9.8m x 6.5m; defined by 27 postholes, with four deeper and more substantial that may have supported an upper storey or elevated storage space; a pair of relatively substantial postholes on the southeast side could have defined an entrance; (B) similar but larger 15m x 7.5m, constructed around massive corner posts with probable plank-built walling
- dating for (A) is uncertain; earlier (B) dated to the 38th-37th centuries BC (period 3710-3650BC)
- (A) artefacts included a flint blade core, bladelets and burnt chips, pottery sherds and fired clay, charred plant seeds, animal bone fragments, polished bone points, and a fragment of a Langdale axe; thought to be associated with occupation deposits found within the ditch of an Early Neolithic U-shaped enclosure; a pit-defined 'house void' and low scatter flints and pottery sherds are other features of the location; both had curving end walls similar to the façade sometimes displayed on long barrows
- artefacts from the locale included birch bark bowls/containers; a near complete Fengate-style bowl; and a large fragment of Mortlake Ware bowl having traces of charred residue from cooking, and decorated with panels of impressions and curvilinear motifs made from end-to-end fingernail impressions (rare in southern England and known on a cup from the West Kennet long barrow)
- there are indications that the four houses were constructed by people aware of the alignment, size, and location of neighbouring properties, suggesting that they were not isolated structures but residences of a dispersed community living and working in the area around the same time
- in plan, the structures resemble one of the Early Neolithic buildings at Lismore Fields (Buxton, Derbyshire), as well as sharing features: a bowed end wall and paired corner post-settings

At least two more Early Neolithic houses are known from the surrounding area of the Colne Valley at Cranford Lane and Gorhambury. Other examples are known from the Upper Thames and around the Thames estuary: two broad types — post-built with probable wattle walls, and post with plank walling

Links identified between a number of sites in eastern England in architecture, dwelling and material culture (similar ways of making pots, knapping flint and use of Langdale axes) may have been being played out in terms of identity, movement and social connections in these small-scale societies. There is the possibility of a common understanding and knowledge of how to plan and build in timber.

A near complete Fengate-style bowl; and a large fragment of Mortlake Ware bowl having traces of charred residue from cooking, and decorated with panels of impressions and curvilinear motifs made from end-to-end fingernail impressions (rare in southern England and known on a cup from the West Kennet long barrow) The most striking parallel for the Mortlake bowl is with a series of vessels from East Yorkshire. The curvilinear end-to-end impressed fingernail motifs also link this vessel with the earlier find of the Fengate-style bowl, which also had cooking residue. In terms of decoration, both vessels are unusual. Their placing near the ditch base hints that they may have been deposited in special circumstances, perhaps as refuse from feasting.

IRELAND

MODEL PHASE 2: CÉIDE FIELDS & KNOCKADOON

1 CÉIDE FIELDS

The Céide Fields in County Mayo, northwestern Ireland (Fig. I.1), extend over at least 12sqkm of valleys and rounded hills that open to the north onto a high cliff coastline. They comprise a structured Neolithic landscape of two large-scale conjoined coaxial field systems, Céide Hill and Behy-Glenulra, with megalithic tombs, dwellings and enclosures within an integrated system of stone walls, much of which has been preserved beneath blanket peat (Figs I.2, I.3). Field boundaries were constructed *c.*5700BP in a relatively warm and dry environment, dominated by woodland, grassland and heath. Each field system has a single axis following the strike of the land, and shows a countryside systematically divided by drystone walls and earthen banks stretching northwards (Fig. I.4). On Céide Hill, parallel walls over 1.5km long divide the land into strips varying 90-150m wide. To the west these follow the contour of the Behy valley and continue over a spur to the eastern side, merging with a similar parallel system in the Glenulra valley. This continues east with strip width remaining consistent but subdivided into rectangular fields of only a few hectares. Further east again the layout becomes less regular and extends under peat bog. There are smaller systems, ranging from less than 100m to 1km in length. Field boundaries vary in type, extent and location, particularly in Behy-Glenulra, suggesting that they served different functions. The field distribution corresponds closely with that of the megalithic tombs (Fig. I.5) (Caulfield 1978, 1983; Caulfield *et al.* 1998; Cooney 2000; Guttman 2007; Molloy and O'Connell 1995; O'Connell and Molloy 2001).

Where the field plan is more fragmentary and irregular, the larger areas are considered to be individual farms; and associated with these are small, oval enclosures, probably households, indicating a dispersed settlement pattern. One at Glenulra (Fig. I.6) is defined by a 1.25m wide drystone wall, originally 1m high, and measuring 28.5m x 22m externally and 23m x 17m internally, with its long axis aligned northeast-southwest. It has a narrow 1m wide entrance to the north and contains the foundation of a small horseshoe-shaped structure. The enclosure was roofed. Caulfield and colleagues (2009:13-17) concluded that it comprised a small round timber farmhouse and various areas for daily tasks, and that the evidence suggests domestic activities, such as pottery and stone tool production. At least eleven similar enclosures are identified throughout the system. Small egg-shaped structures attached to field walls may have been animal pens. At Belderg Beg to the west, a 9m diameter enclosure contained a round house inside the enclosing bank (THC:2017a).

Charcoal is scattered throughout the fields, probably resulting from woodland clearing and spreading of household waste. Regularity of field pattern and fencing indicates that the woodland was cut down and the system laid out as a single operation, possibly over a short time period. The large fields were used mainly for pasture, but ard shares and marks have also been recorded, while pollen analysis indicates cereal cultivation in the Early Neolithic. Lipid analysis on soil bile acids to determine manure content shows ruminant dung to have been present in its highest levels in the ard-marked zone and in other field soils. This is in contrast to Britain where animal manures were not used in agriculture until later (Caulfield 1978, 1983; Caulfield *et al.* 1998; Cooney 2000; Guttman 2007; Molloy and O'Connell 1995; O'Connell and Molloy 2001).

Within the fields there are eleven court and portal tombs, while immediately outside are a further six. These were probably surrounded by fields. Six form three pairs, while these pairs and single tombs are 1-2km apart. One of the largest fields contains the Behy court tomb, a transeptal chambered type with drystone court and kerb, dated *c.*3700-3300 cal BC. It is corbelled with an enclosed court defined at the eastern end by two large arms with dry stone facing and façade. A northern façade is aligned northwest-southeast. Two lateral jambstones covered by a long lintel form the gallery entrance, with a small front chamber and a larger rear one from which two opposing transeptal chambers were accessed, giving it a cruciform shape. The tomb site has a considerable build-up of occupational debris, including quartz and chert debitage and charcoal, and a layer of coarse red sand with cobbling. A gravelled surface surrounds the tomb, with charcoal and artefacts such as flint, chert and quartz pieces. Charcoal was encountered within the tomb entrance. Inside the tomb, the lowest level within the two chambers comprises a layer of yellow clay placed over the subsoil and overlain by flat paving. Both contained charcoal, and flint and chert debitage. Sherds of heavy-rimmed, round-based pottery are associated with the paving and charcoal, suggesting ritual feasting as part of the mortuary behaviour. A number of pits containing “black matter”, charcoal and pottery had been dug into the yellow layer (de Valéra and Nualláin 1964:4-5; Warren *et al.* 2009). Human remains within these tombs would not represent the total population of the area; hence, a selective process for inclusion in tombs was in process. Additionally, these remains appear to have been contemporary with operation of the Céide Fields occupation rather than those curated of earlier people, suggesting a clear emphasis on known individuals considered important enough to be treated in this way.

The regular plan of the fields reflects animal husbandry rather than tillage, indicating that dairying was the economic base, carried out by single-family units. Pollen evidence and plough marks provide evidence of cereal production, but as a minor economic component. Marine resources were also exploited; and coastal middens indicate that farm animals were consumed. Belderg Beg also has evidence of fields and plough marks. A number of saddle querns and rubbers were found inside a round house associated with farming plots. It seems probable that field construction coincided with Early Neolithic intensive farming indicated by the pollen record, yet the structural evidence, lithic and ceramic assemblages are considered Middle/Late Neolithic (Caulfield 1978, 1983; Caulfield *et al.* 1998; Cooney 2000; Guttman 2007; Molloy and O’Connell 1995; O’Connell and Molloy 2001). Whitefield (2017) disputed some of these interpretations on chronological, palaeoenvironmental and architectural grounds. In particular, he questioned the Early Neolithic date for the site; Caulfield’s (1983) view of the field system having been laid out as single operation to a predetermined plan, and saw a developmental sequence in which fields may have been added, larger fields subdivided according to kin group or community requirements; with regard the practice of animal husbandry, he commented that while the stone walls may have kept stock in, there were no drove-ways between field or stock-handling facilities; and the interpretation of structures as Neolithic houses.

2 KNOCKADOON

This site is located near Bruff on a peninsula in Lough Gur, a horseshoe lake at the base of Knockadoon Hill in County Limerick (Fig. 1.7). It is comparable to, but more extensively developed than, Céide Fields (Figs 1.8-1.9). Throughout the Neolithic, Knockadoon was an important settlement focus for a network of specialised and/or seasonally used sites. There are a number of stone circles and standing stones, enclosures, house sites and at least three crannogs (Fig. 1.10) as well as tombs. The Grange stone circle comprises a ring of 113 standing stones up to 2.8m high and arranged side by side. It is 45m in diameter, backed by an earthen bank 9m wide, and *c.*1.2m tall. Nearby is a smaller circle of large stones, and an isolated large stone (Cooney 2000).

The Neolithic occupation of Knockadoon is a clustered settlement with dwellings occupied at the same time, and ongoing reconstruction and replacement. While the focus was on the western end, Sites 11 and L, further east on the northern and southern sides of the settlement, indicate that activity was more widespread. During the Middle Neolithic the open character of house clusters changed to one of enclosure, with some of the long-term houses surrounded by low earthen banks retained by orthostats, such as Site C and Circle L. Most structures have stone foundations, with walls of organic fill held in place by opposed pairs of posts. This suggests that while it may not have been continuously used over the long Middle-Late Neolithic, it was a place of substantial long-term occupation. Enclosed houses had better access to non-local, prestige items, possibly reflecting social differences between households (Cooney 2000). Rectangular and circular houses were contemporaneous, with a trend towards the latter. Cattle were the most important domestic animal, followed by pig and sheep/goat. Garden plots are indicated by cereal pollen recovered from lake bed cores (Cooney 2000).

Nineteen human burials comprise 14 children under six and two adults. There is a grave concentration at Circle K toward the western end of the peninsula. There is also a 14-year-old in crouched position, accompanied by a decorated pot, and another with an axe fragment in the mouth. The same interpretation concerning those selected for processing into the afterlife as seen for Céide Fields is seen to apply.

3 ARCHAEOLOGY: DISCUSSION AND INTERPRETATION

3.1 Settlement

The Céide Fields have no apparent village nucleation; the foci for the small farms are the tombs. Knockadoon was settled earlier and nucleated. Throughout the Neolithic, both were important settlement foci within their regions. Differences between them probably reflect the extent of excavation at Céide Fields. The area represents a significant change in subsistence practice that would have permitted larger numbers of inhabitants for extended periods, at least seasonally, in the same location (Caulfield 1978, 1983; Caulfield *et al.* 1998; Cooney 2000).

3.2 Ideological

There was preoccupation with the afterlife through the remains of the dead (THC:2007b). Distribution of dwellings and enclosures at Céide Fields noticeably corresponds closely with that of the tombs, which suggests that the latter exercised a controlling role within the region. All are located ideopolitically on valley slopes with a dominating view of the landscape. They are aligned east-west with entrances facing east. The Behy court tomb site had been previously an occupation site. Sherd evidence suggests ritual feasting as part of mortuary behaviour.

Construction of the Grange stone circle and a smaller one, and erection of a standing stone together with deposition of metal objects in the lake (Cooney 2000), indicate that the site was perceived as a special place. This is supported by the number of graves that imply concern for the ancestors, as well as close identification with the site. The tombs at Circle K underline that in death all community members were treated the same, and that there were probably ritual specialists to conduct mortuary rituals. Periodic house reconstruction and replacement signify the location's perceived ideological importance.

The strategically placed tombs at Céide Fields and the Grange stone circle at Knockadoon would have served strategically as foci for ritual, ceremonial and other activity, and for social control. Also strategic was the practice of constructing tombs over earlier structures (Grogan 1996:41-42), which would have enhanced their ideological significance and influence, and that of those in control.

3.3 Political

As noted, woodland clearing and regularity of field patterning at Céide Fields indicates that the system was laid out as a single operation, probably as an organised community task. Stone walls meant movement was influenced by the system axis, and by structuring the landscape in this way new kinds of spatial and social networks were enforced.

Erection of stone-built tombs as settlement foci suggests either a need for formal social organisation as a result of population growth; or, indeed, deliberate strategy on the part of particular individuals to achieve social control through ideology. Tomb variation, as between Mayo and Sligo Counties (Caulfield 1983; Burenhult 1984) would suggest possible inter-region competition. Bergh (1995:109, 162) saw the tombs and their associated features relating to power structures and change in these through time. He concluded that a significant aspect of this tradition of monument building was control and domination by a social elite.

The extensive field systems and related megalithic structures provide evidence for deliberate planning by a community who deforested a large area in order to manage a mixed farming subsistence economy. Boundary wall construction would have required organisation of the communities concerned, and social leadership for the purpose. The definite ideopolitical signature on regional planning points to such overarching control.

3.4 Social

Variation in Céide Fields boundary type, extent and location, as evidenced in the Behy-Glenulra zone, suggests that they served different functions in different places. The independent farms within the Céide Fields perhaps show that some families did not participate in the communal resource sharing, which suggests developing individualism, particularly for family heads; and social hierarchy.

This planned landscape of Céide Fields has a number of social implications for communal endeavour. It necessitated large-scale clearance of trees and stones for agricultural purposes, creating a new landscape; and influenced movement and guided access to different areas within it. The circular enclosures and tombs were established for different kinds of spatial and social networks. Enclosures are domestic, while the combination of households, tombs and fields evidence communal co-operation and decision-making. At a higher level, intercommunal co-operation is suggested by articulation of the two coaxial field systems.

Grogan (2002:4-5) regarded the change from large rectangular to small round houses at Knockadoon as reflecting decrease in number of occupants and the range of house activities. In this was seen possible reduction in social significance and role of the house, involving reorganisation of social identity with family independence yielding to increased ideopolitical pressure to respond communally when required. Some locations, such as the Site C house cluster, remained open, while others, such as Circle L, became enclosed, indicating social differentiation and probable hierarchy. The enclosed households with better access to non-local, prestige items, implies that social differentiation included elites and other individuals. While family groups may have been characteristic, communal effort is evident in the construction of wedge tombs and embanked stone circles, perhaps controlled by a centralised leadership. Ancillary buildings indicate a wider range of domestic, agricultural and industrial activity.

3.5 Economic

Both Céide Fields and Behy-Glenulra had a broad-spectrum subsistence economy with dairying, meat production and cereal growing. At Céide Fields there was also consumption of marine resources (Caulfield 1983:138, 200, 213). Cattle were the most

important domesticated animals, along with pigs and sheep/goats. Arable cultivation is indicated by cereal pollen in lake cores and what may have been garden plots, while wild resources were also exploited (Cooney 2000).

3.6 Distant Contact

Caulfield (1983) saw the arrival of Neolithic farmers bringing with them a “Neolithic package of economy and religion” (Caulfield 1978, 1983; Caulfield *et al.* 1998; Cooney 2000). Bergh (1995:110) cites the impetus for monument construction to have been social and economic lines of communication from the Continent.

The range of tombs is similar to that elsewhere in the British Isles and suggests external influence, possibly introduced as a means of strategic social control. The megalithic nature of the Behy tomb, its cruciform plan, chambering, corbelling and façade reflect a blend of new ideas with earlier practices of construction and mounding of the local region. The Céide Fields as a whole present as a new landscape perspective and can be viewed in the same context.

The trend at Knockadoon toward abandonment of the larger rectangular houses in favour of circular ones also has significant implication with regard to outside contact. One explanation is that the former had been introduced by colonising farming groups during the Early Neolithic, but were later abandoned in favour of the smaller latter that were more appropriate to local conditions after communities had become established (Caulfield *et al.* 2009:19). It could also be explained as a new social order of communal behaviour that could be better manipulated. Similarly, at the same time the appearance of stone circles suggests change ‘demanding’ a more communal approach to ritual and ceremonial behaviour.

IRELAND

MODEL PHASE 3: BRÚ NA BÓINNE COMPLEX

Brú Na Bóinne, ‘the Bend of the Boyne’, in County Meath, is a 16km² area, 14km from the Irish Sea, defined by the meandering course of the River Boyne on the southern side, while the River Mattock defines the northern boundary (Figs I.11, I.12). During prehistoric times, the area was tidal (Brady 2007:214). This island-like zone became a major ritual centre with three monumental passage tombs of Knowth, Newgrange and Dowth dated to 3350–2900BC, all situated north of the river and running west-east along ridge crests. These followed a cluster of closely spaced mounds up to 15m in diameter on the Knowth site. The terrain north of the river gradually rises to the knoll on which Newgrange stands. In contrast, Knowth and Dowth to the east and west are much closer to the river, and terracing positions them more steeply above it. Newgrange may also have had a similar relationship to the river if the channel noted on air photographs had been active (Fig. I.12b). This would have been easily effected artificially. Geophysical survey has revealed a prehistoric structure related to this course. The use of natural topography to enclose a ritual landscape was possibly intentional, to separate ritual from secular activity. The three major tombs are circular mounds, over an acre in size and *c.* 10m in height, which cover an extended passage and a chamber, built from orthostats with lintels and a capstone (Figs I.13- I.15). Each has a kerb constructed of massive contiguous stone slabs surrounding the external base. Kerbstones, orthostats and lintels are decorated with art, the motifs including spirals, wavy lines, concentric and rayed circles, dots, zigzags, chevrons, nested rectangles, tightly packed lozenges, and cupmarks. The tombs are orientated to critical solar events (Prendergast 2012:57-64).

Knowth lies *c.* 1km to the northwest of Newgrange and is equal in size; the smaller Dowth is *c.* 1.5km to the northeast. The many other late Neolithic sites in the area include earthen hengiform enclosures, such as one at Dowth, a cursus beside Newgrange, and a number of possible ritual ponds. There is also a series of Late Neolithic timber enclosures and other structures: two adjacent to the Newgrange tomb and another outside the entrance to the eastern tomb at Knowth; and up to forty smaller passage tombs (Fig. 31.6) (Brady 2007:213; O'Kelly, C. 1982:13).

1 KNOWTH

The Knowth mound, 81-95m in diameter and 12-15m in height, is located adjacent to the western meander of the river (Fig. I.16). It also has a cluster of smaller tombs. The tomb itself has two passage graves of differing plans, the Eastern and Western (Fig. I.17). The Eastern has a passage, *c.* 40m long and 85m wide, its height of 1.6m rising to 2.7m above the floor and merging with a spirally corbelled roof of the cruciform central chamber with two side recesses (Fig. I.18). The Western has a passage, *c.* 32m long, showing only slight change in height as a result of lowering the floor to accommodate the end chamber (Fig. I.19). Evidence of multiple burials has been found in both chambers. The two tombs were constructed opposite each other and may align with the equinox sunrise and sunset.

A kerbstone, decorated with nested rectangles and a vertical line, was placed across the Western entrance, while a massive stone adorned with two opposed sets of nested rectangles was positioned in the Eastern entrance (Fig. I.20). Stone settings suggest that rituals took place at these locations, with that of the Eastern entrance being the most highly decorated. In addition, there is a scatter of unusual stones, including quartz, water-rolled granite, banded ocean-rolled stones and those quarried locally. These entrances (Fig. I.21) are vital constituents of a repeated, symbolic and architectural complex.

Knowth has the most decorated stones among these Brú na Bóinne mounds, and the Eastern tomb is the more elaborate (Fig. I.22). Internally, it has orthostats, a capstone, sills and lintels, and corbelling also decorated. Motifs are incised and pecked, techniques regarded as having significance as well as the motifs themselves — as expressed by Lewis-Williams and Pearce (2005:217), it is “a way of ‘connecting with’ the stone as a significant substance, perhaps even of releasing, activating or giving form to some inherent potency within the stone”. Differences in engraving expertise on the kerbstones possibly suggest that a number of different groups of people may have worked on them. In the tombs were found well-made, decorated stone basins as receptacles for cremated remains (Fig. I.23). The most elaborate was found in the Eastern tomb, its motifs consisting of a complex system of symbols possibly relating to a route for ancestors through the cosmos.

Single, multiple and successive human cremations had been placed in the tomb, along with bone pins, beads and pendants, and pottery (Smyth 2009). Of particular interest is a macehead (Fig. I.24), decorated with spiral and lozenge shapes found at the entrance to the right-hand recess of the Eastern passage. This was not a practical object but a status symbol. A triple-spiral motif (Fig. I.25) is a repeated feature of the tombs, suggesting that political power was founded on ideology, a cosmology and the continuing influence of the dead.

Brennan (1980) interpreted a number of the tomb engravings with combinations of semi-circular arcs as astronomical symbols representing crescents of the moon. In these he saw evidence of a sophisticated lunar calendar. From the same engravings Stooke (1994) discerned depictions of the markings on the lunar surface, the broad arc of maria extending west, north and east of the lunar central highlands. On Kerbstone 52, he noted that a series of arcs changed orientation in a manner consistent with the arc of the lunar

maria during the passage of the full moon as seen with the naked eye. This pattern was seen to be associated with one or more spirals or concentric circles, interpreted as an attempt to account for the changing elevation of the full moon in successive months; and its return to its place of rising to complete its daily movement (Fig. I.26). Similar engravings have been identified at Loughcrew. Both interpretations suggest prehistoric concern with astronomy strong enough for it to be reflected in the detailed rock art.

2 NEWGRANGE

This mound has a diameter of *c.*85m and stands *c.*12m high. Its summit is flat and *c.*32m in diameter (Fig. I.27). Adjacent are the remains of a surrounding stone circle, *c.*104m in diameter and *c.*1ha in area, which possibly postdates the closure of the tomb. A kerb of 97 contiguous stone slabs surrounds the base, many of which are decorated with curvilinear parallel lines and offsets. The largest stones are opposite the tomb entrance. This is protected by a large, elaborately carved, horizontal stone, while a similar one is found directly opposite on the other side of the mound (Figs I.28, I.29). White quartz and round granite boulders are used as a revetment *c.*3m above the entrance stone on the façade which elsewhere comprised ordinary boulders (Fig. I.30) (O’Kelly, C. 1982:13-21, 146). Eriksen (2004) argued that the quartz was never used in this way on top of the kerbstones, but that it may have been laid on the face of a less steeply sloping surface or as a platform deposit on the ground in front of the monument. If such a platform surrounded the mound, it would have demarcated space outside the passage, giving the appearance of the mound floating upon it. Quartz triboluminescence may have been experienced if ritual performances were held on it at night (Reynolds 2009:156-157).

Newgrange is entered from the southeast through a low, narrow passage, 24m long, that is slightly curved and lined with orthostats and lintels. It leads to a cruciform chamber having three recesses (Fig. I.31). The passage has a relatively steep incline with the chamber *c.*2m higher than the entrance. It is lined on each side with orthostats: 22 on the left and 21 on the right, that stand 1.5m in height above ground level, rising to those near the chamber at over 2m. The passage has a stone slab roof 3.6m high at the chamber entrance (Fig. I.32). The chamber measures 5.25m deep and 6.55m across. The east recess is the largest and most elaborately decorated. It has two basins placed one inside the other, while the other recesses have one each. The chamber roof is corbelled and rises to a single capstone, 6m above the floor (O’Kelly, C. 1982:13-21; Prendergast 2012:59-60).

The passage and chamber were designed to produce particular effects, especially an astronomical alignment towards the winter solstice sunrise. A ‘roof-box’ above the entrance is supported by a large flagstone decorated with motifs, and a decorated lintel. The box was closed by two quartz blocks that could be slid in or out. Its opening at the time of the winter solstice permits the sun to reach deep into the tomb, lighting up the innermost chamber (Fig. I.33). This light is so precisely framed by the box that it could be used to calculate the day of the solstice itself. The chamber was designed to be sealed except for 17 minutes each year when light swings across the chamber floor dramatically illuminating the zone, particularly the complex triple spiral motif, similar to that at Knowth. This suggests that the motif had ideological connection with the winter solstice (Prendergast 2012:58). From the entrance the equinox sunrise can be viewed over the top of stone GC2 (Stout 2002: Fig. 38).

The tomb had been accessed many times over a long period, and as a result much of its contents have been lost. Available records, however, show that these included both burnt and unburnt human remains, pendants, beads, discs, pins, a bone point and chisel, white chalk marbles, green and black stones, a flint implement, and a cowrie shell. Among these is also a stone carved in the form of a cone, “half a yard long and about 20 inches in the girth”; and a granite object, possibly a lamp (M. O’Kelly 1982:192-196).

3 DOWTH

The tomb is *c.* 8.5m in diameter and 15m high, with large kerbstones some of which are decorated (Figs I.34, I.35). Quartz was found outside the kerbing which suggests its façade was also white. Two passage tombs, Dowth North and Dowth South, leading into the tomb from the west, are 14m and 3.5m in length respectively (Figs I.36, I.37). Both are less spectacular than Knowth and Newgrange. Flattening of the northeastern section of the kerb, similar to that around the Knowth and Newgrange entrances, may indicate additional tombs.

The Dowth North passage, 8.2m long and crossed by three sill-stones, leads to a cruciform chamber containing a stone basin and with an annex off the right recess (Fig. I.38). Several passage and chamber orthostats are decorated with chevrons, lozenges and rayed circles. The right-hand recess leads into a rectangular chamber with an L-shaped extension entered over a sill, and floored with a flagstone, 2.4m in length and having an oval depression. The Dowth South passage is 3.2m long and leads to a circular chamber with single recess to the right. A kerbstone with cup-marks and a spiral and flower-like design marks the entrance. It is aligned towards the winter solstice sunset, at which time the passage and chamber are illuminated. Close to the solstice, the light crosses the sill stone and eventually shines on three stones at the rear of the chamber (Fig. I.39).

4 BRÚ NA BÓINNE COMPLEX ARCHAEOLOGY DISCUSSION AND INTERPRETATION

4.1 Settlement

A high density of lithic material indicates a prolonged Neolithic occupation (Brady 2007:218). Survey shows that the area saw considerable population expansion and settlement over time with a range of different activities. There was both continuity and new development. The Knowth and Newgrange ridges saw Mesolithic and Early Neolithic settlement activity and tombs prior to monument construction (Grogan 2002). Two areas of Early Neolithic occupation were identified under and around Knowth (*c.* 3900–3700 calBC) with evidence of four rectangular stone houses. Overlying this were at least ten Middle Neolithic dwellings, including a large rectangular building on the ridge, and a pebbled area and flint working within two concentric palisades. At Newgrange, phosphate analysis indicates Early Neolithic activity, while hearths and post holes are considered to represent two round Middle Neolithic buildings. There is no Early Neolithic megalithic architecture in the area (Brady 2007:218; Smyth 2009); however, while this may be the result of domestic and ritual activity occupying separate spaces, it is probable that both were integrated within everyday life with any separation relating to the level of ritual sophistication. The visual focus would have been the physical features of the landscape, as the tombs were visible from any distance and in sympathy with the existing topography.

Site development proceeded in phases from small mounded tombs of *c.* 15m diameter with simple rectangular, polygonal or cruciform chambers. At Knowth, their entrance orientation towards the large tomb location suggests this had become a focus in the landscape. An early passage grave was dismantled and some of its decorated stones incorporated in the Knowth and Newgrange mounds. Artefacts illustrate increasing ceremonial complexity that culminated in the construction of the three major tombs, their monumentality, elaboration and symbolism making them the foci while the landscape setting and construction materials emphasised their importance.

4.2 Ideopolitical

The earlier settlement and tombs on the Knowth and Newgrange ridges prior to the major tombs suggests perceived ideological importance of the site. At Knowth, the orientation of earlier tomb entrances towards the site of the large mound indicates that this was a pre-existing focus. The construction materials, sourced from several distant locations, emphasised the importance of the mounds and their regional dominance. They became effective media for conveying ideopolitical messages, and both a visual and ritual centre. Their built alignments ritually acknowledged celestial and cosmological events. They might also be viewed as conspicuous consumption, designed to enhance the prestige of rival groups within the Boyne region and beyond.

The three tombs dominated the landscape, proclaiming that political power was ideologically based and psychologically employed. In addition to size, their elaborate decoration would have established a dramatic impression on those who could assemble outside in areas of stone settings, and paving. At Newgrange, for example, at sunrise around the midwinter solstice, the effect of sunlight on the monument would have been striking, at a time when the land from the river would remain in darkness. Cosmologically, the mound summits could have provided platforms for ritual performance in the upper realm, while the tomb itself was the underworld. In doing so, the spiritual supremacy of the elite, who had organised tomb construction, was emphasised by their control of ideological perceptions.

Motifs on stones of the earlier Knowth tomb are rectilinear, while those of the more recent tombs are curvilinear. Furthermore, apart from one exception, the reused stones were placed with their decorated surfaces either wholly or partially obscured. That they were not destroyed implies that the motifs retained some power needing to be controlled. This suggests ideological estrangement between the earlier builders and those later which would account for motif change, although their incorporation into later mounds may reflect some continuing influence of that ideology. As noted, the entrance to Newgrange is protected by a large, horizontally-placed stone elaborately carved. The white quartz façade is also an entrance feature, the stone being used only there. This indicates that these stones had a particular meaning which may have related to the fact that like a number of others, both were distantly exotic to the area. They may have reflected a wide network of social contact, stating that the influence of this centre was capable of accessing and transporting them through a number of territories.

Since water encircled the area, isolating the tombs, rivers had to be crossed to reach them. Lewis-Williams and Pearce (2005:210), referring to Knowth, have commented that in the same way “one had to cross a circle of decorated stones to enter the tomb, especially the entrance stone with its distinctive motifs that had water eddies as part of their connotations”. The Boyne also provided the deceased with ready access to the sea, a realm associated with the dead.

It is argued that archaeo-astronomical alignments indicate control over the knowledge and ordering of time, this linked to the ancestral world by being captured in tomb structure. Entrance alignments at Newgrange and Dowth to the rising sun at the winter solstice and equinoxes have been demonstrated, and there are possible lunar alignments at Knowth (Brennan 1980; Stooke 1994). By merging the concepts of ancestral, celestial and temporal power, authority in society could be deemed to have a quasi-divine basis. Lewis-Williams and Pearce (2005:232-243), however, have stated that influential individuals, rather than using such astronomical alignments to demonstrate their control over seasonal movements of the sun which would have been accepted as inevitable, were keen to emphasise continuity of their social structure with that of significant events in the upper realm of the cosmos. Those in power realised that their positions in the cosmos could be reified in buildings, such as at Brú Na Bóinne, and that their belief system could

serve their own political purposes. As noted, the flat-topped mounds are important as possible complementary ritual places and elevated platforms for conspicuous, manipulative ceremony.

Kerb motifs at the three mounds include spirals, wavy lines, concentric and rayed circles, nested rectangles, tightly packed lozenges, dots, zigzags and chevrons. All are entoptic. Those of the more elaborately decorated basin within Knowth Eastern epitomise the complex system of ideological symbols employed throughout the tombs. In this context, architecture and art thus coalesce to represent and induce religious experience, belief and practice. As noted, engraving is seen to have had significance as well as the motifs themselves. The flint macehead found in the eastern passage of Knowth is decorated with spirals and lozenges. The spiral motif is a repeated feature of the tombs, suggesting that political power was founded on ideology – a particular cosmology and the continuing influence of the dead. Brennan (1980) and Stooke (1994) would see such curvilinear motifs as being significant to those in control at Knowth.

With respect to Newgrange, Prendergast (2012:63-64) has suggested that the tomb may have functioned with an interconnected set of motifs, particularly the triple spiral, thought to be associated with the shortest day of the year. This probably facilitated beliefs and rituals concerning rebirth and continuity that included a withdrawal into the tomb interior, the ‘other world’, and a return to the ‘real’ world outside. She commented that while deposition of human remains within the tombs has led to their classification as graves, they were more likely to have been used in complex ways, with rituals and associated beliefs interrelating with the living and the dead. At Knowth, attention is drawn to the entrances of its two graves and kerbstones decorated with nested rectangles, thresholds where rituals may have taken place.

4.3 Social

As noted, the tomb form represents the cosmos and has been used ritually. Lewis-Williams and Pearce (2005:243) have referred to the use of raised platforms for ritual display at places such as Silbury Hill, commenting that all the organised labour went towards the “literal and figurative” raising of a few particularly influential people “beyond reach but in full view” of those who had enabled it. In this way, the spiritual supremacy of the elite, who had organised mound construction, was enhanced, as power resided in controlling these places and related ideological perceptions. Pauketak (2009:68-84) detailed similar use of elevated platforms at Cahokia.

The decorated Boyne kerbstones emphasise a boundary not to be crossed, while the blocking stones further controlled entry. Experiencing the interior was restricted to those who could intercede with the ancestors and the supernatural; and there may have been limits to how far into the passage some could move, given the thresholds marked by different motifs incised into orthostats at intervals. In addition, the rising passage floors only permitted those outside to view the entrances and not inside. The effect would have been impressive for people assembled outside in the viewing zones.

4.5 Economic

Animal domestication and crop management, linked by grazing, winter fodder production and manure, were the most important changes to regional culture both economically and socially. For Brú na Bóinne, this meant not only that large numbers of people could aggregate permanently, but in marginal locations as well. Van Wijngaarden-Bakker (1986:101) has suggested that the emphasis was primarily on the breeding of cattle and pigs rather than crop husbandry. Poor preservation of organic material is a problem in determining practices, with only a few cereal seeds identified;

however, relatively high levels of cereal pollen indicate that crops were grown in the vicinity as part of a mixed farming economy (Smythe 2009).

The large faunal assemblage associated with a settlement at Newgrange suggests a livestock economy dominated by domesticated cattle and pig, with pig representing over 60%. All pig bone recovered is carbonised, suggesting that the species was probably preferred for ritual feasting. A crop and livestock economy involving some form of enclosure, perhaps field hedges, has been argued (Smythe 2009).

4.6 Distant Contact

Artefacts and raw materials point to routine contact with areas outside Brú na Bóinne, some at considerable distances away, and for the desire to reference these. This highlights its position as a core area from at least the Middle Neolithic to the Early Bronze Age (Brady 2007:218; Smyth 2009). A large proportion of material used in construction and decoration of the three tombs is not local. Most kerbstones and orthostats were obtained from the coast close to Clogherhead, c.16km northeast; rounded grandiorite cobbles and oval banded siltstones are from Dundalk Bay, c.50 km to the northeast; while the Wicklow Mountains, c.75km to the south, were the source of quartz (McCabe and Nevin 1986; Mitchell 1984; Smythe 2009). It appears that deliberate cultural choices were made for specific resources. For example, significant quantities of chalk flint were imported directly from Antrim, the only Irish source. The flint macehead found within Knowth came from Lambay Island (Cooney 2004:200). These stones were used in conjunction with local resources, such as the black shale underlying the ridges in Brú na Bóinne, stones from the valley alluvial deposits, and sods from the surrounding area. The range of materials used was therefore both local and exotic, and a metaphor for the two contrasting scales of life and landscape, important in the social life of the builders. Many stones were distinctively coloured, suggesting that people travelled far to participate in activity associated with the monuments. Medium and long-distance movement into and out of the area appears to have been routine (Bradley 2007:103; Brady 2007:216-217).

The Late Neolithic saw the introduction of Grooved Ware in Ireland from Britain (Cooney 2000:183), followed later by Beaker pottery. In both cases, it is considered that these innovations represent material expression of new ideas of major social influence. This is indicated by the concentration of these in Brú na Bóinne. Similarly, knowledge and power in ceremonies may have resided in access to non-local ideas, knowledge, materials and artefacts, which is expressed not only by exotic artefacts but also in non-local ornamental stones used and placed in significant locations.

Comparison of tomb motifs suggests that such intensive image-making may have originated in France, coming to eastern Ireland as those responsible for the tombs acquired prestige (Lewis-Williams and Pearce 2005:216). Such abstract, shamanistic patterns of ring, lozenge and zigzag motifs, also seen in Orkney, are common elements in the Boyne, and include the distinctive and rare 'horned' spiral. The latter is found only in the unusual Millin Bay cairn (Bradley et al. 2000:63), although possible variations occur at the Listoghel and Heapstown cairns in County Sligo (Hensey and Robin 2011). The three-pronged motif at the former is reminiscent of the triple-spiral motif at Knowth and Newgrange. Other similarities in Irish and Orcadian visual imagery are seen in placing greater emphasis on the right-hand parts of tombs (Bradley et al. 2000:63-64). A prestigious jadeite axe found in Co. Mayo, originated in the Italian Alps, shows that Ireland was part of a wide European network at this time (O'Toole 2015).

Lewis-Williams and Pearce (2005:208, 218, 223) observed a parallel between these tombs and the embellished Upper Palaeolithic caves of Western Europe, suggesting that their builders were making their own caves, with entrances to the nether realms of their

own cosmos and consciousness. It was noted that on entering, the same sensory deprivation is experienced, providing a way for them to enter an ASC. The passage and chamber give the impression of passing through a constriction that widens and enters a high-roofed chamber itself. This is the fundamental experience of passage tombs and was deliberately contrived to replicate the mental vortex to provide a way through the levels of the cosmos.

COMMENTARY

The evidence indicates that while reflecting trends emphasised by the model for the two phases, processes similar to those operating in Orkney and Wessex, particularly social differentiation and control, and the take-up elements in the Neolithic package, Ireland developed in its own way and timing.

re Model Phase 2: Céide Fields and Knockadoon

Céide Fields, in contrast to Knockadoon, had no apparent village nucleation. These were established settlements with permanent structures, but may not have been permanently occupied and have varied in size according to kin or community group requirements.

There is no explicit evidence of shamanism, however the tombs, by their nature, number and alignments exhibit strong concern for death and cosmology. Similarly, the quartz deposits, the sequencing of yellow clay and red sand layers in flooring, and charcoal and sherds of pottery suggestive of ritual feasting associated with the Behy court tomb have shamanistic overtones. The features of the small number of non-tomb burials in the grave concentration at Knockadoon suggest belief in an afterlife and ancestors.

The ideopolitical signature on regional planning and monument construction points to overarching control. Erection of stone-built tombs as settlement foci suggests either a need for formal social organisation or deliberate strategy on the part of particular individuals to achieve social control through ideology. Ideopolitical overtones are clearly present in the focal positioning of tombs within the settlements. Furthermore, as human remains within the tombs do not represent the total population of the areas, a selective process for inclusion in tombs was in clearly in process. As with Phase 2 at Orkney and Windmill Hill, this impression is reinforced by the stone circles and other enclosures with their sociopolitical implications of sacred space and everything that that implies, particularly control and domination by a social elite.

re Model Phase 3: Brú Na Bóinne Complex

The stone circles and enclosures making their appearance in Phase 2 might be explained as strategy to achieve increased social manipulation through a more communal approach to ritual and ceremonial behaviour. In turn, the Boyne Complex can be seen as having taken this to a much higher level with expansion of practices and rituals, and emphasis on the dead, cosmology and special places, all reinforced by construction of massive elaborate tombs with cosmological alignment. The tombs highlighted the importance of water, were decorated with entoptic art on kerbstones and orthostats and incorporated exotic coloured and shiny artefacts, while Newgrange displayed a prominent shiny quartz façade. Inclusion/exclusion was taken to the extreme, further enhancing the spiritual supremacy of the elite who had organised their construction, since power resided in controlling these places and related ideological perceptions. This is all indicative of shamanistic practice.

While there may be differences of detail and in the resulting ideopolitical landscape, the underlying processes are similar to those seen to be operating in Phase 3 Orkney and Wessex, particularly in the context of social control residing in access to exotic non-local ideas, knowledge, materials and artefacts. Furthermore, the entrance orientation of

enclosures and stone and timber structures in the narrow zone between the three tombs and the Boyne River are reflective of routeways in those other two regions associated with transitioning the dead to the afterlife: such as observed in Wessex, the avenues between Durrington Walls and Stonehenge, and between the Sanctuary and Avebury; and in Orkney, along the isthmus between the Ring of Brodgar and Maeshowe.

REDACTIONS

- Fig. I.1** Céide Fields: location of site in County Mayo, Ireland
- Fig. I.2** Céide Fields: landscape of fields bounded by drystone walls and stretching northwards and downwards to coastal cliffs
ref: <http://ceidefields.com/ceide/wp-content/uploads/2009/12/aerial1.jpg>
- Fig. I.3** Céide Fields: diagrams showing: (a) landscape division into regular coaxial field system; (b) Behy/Glenulra field area system showing enclosures within fields ref: <https://www.pureireland.com/en/magazine/349/the-ceide-fields> and *European Journal of Archaeology*, Volume 20, Issue 2, 2017
- Fig. I.4** Céide Fields: drystone field wall/boundary
ref: http://farm9.ataaticflickr.com/8006/7631094982_ab346b2c3f.jpg
- Fig. I.5** Céide Fields: excavated tomb
ref: http://farm8.ataaticflickr.com/7260/7631118446_11e77e212e.jpg
- Fig. I.6** Céide Fields: (a) composite plan of the Glenulra enclosure; (b) enclosure excavation looking north ref: Caulfield *et al.* 2009
- Fig. I.7** Knockadoon: location of site in County Limerick, Ireland
- Fig. I.8** Knockadoon: site plan of the prehistoric settlement ref: Cooney 2000:79
- Fig. I.9** Knockadoon: remains of the prehistoric site on Lough Gur
ref: http://www.megalithic.co.uk/a558/a312/gallery/ireland/Limerick/lough_gur_ax.jpg
- Fig. I.10** Knockadoon: reconstructed prehistoric crannog, an artificial island/dwelling, the remains of at least three of which have been found on Lough Gur
ref: http://upload.wikimedia.org/wikipedia/commons/thumb/5/53/Crannog_-_geograph.org
- Fig. I.11** Brú Na Bóinne: location in County Meath, Ireland
- Fig. I.12** Brú Na Bóinne landscape of the Late Neolithic
ref: (a) Cooney 2000:166; (b) <http://www.spiegel.de/fotostrecke/remote-scanning-techniques-in-archaeology-fotostrecke-85414.html>
- Fig. I.13** Brú Na Bóinne: Knowth megalithic tomb
ref: http://il.trekearth.com/photos/57481/knowth_1g_mound.jpg
- Fig. I.14** Brú Na Bóinne: Newgrange megalithic tomb
ref: <https://www.civitatis.com/es/dublin/excursion-newgrange-valle-boyne/>
- Fig. I.15** Brú Na Bóinne: Dowth megalithic tomb
ref: <http://www.knowth.com/dowth.htm>
- Fig. I.16** Knowth mound: aerial view showing satellite tombs
ref: <https://www.ireland.com/en-us/amazing-places/bru-na-boinne>
- Fig. I.17** Knowth mound: plans and sections of the Eastern and Western passage graves ref: Lewis-Williams and Pearce 2005:218
- Fig. I.18** Knowth mound: Eastern passage grave ref: <https://cianmcliam.smugmug.com/Ancient-Ireland/Passage-Tombs/Knowth-Passage-Tombs-Co-Meath/>
- Fig. I.19** Knowth tomb: Western passage grave and carved orthostats
ref: <https://www.ancient-origins.net/ancient-places-europe/mystifying-megaliths-knowth-keeper-ancient-tombs-008883>
- Fig. I.20** Knowth mound: entrance stones to (a) Eastern and (b) Western passage graves ref: Lewis-Williams and Pearce 2005:212

- Fig. I.21** Knowth mound: entrances to: (a) Eastern and (b) Western passage graves ref: Lewis-Williams and Pearce 2005:213
- Fig. I.22** Knowth mound: four kerbstones from the perimeter ref: Lewis-Williams and Pearce 2005:210-211
- Fig. I.23** Knowth mound: (a) carved basin and (b) back wall in the right-hand alcove of the Eastern passage grave ref: Lewis-Williams and Pearce 2005:224-225
- Fig. I.24** Knowth mound: decorated stone macehead recovered from the Eastern passage grave ref: Lewis-Williams and Pearce 2005:236; Brú Na Bóinne Co. Meath (OPW brochure)
- Fig. I.25** Brú Na Bóinne mounds: the triple-spiral motif, a repeated feature of the tombs ref: Brú Na Bóinne Co. Meath (OPW brochure)

Naked eye map of the moon (left) with carving on stone orthostat 47 (right) and the two superimposed (centre) to illustrate their similarity

Carvings interpreted as representing the maria on various stones

Carvings on Kerbstone 52 at Knowth

- Fig. I.26** Knowth mound: lunar interpretations by Stooke of motifs on decorated stones ref: Stooke 1994
- Fig. I.27** Newgrange mound: aerial view showing entrance ref: <http://www.newgrange.com/dowth>.
- Fig. I.28** Newgrange mound detail of carved entrance stone ref: <https://www.stcolumbas.ie/2017/10/09/art-history-trip-newgrange/>
- Fig. I.29** Newgrange mound: detail of 'false' entrance stone positioned diametrically opposed the entrance on the other side of the mound ref: <https://cianmcliam.smugmug.com/Ancient-Ireland/Rock-Art/Megalithic-Art/i-W2TWkdb>
- Fig. I.30** Newgrange mound: entrance, quartz facade and carved entrance stone ref: <http://www.mega-what.com/SiteCat/Newgrange/index.html>
- Fig. I.31** Newgrange mound: plan of passage grave including end recess (C8) in relation to axis ref: Powell 1994:89
- Fig. I.32** Newgrange mound: interior showing complex spiral motif ref: <https://www.bowenimagery.com/blog/life-lessons-from-the-emerald-isle/>
- Fig. I.33** Newgrange mound: entrance passage showing roof-box and astrological alignment to the winter solstice sun causing illumination of the back wall ref: <http://blog.mythicalireland.com/2016/12/the-12-days-of-solstice-day-12-sunlight.html>
- Fig. I.34** Dowth mound: aerial view ref: <http://www.newgrange.com/dowth.htm>
- Fig. I.35** Dowth mound: kerbstones ref: <http://www.saintsandstones.net/stones-knowth-journey.htm>
- Fig. I.36** Dowth mound: plan and section of North passage grave ref: www.mythicalireland.com
- Fig. I.37** Dowth mound: plan and section of South passage grave ref: www.mythicalireland.com
- Fig. I.38** Dowth mound: basin stone and decorated orthostat in the North passage grave ref: Brú Na Bóinne Co. Meath (OPW brochure)

Fig I.39 Dowth mound: astronomical alignment of the South passage grave to the winter solstice sun causing illumination of the back wall
ref: <https://www.knowth.com/dowth-sunsets.htm>

BIBLIOGRAPHY

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Abraham, H.

- 2013 *Household Burials and Community Organisation at Çatalhöyük, Turkey*. Senior Honours Thesis, Department of Anthropology, University of Michigan

Adams, R.McC.

- 1966 *The Evolution of Urban Society: Early Mesopotamia and Prehispanic Mexico*. Weidenfeld and Nicolson: London
- 1992 Ideologies: Unity and Diversity. In A.A. Demarest and G.W. Conrad (eds) *Ideology and Pre-Columbian Civilizations*, pp.205:221. School of American Research Press: Santa Fe, New Mexico

Adams, R.N.

- 1977 Power in Human Species: A Synthesis. In R.D. Fogelson and R.N. Adams (eds) *The Anthropology of Power*, pp.387-410. Academic Press: New York

Agelarakis, A.

- 1993 The Shanidar Cave Proto-Neolithic Population: Aspects of Demography and Palaeopathology. *Human Evolution* **8(4)**:235-253
- 2004 The Shanidar Cave Proto-Neolithic Human Condition as reflected through Osteology and Palaeopathology. In R.S. Solecki, R.L. Solecki and A.P. Agelarakis, *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.159-184. Texas A7M University Press: College Station

Albarela, U. and S. Payne

- 2005 Neolithic Pigs from Durrington Walls, Wiltshire, England: a biometrical database. *Journal of Archaeological Science* 32:589-599

Allen, M.

- 2007 *Avebury: Wiltshire's "Other" Stone Circle*
www.timetravel-britain.com/articles/stones/avebury.shtml

Allen, M., B. Chan, R. Cleal, C. French, P. Marshall, J. Pollard, R. Pullen, C. Richards, C. Tuggles, D. Robinson, J. Rylatt, J. Thomas, K. Welham, M. Parker Pearson

- 2016 Stonehenge's Avenue and Bluestonehenge. *Antiquity* 90: 991-1008.

Allen, M. and J. Gardiner

- 2002 A Sense of Time: Cultural Markers in the Mesolithic of Southern England. In B. David and M. Wilson (eds) *Inscribed Landscapes: Marking and Making Places*, pp.139-153. University of Hawaii Press: Honolulu

Amsden, C. W.

- 1977 *A Quantitative Analysis of Nunamiut Eskimo Settlement Dynamics: 1989 to 1969.*
Unpublished PhD. dissertation, University of New Mexico, Albuquerque

Andersen, N. H.

- 2015 Causewayed Enclosures in Northern and Western Europe. In *Oxford Handbook of Neolithic Europe*, pp. 795-812. Oxford University Press; Oxford

Anderson, P.C.

- 1991 Harvesting of Wild Cereals during the Natufian as seen from the Experimental Cultivation and Harvest of Wild Einkorn Wheat and Microwear: Analysis of Stone Tools. In O. Bar-Yosef and F.R. Valla (eds) *The Natufian Culture in the Levant*, pp.521-556. International Monographs in Prehistory. Ann Arbor: Michigan

Anderson-Whymark, H., A. Clarke, M. Edmonds and A. Thomas

- 2017 Process, Form and Time: Maceheads in an Orcadian Context. In R. Shaffrey (ed.), *Written in Stone: Function, Form and Provenancing a Range of Prehistoric Stone Objects.* The Highfield Press: Southampton

Anon

- n.d. West Overton 6b. Wiltshire Heritage: Archaeology/Bronze Age Site Information
<http://www.wiltshireheritagecollections.org.uk/wiltshiresites.asp?...reSites&mwsquery=%7Place%20identity%7D=%7BWest%20Overton%20G6b%7D>

Appleby, A.

- 1994 Is this Britain's first known landscape art? *The Orcadian* **13**

Archaeology Orkney

- 2016 *Intriguing Structure Found in Trench T*
2017 *Ness of Brodgar Summer 2017*

Armit, I and B. Finlayson

- 1992 Hunter-gatherers Transformed: The transition to agriculture in northern and western Europe. *Antiquity* **66**:664-676

Arnold, B.

- 1999 'Drinking the Feast': Alcohol and the Legitimation of Power in Celtic Europe. *Cambridge Archaeological Journal* **9(1)**:71-93

Arnold, J.E.

- 1987 Craft Specialization in the Prehistoric Channel Islands, California. *University Publications in Anthropology* **18**. Berkeley and Los Angeles

Ascouti, E. and A. Fairbairn

- 2002 Subsistence Economy in Central Anatolia during the Neolithic: The Archaeological Evidence. In *The Neolithic of Central Anatolia: Internal Developments and External Relations during the 9th-6th Millennia cal BC*, pp.181-192. Proceedings of the International CANeW Round Table, Istanbul 23-24 November 2001. Ege Yayinlari: Istanbul

Atkinson, R. J.

- 1979 *Stonehenge*. Penguin: London

Bahn, P.G.

- 2010 *Prehistoric Rock Art: Polemics and Progress*. Cambridge University Press: Cambridge

Baird, D.

- 2005 The History of Settlement and Social Landscapes in the Early Holocene in the Çatalhöyük Area. In I Hodder (ed.) *Çatalhöyük Perspectives: Themes from the 1995-1999 Seasons*, pp.55-74. McDonald Institute: Cambridge

Baker, C.M.

- 1975 Site Abandonment and the Archaeological Record: An Empirical Case for Anticipated Return. *Arkansas Academy of Science Proceedings* **23**:10-11

Ballin, T.B.

- 2013 The Late Neolithic Pitchstone Artefacts from Barnhouse, Orkney: An Unusual Assemblage from an Unusual Site. *Archaeological Reports Online (ARO4)*

Banning, E.B.

- 2003 Housing Neolithic Farmers. *Near Eastern Archaeology* **66(1/2)**:4-21
- 2011 So Fair a House: Göblekli Tepe and the Identification of Temples in the Pre-Pottery Neolithic of the New East. *Current Anthropology* **52(5)**:619

Barber, M.

- 2003 *Late Neolithic Palisade Enclosures at West Kennet: Report on the Aerial Photographic Transcription and Analysis*. English Heritage Aerial Survey Report Series AER/1/2003

Barber, M. and D. McOmish

- 1994 *A New Earthwork Survey of Windmill Hill, Wiltshire*. Royal Commission on the Historical Monuments of England

Barclay, A. and G. Chaffey

- 2014 Horton's Neolithic Houses. *Current Archaeology* **292**:24-30.

Barclay, A., G. Chaffey and A. Manning

- 2012 A Possible Second Neolithic House and Unusual Mortlake Bowl from Kingsmead Quarry, Horton, Berkshire. *PAST* **71**:1-2

Barclay, G.J., K Brophy and G. MacGregor

- 2002 Claish, Stirling: An early Neolithic structure in its context. *Proceedings of the Society of Antiquities of Scotland* **132**:165-137

Barclay, G., and C. Russell-White

- 1993 Excavations in the Ceremonial Complex of the Fourth to Second Millennium BC at Balfarg/Balbirnie, Glenrothes, Fife. *Proceedings of the Society of Antiquities of Scotland* **123**:43-210

Barker, A.W. and T.R. Pauketat

- 1992 Lords of the Southeast: Social Inequality of Southeastern North America. *Archaeological Papers of the American Anthropological Association* **3**

Barker, D., J. Pollard, K. Strutt, M. Gillings and J. Taylor

- 2017 Squaring the Circle? Geophysical Survey across part of the Southern Inner Circle of the Avebury henge. Report. University of Leicester.

Barker, D., J. Pollard, K. Strutt, M. Gillings, and J. Taylor

- 2017 Squaring the Circle? Geophysical Survey across part of the Southern Inner Circle of the Avebury henge. University of Southampton/University of Leicester

Barnard, A.

- 2007 From Mesolithic to Neolithic Modes of Thought. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, pp.5-19; Oxford University Press for the British Academy: Oxford

Barrett, J.C.

- 1994 *Fragments of Antiquity: An Archaeology of Social Life in Britain 2900-1200BC.* Basil Blackwell: Oxford

Bar-Yosef, O.

- 1981 The Epipalaeolithic Complexes in the Southern Levant. In J. Cauvin and P. Sanlaville (eds) *Préhistoire du Levant*, pp.389-408. Colloques Internationaux du CNRS **598**, Paris
- 1988 The Natufian Graveyard in Hayonim Cave. *Paléorient* **14(2)**:297-308
- 1991a The Archaeology of the Natufian Layer at Hayonim Cave. In O. Bar-Yosef and F.R. Valla (eds) *The Natufian Culture in the Levant*, pp.81-92. International Monographs in Prehistory. Ann Arbor: Michigan

- 1991b Art Items from Layer B, Hayonim Cave: A Case Study of Art in a Natufian Context. In O. Bar-Yosef and F.R. Valla (eds) *The Natufian Culture in the Levant*, pp.569-588. International Monographs in Prehistory. Ann Arbor: Michigan
- 1998 The Natufian Culture in the Levant: Threshold to the Origins of Agriculture. *Journal of Evolutionary Anthropology* **6(5)**:159-177.
- 2001 From Sedentary Foragers to Village Hierarchies: The Emergence of Social Institutions. In *The Origin of Human Social Institutions*, pp.91-149. Kluwer Academic/Plenum: New York
- 2002a Natufian: A Complex Society of Foragers. In B. Fitzhugh and J. Habu (eds) *Examining the Farming/Language Dispersal Hypothesis*, pp.91-149. Kluwer Academic Plenum: New York

Bar-Yosef, O. and A. Belfer-Cohen

- 1992 From Foraging to Farming in the Mediterranean Levant. In A.B. Gebauer and T.D. Price (eds), *Transitions to Agriculture in Prehistory*, pp21-48. Prehistory Press: Madison WI
- 1999 Encoding Information: Unique Natufian objects from Hayonim Cave, Western Galilee, Israel. *Antiquity* **73**:402-410

Bar-Yosef, O. and N. Goring-Morris

- 1973 Natufian Remains in Hayonim Cave. *Paléorient* **1**:49-68

Bar-Yosef, O. and R. Meadow

- 1995 The Origins of Agriculture in the Near East. In T. D. Rice and G. Gebauer (eds) *Last Hunters, First Farmers: New Perspectives on the Transition to Agriculture*, pp.39-94. School of American Research Press: Santa fe

Basilov, V.N.

- 1990 Chosen by the Spirits. In M.M. Balzer (ed.) *Shamanism: Soviet Studies of Traditional Religion in Siberia and Central Asia*, pp.3-48. ME Sharpe: Armonk, New York

Bataille, G.

- 1955 *Prehistoric Painting: Lascaux; or, The Birth of Art.* Skira: Geneva
- 1962 *Eroticism: Death and Sensuality.* Walker: New York

Bates, D.

- 1973 *Nomads and Farmers: A Study of the Yörüük of Southern Turkey.* Anthropological Paper **52**. University of Michigan Museum of Anthropology, Ann Arbor

Baumann, K.H., K.S. Lackschewitz, J. Mangerud , R.F. Spielhagen, T.C.W. Wolf-Welling, R. Bayliss, A., F. McAvoy and A. Whittle

- 2007 The World Recreated: Redating Silbury Hill in Its Monumental Landscape. *Antiquity* **81**:26-53

Bayliss, A., F. Healy, A. Whittle and G. Cooney

- 2011 Neolithic Narratives: British and Irish Enclosures in Their Timescapes. In Whittle, A., F. Healy and A. Bayliss (eds) *Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland*, pp.682-847; Oxbow Books: Oxford

Bayliss, A., P. Marshall, C. Richards and A. Whittle

- 2017 Islands of History: The Late Timescape of Orkney. *Antiquity* **91(459)**:1171-1188

Bayliss, A., F. McAvoy and A. Whittle

- 2007 The World Recreated: Redating Silbury Hill in Its Monumental Landscape. *Antiquity* **81**:26-53

Bayliss, A., A. Whittle and F. Healy

- 2008 Timing, Tempo and Temporalities in the Early Neolithic of Southern Britain. In H. Fokkens, B. J. Coles, A. L. Van Gun, J. P. Kleijne, H. H. Ponjee and C. G. Slappendel (eds), *Between Foraging and Farming*, pp.25-42; *Analecta Praehistorica Leidensia* 40; Leiden University

Baxter, P.T.

- 1975 Some Consequences of Sedentarization for Social Relationships. In T. Monod (ed.) *Pastoralism in Tropical Africa*, pp.206-208. Oxford University Press: London

Beadsmore, E., D. Garrow and M. Knight

- 2010 Refitting Etton: Space, Time, and Material Culture within a Causewayed Enclosure in Cambridgeshire. *Proceedings of the Prehistoric Society* **76**:115-134

Beardsley, R.K., P. Holder, A.D. Krieger, B.J. Meggers, J.B. Rinaldo and P. Kutsche

- 1956 Functioning and Evolutionary Implications of Community Patterning. In R. Wauchope (ed.) *Seminars in Archaeology 1955*, Society for American Archaeology Memoir **11**

Beau, A., M. Rivollat, H. Réveillas, M. Pemonge, F. Mendisco, Y. Thomas, P. Lefranc and M. Deguilloux

- 2017 Origin of Michelsberg Farmers. *PLOS ONE* July 2017

Becker, J., L. Clare, O. Dietrich, Ç. Köksal-Schmidt, A. Merbach, J. Notroff, S. Pant, J. Peters, N. Pöllath and K. Schmidt

- 2014 *Göbekli Tepe Newsletter 2014*

Belfer-Cohen, A.

- 1988 The Natufian Graveyard in Hayonim Cave. *Paléorient* **14(2)**:297-308

- 1991 Art Items from Layer B, Hayonim Cave: A Case Study of Art in a Natufian Context. In O. Bar-Yosef and F.R. Valla (eds) *The Natufian Culture in the Levant*, pp.569-588. International Monographs in Prehistory. Ann Arbor: Michigan

Belknap, L.

- 2016 New Discoveries from Cahokia's 'Beaded Burial'. *Cahokia Mounds State Historic Site News*

Bell, C.

- 1992 *Ritual Theory, Ritual Practice*. Oxford University Press: Oxford
- 1997 *Ritual: Perspectives and Dimensions*. Oxford University Press: Oxford

Bellwood, P.S.

- 2005 *First Farmers: The Origins of Agricultural Societies*. Blackwell: Malden M.A.

Bender, B.

- 1975 *Farming in Prehistory: From Hunter-Gatherer to Food Production*. John Baker: London
- 1978b Gatherer-Hunter to Farmer: A Social Perspective. *World Archaeology* **10(2)**:204-222
- 1985a Prehistoric Developments in the American Midcontinent and in Brittany, Northwest France. In T.D. Price and J.A. Brown (eds) *Prehistoric Hunter-gatherers: The Emergence of Cultural Complexity*, pp.21-57. Academic Press: London;
- 1985b Emergent Tribal Formations in the American Midcontinent. *American Antiquity* **50(1)**:52-62

Beneš, J., M. Divišová and V. Vondrovsky

- 2014a *Neolithic Longhouse Phenomenon: Origins, Meanings, Inhabitants and Successors*. EAA/European Association of Archaeologists 20th Annual Meeting ITU-Istanbul

Beneš, J., V. Vondrovsky, L. Kovačiková and M. Divišová,

- 2014b Decoding the Neolithic Building Complex: The case of the extraordinary large House III from Hrdlovka, Czech Republic. *Interdisciplinaria Archaeologica: Natural Sciences in Archaeology Vol V(2)*

Bennett, J.

- 1996 Spinoza's Metaphysics. In D. Garrett (ed.) *The Cambridge Companion to Spinoza*, pp.61-88. Cambridge University Press: Cambridge

Bergh, S.

- 1995 Landscapes of the Monuments. University of Stockholm: Stockholm

BfR – Bundesinstitut für Risikobewertung

- 2017 *Risk Assessment of the Occurrence of Alkaloids in Lupin Seeds*. DOI 10.17590/20170530-142504 BfR Opinion No 003/2017

Berthon, R., Y. Erdal, M. Mashkour and G. Kozbe

- 2016 Buried with Turtles: the symbolic role of the Euphrates soft-shelled turtle (*Rafetus euphraticus*) in Mesopotamia. *Antiquity* **90 (349)**:111-125

Binford, L.R.

- 1968a Post-Pleistocene Adaptations. In L.R. Binford and S.R. Binford (eds) *New Perspectives in Archaeology*, pp.313-341. Aldine: Chicago
- 1968b Methodological Considerations of the Archaeological Use of Ethnographic Data. In R.B. Lee and I. DeVore (eds) *Man the Hunter*, pp.268-273. Aldine: Chicago
- 1971 Mortuary Practices: Their Study and Their Potential. In J.A. Brown (ed.) *Approaches to the Social Dimensions of Mortuary Practices.* Society for American Archaeology Memoir **25**:6-29
- 2001 *Constructing Frames of Reference: An Analytical Method for Archaeological Theory Building using Hunter-gatherer and Environmental Data Sets.* University of California Press: Los Angeles

Binford, L.R. and W.J. Jnr Chasko

- 1976 Nunamiut Demographic History: A Provocative Case. In E.B.W. Zubrow (ed.) *Demographic Anthropology: Quantitative Approaches*, pp.63-143. University of New Mexico: Albuquerque

Birdsell, J.B.

- 1968 Some Predictions for the Pleistocene based on Equilibrium Systems among Recent Hunter-Gatherers. In R.B. Lee and I. De Vore (eds) *Man the Hunter*, pp.229-240. Aldine: Chicago
- 1973 A Basic Demographic Unit. *Current Anthropology* **14**:337-356

Black, L.

- 1950 *Stone Arrangements.* Paterson Brokensha:PERTG

Blake, M., J.E. Clark, B. Chisholm and K. Mudar

- 1992 The Dispersal of Food Production across the Levant. In A.B. Gebauer and T.D. Rice (eds) *Transitions to Agriculture*, pp. 33-152. Monographs in World Archaeology **4**. Prehistory Press: Madison Wisconsin

Blanton, R.E., S.A. Kowalewski, G.M. Feinman and L.M. Finsten

- 1993 *Ancient Mesoamerica.* Cambridge University Press: Cambridge

Blintiff, J.L.

- 1999 *Settlement and Territory.* Routledge: London

Bloch, M.

- 1975 Property and the End of Affinity. In M. Bloch (ed.), *Marxist Analyses and Social Anthropology*. ASA London
- 1986 *From Blessing to Violence: History and ideology in the circumcision ritual of the Merina of Madagascar*. Cambridge University Press: Cambridge
- 1992 *Prey into Hunter: The Politics of Religious Experience*. Cambridge University Press: Cambridge
- 2010 Is there religion at Catalhöyük ... or are there just houses? In I. Hodder (ed.) *Religion in the Emergence of Civilization: Catalhöyük as a Case Study*, pp.146-162. Cambridge University Press: Cambridge

Bloch, M. and J. Parry

- 1982 Introduction to Death and the Regeneration of Life. In M. Bloch and M. Parry (eds), *Death and Regeneration of Life*, pp1-45. Cambridge University Press: Cambridge

Blundell, G.

- 2004 *Nqabayo's Nomansland; San Rock Art and the Somatic Past*. Studies in Global Archaeology 2. African and Comparative Archaeology, Department of Archaeology and Ancient History, Uppsala University; Rock Art Research Institute, School of Geography, Archaeology and Environmental Science, University of Witwatersrand, Johannesburg; Elanders Gotab: Stockholm

Bogaard, A., M. Charles, K.C. Twiss, A. Fairbairn, N. Yalman, D. Filipović, G.A. Demiregi, F. Ertuğ, N. Russell and J. Henecke

- 2009 Private Pantries and Celebrated Surplus: Storing and Sharing Food at Neolithic Catalhöyük, Central Anatolia. *Antiquity* 83:649-668

Bond, J.M.

- 1994 *Change and Continuity in an Island System, the Palaeoeconomy of Sanday, Orkney*. Unpublished Ph.D. thesis, University of Bradford

Borić, D.

- 2005 Deconstructing essentialisms: unsettling frontiers of the Mesolithic-Neolithic Balkans. In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.8-31; Oxbow Books: Oxford

Botfield, S.J.

- 2012 *Grooved Ware Pottery in the Upper Thames Valley: Context and Design*. M. Phil. thesis; University of Birmingham

Bourdieu, P.

- 1972 *Esuuisse d'une théorie de la pratique, précédée de trois études d'ethnologies kabyle*. Droz: Genève

1977 *Outline of a Theory of Practice*. Cambridge University Press: Cambridge

1990 *The Logic of Practice*. Cambridge University Press: Cambridge

Bourguignon, E. and T.L. Evascu

1977 Altered States of Consciousness within a General Evolutionary Perspective: A holocultural analysis. *Behaviour Science Reserarch* **12(3)**:197-216

Boutoille, L.

2016 *The Metalworking Toolset at Upton Lovell G2a, Wiltshire, England*. Poster. Queen's University, Belfast

Boyd, B.

2006 On 'Sedentism' in the Later Epipalaeolithic (Natufian) Levant. *World Archaeology* **38(2)**:164-178

Boyer, P.

2000 Functional Origins of Religious Concepts: Ontological and Strategic Selection in Involved Minds. *Journal of the Royal Anthropological Institute (NS)* **6**:195-214

2002 *Religion Explained: The Evolutionary Origin of Religious Thought*. Basic Books: New York

Bradley, R.

1978 *The Prehistoric Settlement of Britain*. Routledge: London

1984 *The Social Foundations of Prehistoric Britain*. Longman: Essex

1990 *The Passage of Arms*. Cambridge University Press: Cambridge

1993 *Altering the Earth: Origins of Monuments in Britain and Continental Europe*. Society of Antiquaries of Scotland Monograph **8**, Edinburgh

1996 Long Houses, Long Mounds and Neolithic Enclosures. *Journal of Material Culture* **1(2)**:239-256

1998a *The Significance of Monuments: On the Shaping of Human Experience in Neolithic and Bronze Age Europe*. Routledge: London

1998b Incised Motifs in the Passage Graves at Quoyness and Cuween, Orkney. *Antiquity* **72**:387-390

2000 *An Archaeology of Natural Places*. Routledge: London

2003 A Life Less Ordinary: The Ritualisation of the Domestic Sphere in Later Prehistoric Europe. *Cambridge Archaeological Journal* **13**:1:5-13

2005 *Ritual and Domestic Life in Prehistoric Europe*. Routledge: London

2007 *The Prehistory of Britain and Ireland*. Cambridge University Press: New York

2008 The End of the Beginning: Changing configurations in the British and Irish Neolithic. *Analecta Praehistorica Leidensia* **40**:43-49

Bradley, R., T. Phillips, C. Richards and M. Webb

2000 Decorating the Houses of the Dead: Incised and Pecked Motifs in Orkney Chambered Tombs. *Cambridge Archaeological Journal* **11**:45-67

Brady, C.

2007 The Lithic Landscape of the Newgrange Environs. In M. Larsson and M. Parker Pearson (eds) *From Stonehenge to the Baltic: Living with Cultural Diversity in the Third Millennium BC*, pp.213-220. BAR International Series **1692**

Braidwood, R.J.

1952 *The Near East and Foundations for Civilisation*; Condon Lectures, Eugene: Oregon State System of Higher Education

1960 The Agricultural Revolution. *Scientific American* **203**:130-141

Braithwaite, M.

1984 Ritual and Prestige in the Prehistory of Wessex c. 22000-1400BC: A New Dimension to the Archaeological Evidence. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp.93-110; Cambridge University Press: Cambridge

Bray, W.M.

1976 From Predation to Production: The Nature of the Agricultural Evolution in Mexico and Peru. In *Problems in Economic and Social Archaeology*, pp.73-95. Duckworth: London

Brennan, M.

1980 *The Boyne Valley Vision.* Dolmen Press: Portlaoise, Ireland

British Archaeology

2013 *Orkney's Great Mystery Dig*

British Museum

2015 Bush Barrow Burial. *Teaching History with 100 Objects*

Brophy, K.

2007 From Big Houses to Cult Houses: Early Neolithic timber halls in Scotland. *Proceedings of the Prehistoric Society* **73**:75-96

Brown, A.

2007 Dating the Onset of Cereal Production in Britain and Ireland: Evidence from charred cereal grains. *Antiquity* **81(314)**:1042-1052

Brück, J.

- 1999 Ritual and Rationality: Some Problems of Interpretation in European Archaeology. *European Journal of Archaeology* **3(2)**:313-344.

Brumm, A.

- 2009 'The Falling Sky': Symbolic and Cosmological Associations of the Mt William Greenstone Axe Quarry, Central Victoria, Australia. *Cambridge Archaeological Journal* **20(2)**:179-196

Burenhult, G.

- 1984 The Archaeology of Carrowmore. *Theses and Papers in North-European Archaeology* **14**

Burger, R.L.

- 2011 What Kind of Hallucinogenic Snuff as used at Chauvín de Huántar? An Iconographic Identification. *Journal of Andean Archaeology* **31(2)**:123-140

Burl, A.

- 1979 *Prehistoric Avebury.* Yale University Press: New Haven.
- 1981 *Rites of the Gods.* Weidenfeld and Nicholson: London
- 1988 *Four-posters. Bronze Age Stone Circles of Western Europe.* British Archaeological Reports **195**
- 2002 *Prehistoric Avebury, 2nd Edition.* Yale University Press: London

Burnham, A.

- 2007 Golden Barrow: Upton Lovell G2e. In *The Megalithic Portal*

Byrd, B.F.

- 1989 The Natufian: Settlement Variability and Economic Adaptations in the Levant at the End of the Pleistocene. *Journal of World Prehistory* **3(2)**:159-197
- 1992 Non-agricultural Staples and Agricultural Supplements. In A.B. Gebauer and T.D. Rice (eds) *Transitions to Agriculture*, pp.49-62. Monographs in World Archaeology **4**. Prehistory Press: Madison Wisconsin
- 1994 Public and Private, Domestic and Corporate: The Emergence of the Southwest Asian Village. *American Antiquity* **59**:639-666
- 2000 Households in Transition: Neolithic Social Organisation within Southwest Asia. In I. Kuijt (ed.) *Life in Neolithic Faring Communities: Social Organisation, Identity and Differentiation*, pp.63-102. Kluwer Academic/Plenum: New York

Campana, D.V.

- 1991 Bone Implements from Hayonim Cave: Some Relevant Issues. In O. Bar-Yosef and F.R. Valla (eds) *The Natufian Culture in the Levant*, pp.459-466. Ann Arbor: Michigan: International Monographs in Prehistory

Card, N.

- 2005a Excavation of Bookan Chambered Cairn, Sandwick, Orkney. *Proceedings of the Society of Antiquities of Scotland* **135**:163-190
- 2005b Assessment of the Prehistoric Periods. In J. Downes, S.M. Foster, C.R. Wickham-Jones and J. Callister (eds) *The Heart of Neolithic Orkney World Heritage Site Research Agenda*, pp.40-61. Edinburgh: Historic Scotland
- 2010 Colour, Cups and Tiles: Recent Discoveries at the Ness of Brodgar: *PAST: The Newsletter of the Prehistoric Society*; **November 2010**:1-3
- 2013 Part 2: Resource Assessment. In P.J Gibbon and A Mitchell (eds) *The Heart of Neolithic Orkney World heritage Site Research Agenda*. Historic Scotland. University of the Highlands and Islands
- 2015 The Ness of Brodgar – an interview with Nick Card
<http://www.northlinkferries.co.uk/orkney-blog/ness-of-brodgar/>

Card N., J. Cluett , J. Downes, J. Gater and S. Ovenden

- 2007 The ‘Heart of Neolithic Orkney’. In M. Larsson and M. Parker Pearson (eds) *From Stonehenge to the Baltic: Living with cultural diversity in the third millennium BC*, pp.211-229. BAR International Series **1692**

Card, N., I. Mainland, S. Timpany, R. Towers, C. Batt, C. Ramsey, E. Dunbar, P. Reimer, A. Bayliss, P. Marshall and A. Whittle

- 2017 To Cut a Long Story Short: Formal Chronological Modelling for the Late Neolithic Site of Ness of Brodgar, Orkney. *European Journal of Archaeology* **2017**

Care, V.

- 1979 The Production and Distribution of Mesolithic Axes in Southern England. *Proceedings of the Prehistoric Society* **45**:93-102

Carey, G.

- 2012 Rethinking the Domestic Architecture of Early Neolithic Orkney. *The Post Hole* **25**:6-13

Carey, S.O.

- 2014 Psychoactive Substances: A Guide to Ethnobotanical Plants and Herbs, Synthetic Chemicals, Compounds and Products. *Psychoactive Substances Manual (Edition 1.1)*. Health Service Executive South: Clonmel, Ireland

Carneiro, R.L.

- 1992 Point Counterpoint: Ecology and Ideology in the Development of New World Civilizations. In A. A. Demarest and G. W. Conrads (eds) *Ideology and Pre-Columbian Civilizations*, pp.175-203. School of American Research Press: Santa Fe (NM)

Carpenter, E. and H. Winter

2011 *Marden Henge and Environs, Vale of Pewsey, Wiltshire*. National Mapping Programme Report. Research Department Report Series No. 76-2011. English Heritage.

Carr, S.

1995 *Entoptic Phenomena*. M.A. Dissertation, University of Newcastle upon Tyne

Castleden, R.

1987/2002 *The Stonehenge People: An Explanation of Life in Neolithic Britain 4700-2000BC*. Routledge and Kegan Paul: London

Caulfield, S.

1978 Neolithic Fields: the Irish Evidence. In H.C. Bowen and P.J. Fowler (eds) *Early Land Allotment*, pp.137-144. BAR British Series 48. Oxford

1983 The Neolithic Settlement of North Connaught. In T. Reeves-Smyth and F. Hammond (eds) *Landscape and Archaeology in Ireland*, pp.195-215. BAR British Series 116. Oxford

Caulfield, S., R.G. O'Donnell and P.L. Mitchell

1998 ¹⁴C Dating of a Neolithic Field System at Céide Fields, County Mayo, Ireland. *Radiocarbon* 40:629-640

Caulfield, S., G. Warren, S. Rathbone, D. McIlreavy and P. Walsh

2009 *Archaeological Excavations at the Glenultra Enclosure (E24): Stratigraphic Report*. UCD School of Archaeology, Dublin

Cauvin, J.

2000a *The Birth of the Gods and the Origins of Agriculture*. Translated from the French by T. Watkins; originally published in 1994 as *Naissance des divinités, naissance de l'agriculture: La révolution des symboles au Néolithique*. CNRS Editions: Paris

2000b The Symbolic Foundations of the Neolithic Revolution in the Near East. In I. Kuijt (ed.) *Life in Neolithic Farming Communities: Social Organisation, Identity and Differentiation*, pp.235-251. Kluwer Academic/Plenum: New York

Caza, S.M.

2003 Ancient Stone Maces. In *Maces Page 1*. Google

Challands A., M. Edmonds and C. Richards

2005a Beyond the Village: Barnhouse Odin and the Stones of Stenness. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.205-228. McDonald Institute for Archaeological Research: Cambridge

Challands, A., T. Muir and C. Richards

- 2005b The Great Passage Grave of Maeshowe. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.229-248; McDonald Institute for Archaeological Research: Cambridge

Chamberlain V.D., J.B. Carlson and M.J. Young

- 2005 *Songs from the Sky*. Ocarina Books: UK

Chan, B.

- 2009 Life Amongst the Rubbish: Middening and Conspicuous Consumption at Durrington Walls. *Internet Archaeology* 26

Chan, B., M. Parker Pearson, S. Viner and R. Ixer

- 2016 Resourcing Stonehenge: Patterns of Human, Animal and Goods Mobility in the Late Neolithic. In J. Leary and T. Kador (eds) *Moving On in Neolithic Stonehenge Studies: Understanding Mobile Lives*, pp.28-44. Oxbow Books: Oxford

Chapa, T.

- 1996 Comment on Agency, Ideology and Power (Blanton et al.). *Current Anthropology* 37:50

Chapman, J.

- 2000a *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South-Eastern Europe*. Routledge: London and New York
- 2000b Pit-Digging and Structured Deposition in the Neolithic and Copper Age. *Proceedings of the Prehistoric Society* 66:61-87

Chappell, S.A.K.

- 2002 *Cahokia: Mirror of the Cosmos*. University of Chicago Press: Chicago

Chatteron, R.

- 2006 Ritual. In C. Conneller and G. Warren (eds) *Mesolithic Britain and Ireland: New Approaches*, pp.101-12. Tempus: Stroud

Childe, V.G.

- 1931 *Skara Brae: A Pictish Village in Orkney*. Kegan Paul, Trench and Trubner: London
- 1942 *What Happened in History*. Penguin: London
- 1951 *Man Makes Himself*. Mentor Books: New York

Clarke, A.

- 2005 The Stone Tool Assemblage. In C. Richards (ed.) *Dwelling Among the Monuments: The Neolithic Village of Barnhouse, Maeshowe Passage Grave and Surrounding Monuments at Stenness*, pp.323-334. McDonald Institute Monographs, McDonald Institute for Archaeological Research, University of Cambridge, Cambridge

Clarke, D.L.

1968 *Analytical Archaeology*. Methuen: London

Clarke, D.V.

1976 *The Neolithic Village at Skara Brae, Orkney: 1972-3 Excavations: An Interim Report*.
Edinburgh

Clarke, D.V. and P. Maguire

2000 *Skara Brae: Northern Europe's Best Preserved Neolithic Village*; Historic Scotland:
Edinburgh

Clarke, D.V. and N. Sharples

1985 Settlements and Subsistence in the Third Millennium BC. In C. Renfrew (ed.) *Prehistory of Orkney*, 2nd Edition, pp.54-82. University of Edinburgh Press: Edinburgh

Cleal, R.

2008 *Human Remains from Windmill Hill and West Kennet Avenue, Avebury Parish, Wiltshire, held by the Alexander Keillor Museum: A Report*

Cleal, R.J. and J. Pollard

2016 Neolithic and Early Bronze Age. In M. Leivers and A.B. Powell (eds) *A Research Framework for the Stonehenge, Avebury and Associated Sites World Heritage Site*, pp. 81-97. Wessex Archaeology Monograph **38**. Salisbury.

Cleal R.J., K.E. Walker and R. Montague

1995 *Stonehenge in Its Landscape; Twentieth-century excavations*. English Heritage
Archaeological Report **10**

Clottes, J. and J.D. Lewis-Williams

1998 *The Shamans of Prehistory: Trance and Magic in the Painted Caves*. Harry Abrams: New York

Clough, T. H. McK and Cummins W.A.

1979 *Stone Axe Studies*. Council for British Archaeology Research Report **2**. London

1988 *Stone Axe Studies*. Council for British Archaeology Research Report **67**. London

Cluett, J.P.

2013 *Soils and Sediment-based Cultural Records and the Heart of Neolithic Orkney World Heritage Site Buffer Zones Research Strategy 2013-2018*. University of the Highlands and Islands, Orkney College

Coe, M.D. and K.V. Flannery

1964 Microenvironments and Mesoamerican Prehistory. *Science* **143**:650-654

Cohen, M.N.

1974 *Two-Dimensional Man: An essay on the anthropology of power and symbolism in complex society*. University of California Press: Berkeley

1977 *The Food Crisis in Prehistory*. Yale University Press: New Haven, Conn.

2015 *The Stonehenge Avenue* <http://www.stone-circles.org.uk/stone/avenue.htm>

Colledge, S.M.

2001 *Plant Exploitation on Epipalaeolithic and Early Neolithic Sites in the Levant*. BAR International Series **986**. John and Erica Hedges: Oxford

Collins, A.

1989 *Gods of Eden: Egypt's Lost Legacy and the Genesis of Civilisation*. Headline

Collinson, D.

1987 *Fifty Major Philosophers: A reference guide*. Routledge: London

Conkey, M.W.

1980 Identification of Prehistoric Hunter-Gatherer Aggregation Sites: The Case of Altimara. *Current Anthropology* **21(5)**:609-630

Conneller C., N. Milner, B. Taylor and M. Taylor

2012 Substantial Settlement in the European Early Mesolithic: New research at Star Carr. *Antiquity* **86**:1004-1020

Connerton, P.

1989 *How Societies Remember*. Cambridge University Press: Cambridge

Cooney, G.

2000 *Landscapes of Neolithic Ireland*. Routledge: London

2001 Bringing Contemporary Baggage to Neolithic Landscapes. In B. Bender and M. Winer (eds) *Contested Landscapes: Movement, Exile, Place*, pp.165-180. Berg: Oxford

Cowley, D.

2010 Ultima Thule: Recent Aerial Survey of Orkney, Scotland. *AARGnews Aerial Archaeology Research Group Newsletter* **40**:25-35

- Craig, O. E., L. Shillito, U. Albarela, S. Viner-Daniels, B. Chan, R. Cleal, R. Ixer, M. Jay, P. Marshall, E. Simmons, E. Wright and M. Parker Pearson**
- 2015 Feeding Stonehenge: Cuisine and Consumption at the Late Neolithic Site of Durrington Walls. *Antiquity* **89**:1096-1109
- Cramp, L., R. Evershed, M. Lavento, P. Halinen, K. Mannermaa, M. Oinonen, J. Kettunen, M. Perola, P. Onkamo and V. Heyd**
- 2014 Neolithic Dairy Farming at the Extreme of Agriculture in Northern Europe. *Proceedings of the Royal Society B*
- Criado, F.**
- 1996 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* **37**(1):53-55
- Crown, P.L., T.E. Emerson, J. Gu, W.J. Hurst, T.R. Pauketat and T Ward**
- 2012 Ritual Black Drink Consumption at Cahokia. *PNAS* **109**(35):13944-13949
- Crown, P.L., K. Marden and H.V. Mattson**
- 2016 Foot Notes: The Social Implications of Polydactyly and Foot-Related Imagery at Pueblo Bonito, Chaco Canyon. *American Antiquity* **81**(3):426-448
- Crozier R., C. Richards, J. Robertson and A. Challands**
- 2016 Reorienting the Dead of Crossietown: Quanterness and Ramberry Head. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.197-223. Oxbow Books: Oxford
- Crumley, C.L.**
- 1995 Heterarchy and the Analysis of Complex Societies. In R. M. Ehrenreich, C. L. Crumley and J.E.L. Levy (eds) *Heterarchy and the Analysis of Complex Societies.* Archaeological Papers of the American Anthropological Association **6**:1-5. Arlington Va
- Cummings, V.**
- 2008 The Architecture of Monuments. In P. Pollard (ed.) *Prehistoric Britain*, pp.135-159. Blackwell Publishing: Oxford, Malden
- 2010 Formalising the Sacred? The Late Mesolithic and Early Neolithic Monumental Landscapes of Britain and Ireland. In B. Finlayson and G. Warren (eds) *Landscapes in Transition*, pp.115-124. Oxford Books: Oxford
- Cummings, V. and O. Harris**
- 2011 Animals, People and Places: The continuity of hunting and gathering practices across the Mesolithic-Neolithic transition in Britain. *European Journal of Archaeology* **14**(3):361-382
- Cunnington, W.**
- Undated *Cunnington MSS Book 1*

1931 The “Sanctuary” on Overton Hill, near Avebury. *Wiltshire Archaeological and Natural History Magazine* **45**:300-335

Curet, A.A. and W.J. Pestle

2010 Identifying High-Status Foods in the Archaeological Record. *Journal of Anthropological Archaeology* **29(4)**:413-431

Curry, A.

2008 Göblekli Tepe: the World’s First Temple. *Smithsonian Magazine*, November 2008

D’Altroy, T.N.

1996 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* **37(1)**:55-56

Darvill, T.

2016 House of the Holy: Architecture and Meaning in the Structure of Stonehenge, Wiltshire, UK. *Time and Mind: Journal of Archaeology Consciousness and Culture* **9:2**:89-121

Darvill, T., P. Marshall, M.P. Pearson and G. Wainwright

2012 Stonehenge Remodelled. *Antiquity* **86**:1021-1040

Darvill, T. and G. Wainwright

2014 Stonehenge and Preseli: Exploring the Meaning of the Bluestones. *Current Archaeology* **287**:18-25

David A., D. McOmish and A. Whittle

1999 Layout of the Enclosure : Geophysical Survey. In A. Whittle, J. Pollard and C. Grigson (eds) *Harmony of Symbols: The Windmill Hill Causewayed Enclosure, Wiltshire*, pp.6-23. Oxbow Books: Oxford

Davies, P. and J.G. Robb

2004 Scratches in the Earth: The Underworld as a Theme in British Prehistory, with particular reference to the Neolithic and Earlier Bronze Age. *Landscape Research* **29(2)**:141-151

Davis, R.V. and M.R. Edmonds

2011 *Stone Axe Studies: Volume III.* Oxbow Books: Oxford

Davis, S., W. Megarry, C. Brady, H. Lewis, T. Cummins, L. Guinan, J. Turner, C. Gallagher, T. Brown and R. Meehan

2013 *Boyne Valley Landscape Project: Phase III Summary Report.* The Heritage Council. Irish National Strategic Archaeological Research

Dawson, S. and C. R. Wickham-Jones

2009 *The Rising Tide: Submerged Landscape of Orkney: Annual Interim Report*

De Cupere, B. and R. Duru

2003 Faunal Remains from Neolithic Höyücek (SW Turkey) and the Presence of Domestic Cattle in Anatolia. *Paléorient* **1**:107-120

Demarest, A.A.

1992 Ideology in Ancient Maya Cultural Evolution: The Dynamics of Galactic Polities. In A.A. Demarest and G.W. Conrad (eds) *Ideology and Pre-Columbian Civilizations*, pp.135-157. School of American Research Press: Santa Fe, New Mexico

DeMarrais, E., L.J. Castillo and T. Earle

1996 Ideology, Materialisation, and Power Strategies. *Current Anthropology* **37(1)**:15-86

Descola, P.

2010 *La Fabrique des Images*. Musée du Quai Branly. Somogy Editions d'Art: Paris

de Valéra, R. and S.Ó. Nualláin

1964 *Survey of Megalithic Tombs of Ireland: Volume II County Mayo*. Dublin Stationery Office. Dundalgan Press: Dundalk

Diakonova, V.P.

1994 Shamans in Traditional Tuvian Society. In G. Seaman and J. S. Day (eds) *Ancient Traditions: Shamanism in Central Asia and the Americas*, pp. 245-256. University Press of Colorado

Diehl, R.A.

2004 *The Olmecs: America's First Civilization*. Thames and Hudson: New York

Dietler, M.

1996 Feasts and Commensal Politics in the Political Economy: Food, Power and Status in Prehistoric Europe. In P. Weissner and W. Schiefenhovel (eds), *Food and the Status Quest*, pp.87-126; Berghahn: Providence

Dietrich, O.

2011 *PPND – The Platform for Neolithic Radiocarbon Dates*
http://www.exorient.org/associated_projects/ppnd_site.php?s=25

Dietrich, O., M. Huen, J. Notroff, K. Schmidt, and M. Zarnkow

2012 The Role of Cult and Feasting in the Emergence of Neolithic Communities from Göbekli Tepe, Southeastern Turkey. *Antiquity* **86**:674-695

Dietrich, O., C. Köksal-Schmidt, J. Notroff and K. Schmidt

- 2013 Establishing a Radiocarbon Sequence for Göbekli Tepe: State of Research and New Data.
Neo-Lithics 1/13:36-41

Dimbleby, G.W.

- 1967 *Plants and Archaeology.* John Baker: London

Dineley, M.

- 2004 *Barley Malt and Ale in the Neolithic.* BAR International Series **S1213**. John and Erica Hedges. Hadrian Books

Dineley, M. and G. Dineley

- 2000 *From Grain to Ale. Skara Brae, Orkney: A Case Study.* ResearchGate
2006 *Grain Processing, Ritual and Grooved Ware Pottery.* Orkneyjar

Diószegi, V.

- 1968 *Tracing Shamans in Siberia: The Story of an Ethnographical Research Expedition.*
Anthropological Publications: Oosterhout, The Netherlands

Diószegi, V. and M. Hoppál

- 1978 *Shamanism in Siberia.* Akadémiai Kiadó: Budapest

Djakanova, V.P.

- 1978 The Vestments and Paraphernalia of a Tuva Shamaness. In V. Diószegi and M. Hoppál (eds)
Shamanism in Siberia, pp.325-339. Akadémiai Kiadó: Budapest

Donald, M.

- 1991 *Origins of the Modern World: Three Stages in the Evolution of Culture and Cognition.*
Harvard University Press: Cambridge Mass.
2001 *A Mind So Rare: The Evolution of Human Consciousness.* Norton: New York

Doniger, W.

- 2004 Foreword. In M. Eliade *Shamanism: Archaic Techniques of Ecstasy*, 2004 Edition.
Bollingen Series LXXVI. Princeton University Press: Princeton and Oxford

Douglas, M.

- 1994 [1966] *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*, 1994
Edition. Routledge: London

Downes J. and C. Richards

- 2005 The Dwellings at Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments: The Neolithic Village of Barnhouse, Maeshowe Passage Grave and Surrounding Monuments at Stenness, Orkney*, pp.57-127. McDonald Institute Monographs. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge

Downes, J., C. Richards, J. Brown, A.J. Cresswell, R. Ellen, A.D. Davies, A. Hall, R. McCulloch, D.C.W. Sanderson and I.A. Simpson

- 2013 Investigating the Great Ring of Brodgar. In .C. Richards (ed.) *Building the Great Stone Circles of the North*, pp.90-118. Windgather: Oxford

Downes, J., P. Sharman, A. Challands, E. Guttman-Bond, J. McKenzie, R. Towers and P. Voke

- 2016 Place in the Past; and early Neolithic house at the Knowes of Trotty barrow cemetery, Harray, Mainland, Orkney. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.41-63. Oxbow Books: Oxford

Draper, P.

- 1975 !Kung Women: Contrasts in Sexual Egalitarian in Foraging and Sedentary Contexts. In R. Reiter (ed.) *Toward an Anthropology of Women*, pp.77-109. Monthly Review Press: New York

Draper, P. and E. Cashdan

- 1974 *The Impact of Sedentism on !Kung Socialisation*. Paper presented at the 73rd Annual Meeting of the American Anthropological Association, Mexico City

Drennan, R.D.

- 1976 Religion and Social Evolution in Formative Mesoamerica. In K. V. Flannery (ed.) *The Early Mesoamerican Village*, pp.345-368. Academic Press: New York

Dronfield, J.C.

- 1996a Entering Alternative Realities: Cognition, Art and Architecture in Irish Passage Tombs. *Cambridge Archaeological Journal* **6**:37-72
- 1996b The Vision Thing: Diagnosis of Endogenous Derivation in Abstract Art. *Current Anthropology* **37**(2):373-391

Drury, N.

- 1989 *The Elements of Shamanism*. Neville and Susan Drury: Dorset

Dunnell, R.C.

- 1999 The Concept of Waste in an Evolutionary Archaeology. *Journal of Archaeological Anthropology* **18**(3):243-250

Düring, B.S.

- 2006 *Constructing Communities: Clustered Neighbourhood Settlements of the Central Anatolian Neolithic CA. 8500-5500 calBC*. Nederlands Instituut voor het Oosten
- 2013 The Anatomy of a Prehistoric Community: Reconsidering Çatalhöyük. In J. Birch (ed.) *From Prehistoric Villages to Cities: Settlement Aggregation and Community Transformation*, pp.23-43. Routledge: New York

Durkheim, E.

- 1995 [1912] *The Elementary Forms of Religious Life*. Transl. K. E. Fields. The Free Press: New York

Duru, R.

- 1999 The Neolithic of the Lake District. In M. Özdoğan and N. Başgelen (eds), *Neolithic in Turkey*, pp.165-192; Arkeoloji ve Sanat Yayınları: Istanbul
- 2016 Commentator p.324 in L. Grosman and N.D. Munro, A Natufian Ritual Event; *Current Anthropology* **57(3)**:311-331

Earle, T

- 1997 *How Chiefs Come to Power: The Political Economy in Prehistory*. Stanford University Press: Stanford
- 2002 *Bronze Age Economics: The Beginnings of Political Economies*. Westview Press: Boulder Colorado, USA
- 2011 Chiefs, Chieftaincies and Chiefly Confederacies: Power in the Evolution of Political Systems. *Social Evolution and History* **10(1)**:27-54

Eck, D.

- 1987 Rivers. In M. Eliade (ed.) *The Encyclopaedia of Religion*, Vol.12, pp.425-428. Macmillan: London

Edmonds, M.

- 1993 Interpreting Causewayed Enclosures in the Past and Present. In C. Tilley (ed.) *Interpretive Archaeology*, pp.99-142. Berg: Oxford
- 1999 *Ancestral Biographies of the Neolithic: Landscapes, monuments and memory*. Routledge: London

Edwards, P.C.

- 1988 Natufian Settlement at Wadi al-Hammeh. *Paléorient* **14(2)**:309-315
- 1989 Problems of Recognizing the Earliest Sedentism: the Natufian Example. *Journal of Mediterranean Archaeology* **2(1)**:5-48
- 1990 Kebaran Occupation at the Last Glacial Maximum in Wadi al-Hammeh, Jordan Valley. In C. Gamble and O. Soffer (eds) *The World at 18000BP: Volume 2 Low Latitudes*, pp.97-118. Unwin Hyman: London

1991 Wadi Hammeh 27: An Early Natufian Site at Pella, Jordan. In O. Bar-Yosef and F.R. Valla (eds) *The Natufian Culture in the Levant*, pp.123-148. International Monographs in Prehistory. Ann Arbor: Michigan

2013 *Wadi Hammeh 27: An Early Natufian Settlement at Pella, Jordan*. Brill:Leiden Boston

Edwards, P.C., S.J. Bourke, S.M. Colledge, J. Head J. and P.G. Macumber

1988 Late Pleistocene Prehistory in Wadi al-Hammeh. In A.N. Garrard and H.G. Gebel (eds) *The Prehistory of Jordan: The State of Research in 1986*, pp.525-565. BAR International Series **396(ii)**. Oxford

Edwards, P.C., P.G. Macumber and M.J. Head

1996 The Early Palaeolithic of Wadi al-Hammeh. *Levant* **XXVII**:115-130

Eliade, M.

1958 *Patterns in Comparative Religions*. Sheed and Ward: London

1959 *The Sacred and the Profane*. Translated from the French by Willard R. Trask. Harcourt. Brace and Company: New York

1972 *The Sacred and the Profane*. Princeton University Press

1964 *Shamanism: Archaic Techniques of Ecstasy*. Princeton University Press, New Jersey

1965 *The Myth of the Eternal Return*. Princeton University Press: Princeton

1968 *Myths, Dreams and Mysteries*. Collins: London

1978 *The Forge and the Crucible: The Origins and Structures of Alchemy*. University of Chicago Press: Chicago

1987 Shamanism: An Overview. In M. Eliade (ed.) *Encyclopedia of Religion, Vol 13*:201-208. Macmillan: New York

2004 *Shamanism: Archaic Techniques of Ecstasy*. Princeton University Press: Princeton NJ

Elkin, A.P.

1945 *Aboriginal Men of High Degree*. The John Murtagh Macrossan Lectures 1944; University of Queensland. Australasian Publishing Company: Sydney

Ellens, J.H.

2014 *Seeking the Sacred with Psychoactive Substances: Volume 2 Religion*. Praeger: Oxford

Emerson, T.E.

2000 Some Perspectives on Cahokia and the Northern Mississippian Expansion. In T.E. Emerson and R.B. Lewis (eds) *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*, pp.221-236. University of Illinois Press: Urbana and Chicago

2003 Materializing Cahokia Shamans. *Southeastern Archaeology* **22(2)**:135-154

Emerson, T. E., W.S. Dancey, T.R. Pauketak, A. Whittle, E. De Marrais, W.R. DeBoer and A.B. Kehoe

1999 Cahokia and the Archaeology of Power. *Cambridge Archaeological Journal* **9(02)**:249- 275

Emerson, T.E., K.M. Hedman, E.A. Hargrave, D.E. Cobb and A.R. Thompson

2016 Paradigms Lost: Reconfiguring Cahokia's Mound 72 Beaded Burial. *American Antiquity* **81**:405-425

English Heritage

2003 *Late Neolithic Palisade Enclosures at West Kennet: Report on the Aerial Photographic Transcription and Analysis*. Aerial Survey Report Series AER/1/2003

en Perú

2010 *800 Year-Old Tomb of Shaman Discovered*
<http://enperublog.com/2010/01/23/tomb-of-800-year-old-shaman-discovered>

Eriksen, P.

2004 Newgrange og den hvide mur. *KUML* **2004**:45-77

Esin, U.

1999 The Neolithic in Turkey: A General Review. In M. Özdoğan and N. Başgelen (eds), *Neolithic in Turkey*, pp13-23; Arkeoloji ve Sanat Yayinlari: Istanbul

Evans, J.G., Rouse, A. and N. Sharples

1988 The Landscape Setting of Causewayed Enclosures: Recent work on the Maiden Castle enclosure. In J.C. Barrett and I. Kinnes (eds), *The Archaeology of Context in the Neolithic and Bronze Age: Recent trends*, pp.73-78. Department of Archaeology and Prehistory: Sheffield

Fairbairn, A.S.

1999 Charred Plant Remains. In A. Whittle, J. Pollard and C. Grigson (eds) *Harmony of Symbols: The Windmill Hill Causewayed Enclosure, Wiltshire*, pp.139-156. Oxbow Books: Oxford

2000 On the Spread of Plant Crops across Neolithic Britain, with Special Reference to Southern England. In A.S. Fairbairn (ed.) *Plants in Neolithic Britain and Beyond*, pp.107-122. Neolithic Studies Group Seminar Papers **5**. Oxbow Books: Oxford

Fairbairn, A.S., J. Near and D. Martinoli

2005 Macrobotanical Investigation of the North, South and KOPAL Area Excavations at Çatalhöyük East. In I Hodder (ed.) *Inhabiting Çatalhöyük: Reports from the 1995-1999 Seasons*. McDonald Institute of Archaeology at Ankara monograph, Cambridge: (in press)

Farrington, I.S.

- 1987 *Women and Men. Some Thoughts on the Origins of Farming: A Comparative Paper.* Read at the Origenes del Hombres Americano, Museo Nacionale de Antroplogia, México DF

Farrington, I.S. and J. Urry

- 1985 Food and the Early History of Cultivation. *Journal of Ethnobiology* **5(2)**:143-157

Field, D.

- 2009 Neolithic Ground Axe-heads and Monuments in Wessex. *Internet Archaeology* **26**

Field, D., H. Anderson-Whymark, N. Linford, M. Barber, M. Bowden, P. Linford and P. Topping

- 2015 Analytical Surveys of Stonehenge and Its Environs, 2009-2013: Part 2 – the Stones. *Proceedings of the Prehistoric Society* **81**:125-148

Fienup-Riordan, A.

- 2003 Spiritual Life of the Central Yup'ik Eskimos. In L. E. Sullivan (ed.) *Native Religions and Cultures of North America: Anthropology of the Sacred*, pp.181-207. Continuum: London

Finlayson, B

- 2014 Houses of the Holy: The evolution of ritual buildings. In B. Finlayson and C. Makarewicz (eds), *Settlement, Survey and Stone: Essays on Near Eastern prehistory in honour of Gary Rollefson*; ex oriente: Berlin

Finlayson, B., S.J. Mithen, M. Najjar, S. Smith, D. Maričević, N. Pankhurst and L. Yeomans

- 2011 Architecture, Sedentism, and Social Complexity. Communal building in Pre-Pottery Neolithic settlements: New evidence from WF16, Southern Jordan; *Proceedings of the National Academy of Science* **108(20)**:8183-8188

Fitzpatrick, A.P.

- 2011a *The Amesbury Archer: The King of Stonehenge?* BBC-History-Ancient History in Depth, pp.1-6 http://www.bbc.co.uk/history/ancient/archaeology/king_stonehenge_0.1.shtml
- 2011b The Amesbury Archer and the Boscombe Bowmen: Bell Beaker Burials at Boscombe Down, Amesbury, Wiltshire. *Wessex Archaeological Report* **27**. Wessex Archaeology, Salisbury
- 2013 The Arrival of the Bell beaker Set in Britain and Ireland. In J.T. Koch and B. Cunliffe (eds) *Celtic from the West 2. Rethinking the Bronze Age and the Arrival of Indo-European in Atlantic Europe*, pp.41-70. Oxbow Celtic Publications XVI: Oxford

Flannery, K.V.

- 1968 Archaeological Systems Theory and Early Mesoamerica. In B. J. Meggers (ed.) *Anthropological Archaeology in the Americas*, pp.67-87. Anthropological Society of Washington: Washington DC

- 1969 Origins and Ecological Effects of Early Domestication in Iran and the Near East. In *The Domestication and Exploitation of Plants and Animals: Proceedings of a meeting of the Research Seminar in Archaeology and Related Subjects held at the Institute of Archaeology, London University*, pp.73-100. Duckworth: London
- 1972a *The Early Mesoamerican Village*. K. V. Flannery (ed.). Academic Press: New York
- 1972b The Cultural Evolution of Civilisations. *Annual Review of Ecology and Systematics* **3**:399-426
- 1972c The Origins of the Village as a Settlement Type in Mesoamerica and the Near East. In P. Ucko, R. Tringham and G.W. Dimbleby (eds) *Man, Settlement and Urbanism*, pp.23-53. Duckworth: London
- 1973b The Origins of the Village as a Settlement Type in Mesoamerica and the Near East: A Comparative Study. In R. Tringham (ed.) *Ecology and Agricultural Settlement: An Ethnographical and Archaeological Perspective*, Warner Modular Publications: Andover, Massachusetts
- 1976 *The Early Mesoamerican Village*. Academic Press: New York
- 1999a Process and Agency in Early State Formation. *Cambridge Archaeological Journal* **9**:1, pp.3-21
- 1999b Chiefdoms in the Early Near East: Why it is so hard to identify them. In A. Alizadeh, Y. Majidzadeh and M. Shamizadeh (eds), *The Iranian World. Essays on Iranian Art and Archaeology presented to Ezat O. Negahban*, pp.44-63

Flannery, K.V. and M.D. Coe

- 1968 Social and Economic Systems in Formative Mesoamerica. In S.R. Binford and L.R. Binford (eds) *New Perspectives in Archaeology*, pp.267-283. Aldine: Chicago

Fleming, A.

- 1971 Territorial Patterns in Bronze Age Wessex. *Proceedings of the Prehistoric Society* **37**:138-166

Fletcher, R.J.

- 1986 Settlement Archaeology: World-wide Comparisons. *World Archaeology* **18**:59-83

Flood, J.

- 1983 *Archaeology of the Dreamtime*. Collins: Sydney

Ford R. I.

- 1971 An Ecological Perspective on the Eastern Pueblos. In A. Ortiz (ed.) *New Perspectives on the Eastern Pueblos*, pp.1-17. University of New Mexico Press: Albuquerque

Forte, M.

- 2015 *Embodiment and 3D Archaeology: A Neolithic House in Çatalhöyük*. Paper presented at Chacmool Conference: Breaking Barriers, Calgary (in press)

Fowler, M.L.

- 1991 Mound 72 and Early Mississippian at Cahokia. In J.B. Stoltman; (ed.) *New Perspectives on Cahokia: Views from the Periphery*, pp.1-28. Monographs in Prehistory **2**. Prehistory Press: Madison, Wisconsin

Fox, W.A. and J.E. Molto

- 1994 The Shaman of Long Point. *Ontario Archaeology* **57**: 23-44

French, C. and F. Pryor

- 2005 *Archaeology and Environment of the Etton Landscape*. Fenland Archaeological Trust: Peterborough

French, C., R. Scaife, M.J. Allen, M. Parker Pearson M., J. Pollard, C. Richards, J. Thomas and K. Welham

- 2012 Durrington Walls to West Amesbury by way of Stonehenge: A major transformation of the Holocene landscape. *The Antiquaries Journal* **92**:1-36

Fried, M.H

- 1967 *The Evolution of Political Society: An essay in political anthropology*. Random House: New York

Friedman, J.

- 1998 *System, Structure and Contradiction: The evolution of 'civilization'*. AltaMira Press: Walnut Creek

Friedrich, P.

- 1989 Language, Ideology and Political Economy. *American Anthropologist* **91**

Fritz, J.M.

- 1978 Paleopsychology Today: Ideational Systems and Human Adaptation in Prehistory. In *Social Archaeology: Beyond Subsistence and Dating*, pp.37-59. Academic Press: New York

Frizzi, R.

- 1996 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* **37**(1):61
- 1996 Comment/Reply in Ideology, Materialisation, and Power Strategies. *Current Anthropology* **37**(1)

Furst, P.T.

- 1968 The Olmec Were-Jaguar Motif in the light of Ethnographic Reality. In E.P. Benson (ed.) *Dumbarton Oaks Conference on the Olmec*, pp.143-174. Dumbarton Oakes: Washington DC

- 1972 *Flesh of the Gods: The Ritual Use of Hallucinogens*. Praeger: New York
- 1977 The Roots and Continuities of Shamanism. In A.T. Brodzy, R. Daneswich and N. Johnson (eds) *Stones, Bones and Skin: Ritual and Shamanic Art*, pp.1-28. Society for Art Publications: Toronto
- 1994 Introduction: An Overview of Shamanism. In G. Seaman and J.S. Day (eds) *Ancient Traditions: Shamanism in Central Asia and the Americas*, pp.1-28. University Press of Colorado: Colorado

Gaffney, V.

- 2015 Major Discovery: 4,500-year-old megalithic super-henge found buried one mile from Stonehenge. *Ancient Origins*
<http://www.ancient-origins.net/news-history-archaeology/major-discovery-4500-year-old-megalithic-super-henge-found-buried-one-mile-020519>

Gaffney, V., S. Fitch, E. Ramsey, R. Yorston, E. Ch'ng, F. Baldwin, R. Bates, C. Gaffney, C. Ruggles, T. Sparrow, A. McMillan, D. Cowley, S. Fraser, C. Murray, H. Murray, E. Hopla and A. Howard

- 2013 Time and Place: A Luni-solar 'time reckoner' from 8th Millennium BC Scotland. *Internet Archaeology* **34** <http://dx.doi.org/10.11141/1a.34.1>

Gaffney, V., M. Parker Pearson and N. Snashall

- 2016 Rethinking Durrington Walls: a long-lost monument revealed. *Current Archaeology* **320**

Gage, J.E. and M.E. Gage

- 2009 Standing Stone Niche Site, Sandown, New Hampshire: Structure A005 Cairn. In *Stone Structures of Northeastern United States*
www.stonestructures.org/html/sandown-nh-1.html

Gamble, C., W. Davies, P. Pettit, M. Richards and L. Hazelwood

- 2005 The Archaeological and Genetic Foundations of the European Population during the Late Glacial and Implications for "Agricultural Thinking". *Cambridge Archaeological Journal* **15(2)**:193-223

Garrow, D.

- 2006 Pits, Settlement and Deposition during the Neolithic and Early Bronze Age in East Anglia. British Archaeological Report **414**. Hedges: Oxford
- 2007 Placing Pits: Landscape Occupation and Depositional Practice during the Neolithic in East Anglia. *Proceedings of the Prehistoric Society* **73**:1-24
- 2010 The Temporality of Materials: Occupation Practices in Eastern England during the 5th and 4th Millennia BC. In B. Finlayson and G. Warren (eds) *Landscapes in Transition*; pp.208-220. Oxford Books: Oxford
- 2015 Deposition in Pits. In C. Fowler, J. Harding and D. Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*, pp.729-744. Oxford University Press: Oxford

Garrow, D., E. Beadsmore and M. Knight

- 2005 Pit Clusters and the Temporality of Occupation: An Earlier Neolithic Site at Kilverstone, Thetford, Norfolk. *Proceedings of the Prehistoric Society* **71**:139-157

Garrow, D., S. Lucy and D. Gibbon

- 2006 *Excavations at Kilverstone, Norfolk: An Episodic Landscape History.* East Anglian Archaeology Monograph **113**. Cambridge

Garrow, D., J. Raven and C. Richards

- 2005b The Anatomy of a Megalithic Landscape. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.249-260. McDonald Institute for Archaeological Research: Cambridge

Gee, C., C. Richards and M. Robertson

- 2016 Local Histories of Passage Grave Building Communities. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*; pp.64-90. Oxbow Books: Oxford

Geertz, C.

- 1957 Ethos, Worldview and the Analysis of Sacred Symbols. *Antioch Review* **17**:421-437
- 1980 *Negara: The Theatre State in Nineteenth-century Bali.* Princeton University Press: Princeton

Gell, A.

- 1998 *Art and Agency.* Clarendon Press: Oxford

Gellner, E.

- 1988 *Plough, Sword and Book: The Structure of Human History.* Collins Harvill: London

Gerritsen, J.

- 1976 *Mootwingee: The Rockholes.* T. Nicholls and Sons: Broken Hill NSW

Gheorghiu, D.

- 2015 A River Runs Through It: The semiotics of Göbekli Tepe's map (an exercise of archaeological imagination). In A. Vianello (ed.), *Rivers in Prehistory*, pp65-76. Archaeopress: Oxford

Giddens, A.

- 1979 *Central Problems in Social Theory: Action, structure and contradiction in social analysis.* Macmillan: London
- 1984 *The Constitution of Society: Outline of a theory of structuration.* University of California Press: Berkeley

Gillings, M., J. Pollard and D. Wheatley

- 2000 The Beckhampton Avenue and a 'New' Neolithic Enclosure near Avebury: An Interim Report on the 1999 Excavations. *Wiltshire Archaeological and Natural History Magazine* **93**:1-8

Gillings, M., J. Pollard, M. Allen, C. French, R. Cleal, A. Pike and N. Snashall

- 2014 *Between the Monuments: Fieldwork on the West Kennet Avenue 'occupation site' and Foot of Avebury Down lithic scatter, Avebury, Wiltshire, 2012-13. An Interim report*

Gilman, A.

- 1989 Marxism in American Archaeology. In C. C. Lamberg-Karlovsky (ed.) *Archaeological Thought in America.* Cambridge University Press: Cambridge
- 1996 Ideology, Materialisation, and Power Strategies. Comments and Replies. *Current Anthropology* **37(1)**:56-59

Godelier, M.

- 1977 Perspectives in Marxist Anthropology. In C. C. Lamberg-Karlovsky (ed.) *Archaeological Thought in America.* University Press: Tuscon

Goring-Morris, N. and A. Belfer-Cohen

- 2003 Structures and Dwellings in the Upper and Epipalaeolithic (ca 42-10k BP) Levant: Profane and Symbolic Uses. In S.A. Vasil'ev, O. Soffer and J. Kozłowski (eds), *Perceived Landscapes and Built Environments: The cultural geography of Late Paleolithic Eurasia.* BAR International Series **1122**:65-81

Gračeva, G.N.

- 1978 A Nganasan Shaman Costume. In V. Diószegi and M. Hoppál (eds) *Shamanism in Siberia,* pp.315-323. Akadémiai Kiadó: Budapest

Green, M.

- 2000 *A Landscape Revealed: 10,000 years on a Chalkland Farm.* Tempus: Stroud

Griffiths, S.

- 2016 Beside the Ocean of Time. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014),* pp.1254-302. Oxbow Books: Oxford

Grogan, E.

- 1996 Neolithic Houses of Ireland. In T. Darvill and J. Thomas, *Neolithic Houses in Northwest Europe and Beyond,* pp.41-60. Oxbow Books: Oxford
- 2002 Neolithic Houses in Ireland: A Broader Perspective. *Antiquity* **2002**:1-11 (Special Edition)

Grosman, L. and N.D. Munro

2007 The Sacred and the Mundane. *Before Farming* **2007(4)**:1-14

2016 A Natufian Ritual Event. *Current Anthropology* **57(3)**:311-331

Grosman, L., N.D. Munro and A. Belfer-Cohen

2008 A 12,000-year-old Shaman Burial from the Southern Levant (Israel). *Proceedings of the National Academy of Sciences USA* **105(46)**:17665-17669

Grove, D.C. and S.D. Gillespie

1992 Ideology and Evolution at the Pre-State Level: Formative Period Mesoamerica. In A.A. Demarest and G.W. Conrad (eds) *Ideology and Pre-Columbian Civilizations*, pp.16-36. School of American Research Press: Santa Fe, New Mexico

Guttman, E.B.A.

2007 *Geoarchaeology in the Céide Fields: Assessing the Nature and Intensity of Neolithic Land Use*.
[Users/schulting/Documents/WORD/Conferences/NRA%20Belfast/NRA%20publication/Guttman.htm](#)

Haas, J.

1990 Foreword. In S. Upham (ed.) *Evolution of Political Systems: Sociopolities in Small-Scale Sedentary Societies*, pp. vv-xvii. Cambridge University Press: Cambridge

Halifax, J.

1982 *Shamanism: The Wounded Healer*. Crossroad: New York

Halstead, P.

1999 Neighbours from Hell? The Household in Neolithic Greece. In P. Halstead (ed.), *Neolithic Society in Greece*, pp77-95; Sheffield University Press: Sheffield

2005 Resettling the Neolithic: faunal evidence for seasons of consumption and residence at Neolithic sites. In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.38-50; Oxbow Books: Oxford

Harding, J.

2006 *Henge Monuments of the British Isles*. Tempus Publishing: Stroud

Hardman, C. and M. Hardman

1987 *Ohio Archaeologist* **37(3)**:34-40

Hardy-Smith, T. and P.C. Edwards

2004 The Garbage Crisis in Prehistory: Artefact Discard Patterns at the Early Natufian Site of Wadi Hammeh 27 and the Origin of Household Refuse Disposal Strategies. *Journal of Anthropological Archaeology* **23**:253-289

Harner, M. J.

1973 *Hallucinogens and Shamanism*. Oxford University Press: New York

1980 *The Way of the Shaman*. Harper and Row: San Francisco

Harris, D.R.

1974 Settling Down: An Evolutionary Model for the Transformation of Mobile Bands into Sedentary Communities. In J. Friedman and M.L. Rowlands (eds) *The Evolution of Social Systems*, pp.401-417. Duckworth: London

Harris, M.

1977 *Cannibals and Kings: The Origins of Cultures*. Random House: New York

Harris, O.

2009 Making Places Matter in Early Neolithic Dorset. *Oxford Journal of Archaeology* **28**:111-123

Hassan, F.A.

1977 The Dynamics of Agricultural Origins in Palestine: A Theoretical Model. In C. A. Reed (ed.) *Origins of Agriculture*, pp.589-609. Mouton: The Hague

Hastorf, C.

2003 Community with the Ancestors: Ceremonies and Social Memory in the Middle Formative at Chirpa, Bolivia. *Journal of Anthropological Archaeology* **31**:305-332

Hauptmann, H.

1999 The Urfa Region. In M. Özdoğan and N. Başgelen, *Neolithic in Turkey: The Cradle of Civilization*; pp.66-68. Arkeoloji ve Sanat Yayınları: Istanbul

Hayden, B.

1981 Research and Development in the Stone Age: Technological Transitions among Hunter-Gatherers. *Current Anthropology* **22(5)**:519-549

1990 Nimrods, Piscators, Pluckers and Planters: The Emergence of Food Production. *Journal of Anthropological Archaeology* **9(3)**:31-69

1998 Practical and Prestige Theories. *Journal of Archaeological Method and Theory* **5**:1-55

2001a Richman, Poorman, Beggarman, Chief: The Dynamics of Social Inequality. In G.M. Feinman and T.D. Price (eds), *Archaeology at the Millennium*, pp.231-272

2001b Fabulous Feasts: A Prolegomenon to the Importance of Feasting. In M. Dietler and B. Hayden (eds) *Feasts: Archaeological and Ethnographic Perspectives of Food, Politics and Power*. Smithsonian Series in Archaeological Inquiry, pp.23-64. Smithsonian Institution Press: Washington-London

2003 *Shamans, Sorcerers and Saints: A Prehistory of Religion*. Smithsonian Books: Washington

2004 Sociopolitical Organisation in the Natufian: A View from the Northwest. In C. Delage (ed.) *The Last Hunter-Gatherer Societies in the Near East*, pp.263-308. BAR International Series **1539**. Archaeopress; Oxford

2017 Discussion: Are Rituals Socially Integrative? The Natufian Case. *Current Anthropology* **38(3)**:410

Healy, F.

2016 Scientific Dating. In M. Leivers and A.B. Powell (eds) *A Research Framework for the Stonehenge, Avebury and Associated Sites World Heritage Site*, pp. 40-58. Wessex Archaeology Monograph **38**. Salisbury.

Healy, F., A. Bayliss, A. Whittle, F. Pryor, C. French, M. Allen, C. Evans, M. Edmonds, J. Meadows and G. Hey

2011 Eastern England. In *Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland*, pp.263-347. Oxbow Books: Oxford

Helskog, K.

1999 The Shore Connection: Cognitive Landscape and Communication with Rock Carvings in Northernmost Europe. *Norwegian Archaeological Review* **32**:73-94

Helwig, B.

2003 Feasts as a Social Dynamic in Prehistoric Western Asia: Three Case Studies from Syria and Anatolia. *Paléorient* **29(2)**:63-86

Henrich, J.

2009 The Evolution of Costly Displays, Co-operation and Religion: Credibility enhancing displays and their implications for cultural evolution. *Evolution and Human Behaviour* **30**:244-260

Henry, D.O.

1976a The Excavation of Hayonim Terrace: An Interim Report. *Journal of Field Archaeology* **3**:391-406

1976b Rosh Zin: A Natufian Settlement near Ein Avdat. In A.E. Marks (ed.), *Prehistory and Palaeoenvironments in the Central Negev: The Avdat/Aqev Area, Part 1*, pp.317-347; SMU Press: Dallas

1989 *From Foraging to Agriculture: The Levant at the End of the Ice Age*. University of Pennsylvania Press: Philadelphia

Henry, D.O. and A. Leroi-Gourhan

1976 The Excavation of Hayonim Terrace: An Interim Report. *Journal of Field Archaeology* **3**:391-406

Henry, D.O., A. Leroi-Gourhan and S. Davis

- 1981 The Excavation of Hayonim Terrace: An Examination of Terminal Pleistocene Climatic and Adaptive Changes. *Journal of Archaeological Science* **8**:33-58

Hensey, R. and G. Robin

- 2011 More than Meets the Eye: New Recordings of Megalithic Art in North-West Ireland. *Oxford Journal of Archaeology* **30(2)**:109-130

Henshall, A.

- 1972 *The Chambered Cairns Vol. 2*, pp.177. Edinburgh University Press: Edinburgh

Herne, A.

- 1988 A Time and a Place for the Grimston Bowl. In J.C. Barrett and I.A. Kinnes (eds) *The Archaeology of Context in the Neolithic and Bronze Age: Recent Trends*, pp.9-29. Department of Archaeology and Prehistory; University of Sheffield.

Hesse, B. C.

- 1979 Rodent Remains and Sedentism in the Neolithic: Evidence from Ganj Dareh Tepe, West Iran. *Journal of Mammology* **60(4)**:856-857

Higginbottom, G. and R. Clay

- 1999 Reassessment of Sites in Northwest Scotland: A New Statistical Approach. *Archaeoastronomy* **24**:41-46
- 2014 *Origins of Standing Stone Astronomy in Britain: New Quantitative Techniques for the Study of Archaeoastronomy.* arxiv.org/pdf/1402.1338v2.pdf

Higginbottom, G., A. Smith, K. Simpson and R. Clay

- 2013 More Than Orientation: Placing Monuments to View the Cosmic Order. In A. Maravelia (ed.) *Ad Astra per Aspera et per Ludum: European Archaeoastronomy in the Orientation of Monuments in the Mediterranean Basin*, pp.39-52. BAR International Series **S1154**. Archaeopress: Oxford

Higginbottom, G., A.G.K. Smith and P. Toner

- 2015 A Recreation of Visual Engagement and the Revelation of World Views in Bronze Age Scotland. *Journal of Archaeological Theory and Method* **22**:584-645

Higgs, E.S.

- 1959 Excavation at a Mesolithic Site at Downton, near Salisbury, Wiltshire. *Proceedings of the Prehistoric Society* **25**:209-232

Higgs, E.S. and M.R. Jarman

- 1975 Palaeoeconomy. In E. S. Higgs (ed) *Palaeoeconomy*, pp.1-7. Cambridge University Press: London

Hill, B.

- 2015 The Sacred Prehistoric Neolithic Complex of the Thornborough Henges. *Ancient Origins*
August 2015

Hill, J. and C. Richards

- 2005 Structure 8: Monumentality at Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.157-194. McDonald Institute for Archaeological Research, University of Cambridge; Cambridge

Hillman, G.C.

- 2000 The Plant Food Economy at Abu Hureyra 1 and 2. In A.M.T. Moore, G.C. Hillman and A.J. Legge *Village on the Euphrates: From Foraging to Farming at Abu Hureyra*, pp.76-84. Oxford University Press: New York

Hinton, P.

- 2005 The Charred Plant Remains from Barnhouse and Maeshowe. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.339-357. McDonald Institute for Archaeological Research: Cambridge

Hirst, K.

- 2017 Linearbandkeramik Culture – European Farming Innovators: The first farmers of Europe. *ThoughtCo* 1-8

Hiscock, P.

- 2008 *Archaeology of Ancient Australia*. Routledge: London

Historic England

- 2012 *Maxey Complex*
2104 *Bush Barrow*
2015a *Etton Causewayed Enclosure*
2015b *Etton Woodgate*
2015c *Northborough Causewayed Enclosure*
2015d *Windmill Hill*
2017 *Bulford Henges*

Historic Scotland

- 2005 *The Heart of Neolithic Orkney World Heritage Site Research Agenda: Part 2*.
2009 *The Rising Tide: An examination of Holocene relative sea-level change and the impact on prehistoric the human population of Orkney*

2016 *We're Changing: Ring of Brodgar and Stone Circle and Henge*

Hitchcock, R.K.

- 1982 Patterns of Sedentism among the Basarwa of Eastern Botswana. In E. Leacock and R. Lee (eds) *Politics and History in Band Societies*, pp.223-267. Cambridge University Press: Cambridge and New York
- 1987 Sedentism and Site Structure: Organisational changes in Kalahari Basarwa residential locations. In S. Kent (ed.) *Method and Theory for Activity Research*, pp.374-432. University of Columbia Press: New York

Hobsbawm, E. and T. Ranger

1983 *The Invention of Tradition*. Cambridge University Press; Cambridge

Hodder, I.

- 1996 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* **37(1)**:57-58
- 1984 Burials, House, Women and Men in the European Neolithic. In D. Miller and C. Tilley (eds) *Ideology, Power and Prehistory*, pp.51-68. Cambridge University Press: Cambridge
- 1986 *Reading the Past: Current Approaches to Interpretation in Archaeology*. Cambridge University Press: Cambridge
- 1975 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* **37(1)**:57-58
- 1990 *The Domestication of Europe*. Blackwell: Oxford
- 2000 *Towards a Reflexive Method in Archaeology: The Example at Catalhoyuk*. I. Hodder (ed.). McDonald Institute for Archaeological Research, Cambridge
- 2001 Symbolism and the Origins of Agriculture in the Near East, pp.107-112. *Cambridge Archaeological Journal* **11(1)**
- 2005 The Spatio-temporal Organisation of the Early 'town' at Catalhöyük. In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.126-139; Oxbow Books: Oxford
- 2006 *Çatalhöyük: The Leopard's Tale*. Thames and Hudson: London
- 2009 Upper Storeys at Çatalhöyük. *Anatolian Archaeology* **15**:19-20
- 2010a Probing Religion at Çatalhöyük: A Interdisciplinary Experiment. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.1-31. Cambridge University Press: Cambridge
- 2010b Conclusions and Evaluation. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.332-355. Cambridge University Press: Cambridge

Hodder, I. and L. Meskell

- 2010 The Symbolism at Çatalhöyük in its Regional Context. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.32-72; Cambridge University Press: Cambridge
- 2011 “A ‘Curious and Sometimes a Trifle Macabre Artistry’”. *Current Anthropology* **52(2)**:235-263

Hodder, I. and P. Pels.

- 2010 History Houses: A New Interpretation of Architectural Elaboration at Çatalhöyük. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.163-186. Cambridge University Press: Cambridge

Hole, F.

- 1989 Patterns of Burial in the Fifth Millennium. In E. Henricksen and I. Thusen (eds) *Upon This Foundation: The Ubaid Reconsidered*, pp.149-180. Carsten Niebuhr Institute Publication **10**. Copenhagen

Hollis, M.

- 1977 *Models of Man*. Cambridge University Press: Cambridge

Hoppál, M.

- 1992 Traces of Shamanism. In A. Siikala and M. Hoppál (eds) *Studies on Shamanism*, pp.156-168. Finnish Anthropological Society, Helsinki/Akadémiai Kiadó, Budapest. Akaprint: Budapest

Hoskins, J.

- 1998 *Biographical Objects: How Things Tell the Stories of People’s Lives*. Routledge: London

Hosler, D.

- 1994 *The Sounds and Colour of Power: The Sacred Metallurgical Technology of Ancient West Mexico*. MIT Press: Cambridge Mass.

Houston, S. and K. Taube

- 2000 An Archaeology of the Senses: Perception and Cultural Expression in Ancient Mesoamerica. *Cambridge Archaeological Journal* **10(2)**:261-294

Howarth, S.M.

- 2009 *An Investigation into the Late Neolithic and Early Bronze Age Round Barrow Monuments in the Wylye Valley, Wiltshire*. Ph.M. thesis, University of Birmingham

Huffman, T.N.

- 2004 Beyond Data: The Aim and Practice of Archaeology: *South African Archaeological Bulletin* **59 (180)**:66-69

Hunter, J. and A. Woodward

- 2015 Ritual in Early Bronze Age Grave Goods: An examination of ritual and dress equipment from Chalcolithic and Early Bronze Age graves in England. Oxbow Books: Oxford

Insoll, T.

- 2009 Materialising Performance and Ritual: Decoding the archaeology of movement in Tallensi shrines in northern Ghana. *Material Religion* **5(3)**:288-310

Ixer, R.A. and P. Turner.

- 2006 A Detailed Examination of the Petrography of the Altar Stone and Other Non-sarsen Sandstones from Stonehenge as a Guide to their Provenance. *Wiltshire Archaeological and Natural History Magazine* **99**:1-9

Jegues-Wolkiewiez, C.

- 2007 *The Lascaux Cave: A Prehistoric Sky-Map.* Google: 'Lascaux Astronomy'

Jilek, W.C.

- 1974 *Salish Indian Mental Health and Culture Change: Psychohygienic and Therapeutic Aspects of the Guardian Spirit Ceremonial.* Holt, Rinehart and Winston of Canada: Toronto and Montreal

Johnson, A.W. and T.E. Earle

- 2000 *The Evolution of Human Societies: From Foraging Group to Agrarian State.* Stanford University Press: California

Johnson, G.A.

- 1977 Aspects of Regional Analysis in Archaeology. In B.J. Spiegel, A.R. Reals and S.A. Tyler (eds) *Annual Review of Anthropology* **6**, pp.479-508. Annual Reviews Inc: Palo Alto

Johnson, M.

- 1999 *Archaeological Theory: An introduction.* Blackwell: Oxford

Joki, A.J.

- 1978 Notes on Selkup Shamansim. In V. Diószegi and M. Hoppál (eds) *Shamanism in Siberia*, pp.373-386. Akadémiai Kiadó: Budapest

Jones, A.

- 1998 Where Eagles Dare: Landscape, Animals and the Neolithic of Orkney. *Journal of Material Culture* **3(3)**:301-324
- 2005 The Grooved Ware from Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments: the Neolithic Village of Barnhouse, Maeshowe Passage Grave and Surrounding Monuments at Stennes, Orkney*, pp.261-282. McDonald Institute Monographs, Macdonald Institute for Archaeological Research, University of Cambridge, Cambridge

Jones, A., W.J. Cole and R.E. Jones

- 2005 Organic Residue Analysis of Grooved Ware from Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments: the Neolithic Village of Barnhouse, Maeshowe Passage Grave and Surrounding Monuments at Stenness, Orkney*, pp.283-292. McDonald Institute Monographs, Macdonald Institute for Archaeological Research, University of Cambridge, Cambridge

Jones, A. and G. MacGregor

- 2002 Making Monuments out of Mountains: The Role of Colour and Texture in the Constitution of Meaning and Identity at Recumbent Stone Circles. In A. Jones and G. MacGregor (eds) *Colouring the Past: The Significance of Colour in Archaeological Research*, pp.141-158. Berg: Oxford

Jones, A. and C. Richards

- 2005 Living in Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments: The Neolithic Village of Barnhouse, Maeshowe Passage Grave and Surrounding Monuments at Stenness, Orkney*, pp.23-56. McDonald Institute Monographs. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge

Jones, A. , R. Jones, G. Tully, L. Maritan, A. Mukherjee, R. Evershed, A. MacSween, C. Richards and R. Towers

- 2016 Prehistoric Pottery from Sites within the Bay of Firth: Stonehall, Crossietown, Wideford Hill, Brae of Smerquoy, Muckquoy, Ramberry and Knowes of Terry. In C. Richards and R. Jones (eds), *The Development of Neolithic House Societies in Orkney*, pp.303-412. Oxbow Books: Oxford

Jones, S. and C. Richards

- 2005 The Villagers of Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments: The Neolithic Village of Barnhouse, Maeshowe Passage Grave and Surrounding Monuments at Stenness, Orkney*, pp.195-204. McDonald Institute Monographs. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge

Joralemon, D. and D. Sharon

- 1993 *Sorcery and Shamanism: Curanderos and Clients in Northern Peru*. University of Utah Press: Salt Lake City

Jordan, P.

- 2001 Ideology, Material Culture and Kanty Ritual Landscapes in Western Siberia. In K.J. Fewster and M. Zvelebil (eds) *Ethnoarchaeology and Hunter-Gatherers: Pictures at an Exhibition*, pp.25-42. BAR International Series **955**. Archaeopress: Oxford

Joyce, A.A. and M. Winter

- 1996 Ideology, Power and Urban Society. *Current Anthropology* **37**:33-47

Katzman, J. L.

- 2011 Papaver somniferum during the European Neolithic. *Aggsbach's Palaeolithic Blog*

Kent, S.

- 1993 Models of Abandonment and Material Culture Frequencies. In C.M. Cameron and S.A. Tomka (eds) *Abandonment of Settlements and Regions: Ethnoarchaeological and Archaeological Approaches*, pp.54-73. Cambridge University Press: Cambridge

Kertzner, D.I.

- 1988 *Ritual, Politics and Power*. Yale University Press: New Haven

Kesarwani, A.

- 1987 Sedentism: Problems and Issues. *Man and Environment* **XI**:67-77

King, S.E.

- 2005 Barnhouse Faunal Remains. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.367-369. McDonald Institute for Archaeological Research, Cambridge

Kirch, P.V.

- 1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawaii Press: Hi
- 1988 *Niautoputapu: The Prehistory of a Polynesian Chiefdom*. The Burke Museum: Seattle, Wa

Kirchner, H.

- 1952 An Anthropological Contribution to the Early History of Shamanism. *Anthropos* **47**:244-286

Kolata, A.L.

- 1992 Economy, Ideology and Imperialism in the South-Central Andes. In A.A. Demarest and G.W. Conrad (eds) *Ideology and Pre-Columbian Civilizations*, pp.65-85. School of American Research Press: Santa Fe, New Mexico
- 1993 *The Tiwanaku: Portrait of an Andean Civilization*. Blackwell: Cambridge, Ma

Kotsakis, K.

- 2005 Across the Border: Unstable dwellings and fluid landscapes in the earliest Neolithic Greece. In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.8-15; Oxbow Books: Oxford

Krakovka, K.

- 2018 The Ness of Brodgar. *Excerpt, Current Archaeology* **335**

Kramer, C.

- 1982 *Village Ethnoarchaeology: Rural Iran in Archaeological Perspective*. Academic Press: New York

Kreuz, A., T. Märkle, E. Marinova, M. Rösch, E. Schäfer, S. Schamuhn and T. Zerl

- 2014 The Late Neolithic Mischelsberg culture — just ramparts and ditches? A supraregional comparison of agricultural and environmental data. *Praehistorische Zeitschrift* **89(1)**:72-115

Krupp, E.C.

- 1997 *Skywatchers, Shamans and Kings: Astronomy and the Archaeology of Power.* John Wiley and Sons: New York
- 1983 *Echoes of the Ancient States: The Astronomy of Lost Civilizations.* Harper and Row: New York

Kuijt, I.

- 1996 Negotiating Equality through Ritual: A consideration of Late Natufian and Prepottery Neolithic A period mortuary practices. *Journal of Anthropological Archaeology* **15**:313-336
- 1999 People and Space in Early Agricultural Villages: Exploring daily lives, community size, and architecture in the Late Pre-Pottery Neolithic. *Journal of Anthropological Archaeology* **19**:75-102
- 2000 *Life in Neolithic Farming Communities: Social organisation, identity and differentiation.* Kluwer Academic/Plenum Publishers: New York

Kus, S.

- 1992 Toward an Archaeology of Body and Soul. In J-C. Gardin and C.S. Peebles (eds), *Representations in Archaeology*, pp.168-177. Indiana University Press: Bloomington

La Barre, W.

- 1972 Hallucinogens and the Shamanic Origins of Religion. In P.T. Hurst (ed.), *Flesh for the Gods*, pp.26-280. Praeger Publishers: New York

Laneri, N.

- 2007 An Archaeology of Funerary Rituals. In N. Laneri (ed.), *Performing Death: Social analyses of funerary traditions in the ancient Near East and Mediterranean*, pp.1-3. Oriental Institute Seminars **3**. Oriental Institute: Chicago

Laughlin, C.D.

- 1997 Body, Brain and Behaviour: The neuroanthropology of the body image. *Anthropology of Consciousness* **8 (2-3)**: 49-68

Laughlin, C.D. and H.N. Loubser

- 2010 Neurognosis, the Development of Neural Models and the Study of the Ancient Mind. *Time and Mind: The Journal of Archaeology, Consciousness and Culture* **3(2)**:135-158

Laughlin, C.D., J. McManus and E. D'Aquili

- 1992 *Brain, Symbol and Experience: Toward a neurophenomenology of consciousness.* Shambhala: Boston MA (reprint by Columbia University Press)

Lavenda, R.H. and E.A. Schulz

2013 *Anthropology: What does it mean to be human?* Oxford University Press: Oxford

Lawrence, D.

2011 *Tomb of the Eagles paint a Darker Picture of Neolithic Orkney.*
<http://www.orkneyjar.com/archaeology/2011/03/16/tomb-of-the-eagles-remains-paint-a-darker-picture-of-neolithic-orkney>

LBI/UB –Ludwig Boltzmann Institute, University of Birmingham (LBI/UB)

2014 Stonehenge Hidden Landscape Project
<http://lbi-archpro.org/cs/stonehenge/results.html>

Leach, E.R.

1954 *Political Systems of Highland Burma.* Beacon Press: Boston

1977 *A View from the Bridge.* In M. Spriggs (ed.) *Archaeology and Anthropology: Areas of Mutual Interest*, pp.161-175. BAR Supplementary Series **19**; Oxford

Leary, J.

2015 *Summer in the Vale of Pewsey. News from the Dept. of Archaeology at the University of Reading*
<https://blogs.reading.ac.uk/archaeologu/?p=484>

Leary, J. and D. Field

2010 *Recent Work at Marden Henge, Wiltshire. English Heritage Research News* **15** (Autumn 2010):10-13

2012 *Journeys and Juxtapositions: Marden Henge and the View from the Vale of Pewsey.* In A. Gibson (ed.) *Enclosing the Neolithic; Recent Studies in Britain and Europe*, pp.55-65. Archaeopress: Oxford

2014 *Ways of Understanding the Neolithic Mound.* In J. Leary, D. Field and G. Campbell (eds) *Silbury Hill, The Largest Prehistoric Mound in Europe*, pp.7-55. University of Chicago Press: Chicago

Leary, J., D. Field and G. Campbell

2014 *Silbury Hill, The Largest Prehistoric Mound in Europe.* University of Chicago Press: Chicago

Leary, J. and P. Marshall

2012 *The Giants of Wessex: The Chronology of the Three Largest Mounds in Wiltshire. Antiquity* **86(334)**. Project Gallery

Leone, M.P.

- 1984 Interpreting Ideology in Historical Archaeology: Using the Rules of Perspective in the William Paca Garden in Annapolis, Maryland. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp25-35. Cambridge University Press: Cambridge

Lewis, I.M.

- 1975 The Dynamics of Nomadism: Prospects for Sedentarization and Social Change. In T. Monod (ed.) *Pastoralism in Tropical Africa*, pp.426-242. Oxford University Press: London

Lewis-Williams, J.D.

- 1991 Wrestling with Analogy: A Methodological Dilemma in Upper Palaeolithic Art Research. *Proceedings of the Prehistoric Society* **57(1)**:149-162
- 1995 Harnessing the Brain: Visions and Shamanism in Upper Palaeolithic Western Europe. In M. Conkey, O. Soffer, D. Stratmann and N. Jabonski (eds) *Beyond Art: Pleistocene Image and Symbol*, pp. 321-342. Memoirs of the California Academy of Sciences **23**. California Academy of Sciences: San Francisco
- 1997 Agency, Art and Altered Consciousness: A Motif in French (Quercy) Upper Palaeolithic Parietal Art. *Antiquity* **71**:810-830
- 2002 *The Mind in the Cave: Consciousness and the origins of art.* Thames and Hudson: London
- 2004 Constructing a Cosmos: Architecture, Power and Domestication at Çatalhöyük. *Journal of Social Anthropology* **4(1)**:28-59

Lewis-Williams, J. D. and T. Dowson

- 1988 The Signs of All Times: Entoptic phenomena in Upper Palaeolithic art. *Current Anthropology* **29**:201-245
- 1993 On Vision and Power in the Neolithic: Evidence from the decorated monuments. *Current Anthropology* **34(1)**:55-65

Lewis-Williams, J.D. and D.G. Pearce

- 2004 *San Spirituality: Roots, Expressions and Social Consequences.* Double Storey: Cape Town
- 2005 *Inside the Neolithic Mind.* Thames and Hudson: London

Lhote, H.

- 1959 *The Search for the Tassili Frescoes: The Story of the Prehistoric Rock-paintings of the Sahara.* Translated from the French by A.H. Broderick. Hutchinson: London

Lieberman, D.E.

- 1991 Seasonality and Gazelle Hunting at Hayonim Cave: New evidence for “Sedentism” during the Natufian. *Paléorient* **17(1)**:47-57

Lietava, J.

- 1992 Medicinal Plants in a Middle Palaeolithic Grave Shanidar. *Journal of Ethnopharmacology* **35(3)**:263-266

Lightfoot, K. and R.A. Jewett

- 1982 *Settled Life and Early Villages in the American Southwest: Some Considerations of Sedentism*. Manuscript on file, Department of Anthropology, State University of New York, Stony Brook

Littlejohn, K.

- 1998 *Traditional Aboriginal Use of Nicotine*. Fenner School, Australian National University, Canberra

Liverani, M.

- 1990 Prestige and Interest: International relations in the Near East ca.1600-1100 B.C. *History of the Ancient Near East/Studies 1*. Sargon SRL: Padua

Lommell, A.

- 1967 *Shamanism: The Beginnings of Art*. McGraw-Hill: New York

Louwe Kooijmans, L. P.

- 2007 The Gradual Transition to Farming in the Lower Rhine Basin. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic transition in north-west Europe*, pp.287-309. Oxford University Press for the British Academy: Oxford

Loveday, R.

- 2006 Where Have all the Neolithic Houses Gone? Turf — an Invisible Component. *Scottish Archaeological Journal* **28(2)**:81-104

Lucas, P.C

- 2014 Stones of Stenness, Orkney Island, Scotland. *Neolithic Studies*
<https://www2.stetson.edu/neolithic-studies>

Lucerno, L.J.

- 2003 The Politics of Ritual. *Current Anthropology* **44(4)**:523-558

Lynch, C.T.

- 1974 *CRC Handbook of Materials Science*. CRC Press: Florida

MacDonald, K.C.

- 1998 Before the Empire of Ghana: Pastoralism and the origins of cultural complexity in the Sahel. In *Transformations in Africa: Essays on Africa's Past*, pp.71-103; Leicester University Press: London

MacDonald, G.F, J. L. Cove, C.D. Laughlin Jnr and J. McManus

- 1989 Mirrors, Portals, and Multiple Realities. *Zygon* **24(1)**:39-64

MacGregor, G.

- 2002 Making Monuments out of Mountains: The Role of Colour and Texture in the Constitution of Meaning and Identity at Recumbent Stone Circles. In A. Jones and G. MacGregor (eds) *Colouring the Past: The significance of colour in archaeological research*, pp.141-158. Berg: Oxford

MacKie, E.W.

- 1977 *Science and Society in Prehistoric Britain.* St. Martin's Press: New York
- 1998 Maeshowe and the Winter Solstice: Ceremonial aspects of the Orkney Grooved Ware culture. *Antiquity* **71**:338-359

MacNeish, R.S.

- 1964 Ancient Mesoamerican Civilization. *Science* **143**:531-537
- 1972 The Evolution of Community Patterns in the Tehuacan Valley of Mexico and Speculations about the Cultural Processes. In P.J. Ucko, R. Tringham and G.W. Dimbleby (eds) *Man, Settlement and Urbanism*, pp.67-93. Duckworth: London

Macumber, P.G. and M.J. Head

- 1991 Implications of the Wadi al-Hammeh Sequences for the Terminal Drying of Lake Lisan, Jordan. *Palaeogeography, Palaeoclimatology, Palaeoecology* **84**:163-173

Marciniak, A., M.Z. Barański, A. Bayliss, L. Czerniak, T. Goslar, J. Southon and R.E. Taylor

- 2015 Fragmenting Times: Interpreting a Bayesian chronology for the Late Neolithic occupation of Catalhöyük East, Turkey. *Antiquity* **89**:154-176

Marcus, J. and K.V. Flannery

- 1996 *Zapotec Civilisation: How Urban Society Evolved in Mexico's Oaxaca Valley.* Thames and Hudson: London

Maričević, D. and S. Mithen

- 2016 *The Islay Project: An Archaeological Excavation and Survey of Slochd Measach (Giant's Grave), Isle of Islay: Project Design for 2016/17 fieldwork.* University of Reading

Marineo, S.

- 2014 A 50km da Göbekli Tepe: le enigmatiche sculture di Nevalı Çori. *Storia...ControStoria*, pp.1-11

Mark, J.J.

- 2102 Maeshowe. *Ancient History Encyclopaedia*
<http://www.ancient.eu/Maeshowe/>

Marshack, A.

- 1972 *The Roots of Civilisation.* Weidenfeld and Nicholson: London

Marshall, Y.

2006 Introduction: Adopting a sedentary lifeway. *World Archaeology* **38(2)**:153-163

Martinoli, D. and M. Nesbitt

2003 Plant Stores at Pottery Neolithic Höyücek, Southwest Turkey. *Anatolian Studies* **53**:17-32

Maryanski, A and J. Turner

1992 *The Social Cage: Human Nature and the Evolution of Society.* Stanford University Press: California

Mays, S., D. Roberts, P. Marshall, A. Pike, V. van Heeheren, C. Ramsay, E. Dunbar, P. Reimer, B. Linscott, A. Radini, A. Lowe, C. Speller, J. Vallender and J. Bedford

2018 Lives Before and After Stonehenge: An osteobiological study of four prehistoric burials recently excavated from the Stonehenge World Heritage Site. *Journal of Archaeological Science Reports* **20**: 692-710.

McAdams, R.

1992 Ideologies: Unity and Diversity. In A.A. Demarest and G.W. Conrad (eds) *Ideology and Pre-Columbian Civilizations*, pp.205:221. School of American Research Press: Santa Fe, New Mexico

McBryde, I.

1984 Kulin Greenstone Quarries: The social contexts of production and distribution for the Mt William Site. *Mankind* **11**:354-382

McCabe, P.F. and R. Nevin

1986 Regarding the Construction of Knowth. In G. Eogan *Knowth and the Passage Tombs of Ireland*, pp.113-114; Thames and Hudson: London

McClough, T.H. and W.A. Cummins (eds)

1979 Neolithic Stone Axes:Distribution and trade in England and Wales. In *Stone Axe Studies: Archaeological, Petrological, Experimental and Ethnographic*, pp5-12. CBA Research Report **23**

McFadyen, L.

2008 Temporary Spaces in the Mesolithic and Neolithic: Understanding Landscapes. In P. Pollard (ed.) *Prehistoric Britain*, pp.121-134. Blackwell: Oxford, Malden

Meaden, G.T.

2012a The Five Megaliths of the Avebury Cove. In T.G. Meaden (ed.) *Archaeology of Mother Earth Sites and Sanctuaries through the Ages*, pp.67-72. BAR International Series **2389**. Archaeopress: Oxford

2012b Testing Stonehenge Experimentally using a Replica Full-Size Altar Stone positioned at the Focus of the Monument. In T.G. Meaden (ed.) *Archaeology of Mother Earth Sites and Sanctuaries through the Ages*, pp. 73-78. BAR International Series **2389**. Archaeopress: Oxford

Mehrer, M.W.

1995 *Cahokia's Countryside*. Northern Illinois University Press: Dekalb

Meiklejohn, C., D.C. Merrett, R.W. Nolan, M.P. Richards and P.A. Mellars

2005 Spatial Relationships, Dating and Taphonomy of the Human Bone from the Mesolithic Site of Cnoc Coig, Oronsay, Argyll, Scotland. *Proceedings of the Prehistoric Society* **71**:85- 105

Mellaart, J.

1961 Hacilar: A Neolithic Village Site. *Scientific American* **25**:86-98

1967 *Çatal Hüyük: A Neolithic Town in Anatolia*. Thames and Hudson: London and New York

1970 *Excavations at Hacilar*. British Institute of Archaeology, Ankara. University of Edinburgh Press: Edinburgh

Miller, D.

1984 Modernism and Suburbia as Material Ideology. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp37-49. Cambridge University Press: Cambridge

Miller, J., S. Ramsay, D. Alldritt and J. Bending

2016 Bay of Firth Environments from the 2nd to 4th Millennium BC: The evidence from Stonehall, Wideford Hill, Crossietown, Knowes of Trotty, Varne Dale and Brae of Smerquoy. In C. Richards and R. Jones (eds), *The Development of Neolithic House Societies in Orkney*, pp.495-526. Oxbow Books: Oxford

Miller, D. and C. Tilley

1984a Preface. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*. Cambridge University Press: Cambridge

1984b Theoretical Perspectives. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp.1-15; Cambridge University Press: Cambridge

1984c Conclusion. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp.147-152; Cambridge University Press: Cambridge

Milner, N.

2005 Can seasonality studies be used to identify sedentism in the past? In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.32-37; Oxbow Books: Oxford

Mitchell, G.F.

1984 The Landscape. In *Excavations at Knowth I*, pp.9-11. Royal Irish Academy, Dublin

Mithen, S.J.

- 1990 *Thoughtful Foragers: A Study of Prehistoric Decision Making*. Cambridge University Press: Cambridge
- 1996 *The Prehistory of the Mind: A Search for the Origins of Art, Religion and Science*. Thames and Hudson: London and New York

Mithen, S. J., A.E. Pirie, S. Smith and K Wicks

- 2007 The Mesolithic-Neolithic Transition in Western Scotland: A review and new evidence from Tiree. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, pp.512-541. Oxbow Books: Oxford

Molloy, K. and M. O'Connell

- 1995 Palaeoecological Investigations towards the Reconstruction of Environment and Land-use Changes during Prehistory at Céide Fields, Western Ireland. *Probleme der Küstenforschung im Nordseegebiet* **23**:187-225

Morphy, H.

- 1992 From Dull to Brilliant: The aesthetics of the spiritual among the Yolngu. In J. Coote and A. Shelton (eds) *Anthropology, Art and Aesthetics*, pp.181-208. Clarendon: Oxford

Munro, N.D.

- 2006 The Early to Late Natufian Transition at Hayonim Cave, Israel: A faunal perspective. In J.A. Haws, B.S. Hockett and J. Brugal (eds) *Paleolithic Zooarchaeology in Practice*, pp.57-71. BAR International Series **1564**

Needham, R.

- 1967 Percussion and Transition. *Man* **2(4)**:606-14

Needham, S.

- 2008 *Shamanism and the Origin of States: Spirit, Power and Gender in East Asia*. Left Coast Press: California

Needham, S., A. Lawson and A. Woodward

- 2009 Rethinking Bush Barrow. *British Archaeology* 104.
- 2010 A Noble Group of Barrows: Bush Barrow and the Normanton Down Early Bronze Age cemetery two centuries on. *The Antiquaries Journal* **90**:1-39

Needham, S., M. Parker Pearson, A. Tyler, M. Richards and M. Jay

- 2010 A First 'Wessex 1' Date from Wessex. *Antiquity* **84**:363-373

Nelson, S.M.

- 2008 *Shamanism and the Origin of States: Spirit, Power and Gender in East Asia*. Left Coast Press: California

Nether, A.

- 1961 Auditory Driving observed with Scalp Electrodes in Normal Subjects. *Electroencephalography and Clinical Neurophysiology* **13(3)**:449-451
- 1962 A Physiological Explanation of Unusual Behaviour in Ceremonies Involving Drums. *Human Biology* **34(2)**:151-160

Neubauer, W., V. Gaffney, K. Löcker, M. Wallner, E. Baldwin, H. Chapman, T. Trausmuth, J. Kainz, P. Schneidhofer, M. Kucera, G. Zotti, L. Aldrian and H. Schiel

- 2017 Sussing out the Super-henge: A multi method survey at Durrington Walls. In B. Jennings *et al.* (eds) *12th International Conference of Archaeological Prospection*, pp.166-8. Archaeopress Archaeology: Oxford.

Noble, W. and I. Davidson

- 1996 *Human Evolution, Language and Mind: A Psychological and Archaeological Inquiry.* Cambridge University Press: Cambridge

O'Connell, M. and K. Molloy

- 2001 Farming and Woodland Dynamics in Ireland during the Neolithic. *Biology and Environment, Proc. R. Ir. Acad. Ser B* **101**:99-128

Odum, H.

- 1988 Self-Organisation, Transformity and Information. *Science* **242**:1132-1139

O'Kelly, C.

- 1982 Introduction to Newgrange. In M.J. O'Kelly (ed.) *Newgrange: Archaeology, Art and Legend*, pp.13-64. Thames and Hudson: London

O'Kelly, M.J.

- 1982 *Newgrange: Archaeology, Art and Legend* Thames and Hudson: London

Olszewski, D.

- 1991 Social Complexity in the Natufian? Assessing the relationship of ideas and data. In G.A. Clark (ed.), *Perspectives on the Past: Theoretical Biases in Mediterranean Hunter-Gatherer Research*, pp.322-340. University of Pennsylvania Press: Philadelphia

Orkneyjar

- (1) *The Standing Stones of Stenness*
www.orkneyjar.com/history/standingstones/index/html
- (2) *The Links of Noltland Excavations, Westray*
www.orkneyjar.com/archaeology/linksofnoltland/background.htm
- (3) *Unstan Ware and Grooved Ware*
www.orkneyjar.com/history/2tribes.htm

- (4) *A Timeline of Early Orkney History*
<http://www.orkneyjar.com/history/timeline.htm>
- (5) *Sea Level Results lead to radical Rethink over World Heritage Site Landscape*
<http://www.orkneyjar.com/archaeology/author/admin/html>
- (6) *Do Survey Results show a Massive Prehistoric Monument under the Water of the Stenness Loch?* (October 2011)
- (7) *Ness of Brodgar Excavations: Revealing a Prehistoric Complex in the Heart of Orkney* (August 2015)
- (8) *Unstan Ware and Grooved Ware* (August 2012)
- (9) *Maeshowe* (2015)
- (10) *The Barnhouse Neolithic Settlement* (2015)
- (11) *Orkney's Standing Stones: Barnhouse Stone, Stenness* (2016)
- (12) *The Ring o' Bookan, Sandwick* (2015)
- (13) *The Orkney Venus* (2018)

Orlove, B.

1980 *Ecological Anthropology. Annual Review of Anthropology* **9**:235-273

Oswald, A.

2011 *Causewayed Enclosures. English Heritage: Introductions to Heritage Assets*

Oswald, A., B. Martyn and D. Carolyn

2001 *The Creation of Monuments: Neolithic Causewayed Enclosures in the British Isles. English Heritage: Swindon*

Oswin, J., J. Richards and R. Sermon

2014 *Stanton Drew 2010 Geophysical Survey and Other Investigations. Bath and North East Somerset Council*

O'Toole, F.

2015 *A History of Ireland. Irish Times*

Otto, R.

1914 *The Idea of the Holy*. Transl. J.W. Harvey. Oxford University Press edition 1958: London

Owens, D. and B. Hayden

1997 *Prehistoric Rites of Passage: A comparative study of transegalitarian hunter-gatherers. Journal of Anthropological Archaeology* **16**:121-161

Oyuela-Caycedo, A.

- 2001 The Rise of Religious Routinization: The study of changes from shaman to priestly elite. In J.E. Staller and E.J. Currie (eds), *Mortuary Practices and Ritual Associations: Shamanic Elements in Prehistoric Funerary Contexts in South America*, pp. 5-18. BAR International Series **982**:

Özdoğan, A.

- 1999 Çayönü. In M. Özdoğan and N. Başgelen (eds), *Neolithic in Turkey*, pp.35-63; Arkeolojive Sanat Yayinlari: Istanbul

Özdoğan, M. and A Özdoğan

- 1989 Çayönü: A Conspectus of Recent Work. *Paléorient* **15(1)**:65-74

Paddayya, K.

- 1980 Comment. The Identification of Prehistoric Hunter-Gatherer Aggregation Sites: The case of Altimara. In M.W. Conkey, *Identification of Prehistoric Hunter-Gatherer Aggregation Sites: The Case of Altimara.* *Current Anthropology* **21(5)**:609-630

Parker Pearson, M.

- 1984 Economic and Ideological Change: Cyclical Growth in the Pre-state Societies of Jutland. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp.69-92. Cambridge University Press: Cambridge
- 1998 Stonehenge for the Ancestors. *Antiquity* **72(276)**:308-326
- 2000 Ancestors, Bones and Stones in Neolithic and Early Bronze Age Britain and Ireland. In A. Ritchie (ed.) *Neolithic Orkney in European Context*, pp.203-214. McDonald Institute for Archaeological Research, Cambridge
- 2007 The Stonehenge Riverside Project. In M. Larson and M. Parker Pearson (eds) *From Stonehenge to the Baltic*, pp.125-144; BAR international Series **1692**
- 2013a *Researching Stonehenge Theories Past and Present.* UCL Archaeology International. Ubiquity Press: London
- 2013b *Stonehenge may have been burial site for Stone Age elite, say archaeologists.* In M. Kennedy, The Guardian
<http://www.the-guardian.com/science/2013/mar/09/archaeology-stonehenge-bones-burial-ground>
- 2013c *Stonehenge Revealed: Why stones were a special place.*
<http://blog.stonehenge-stone-circle.co.uk/2013/06/22/stonehenge-revealed-why-stones-were-a-special-place>

Parker Pearson, M., R. Bevins, R. Ixer, J. Pollard, C. Richards, K. Welham, B. Chan, K. Edinborough, D. Hamilton, R. Macphail, D. Schlee, J-L Schwenninger, E. Simmons and M. Smith

2015 Craig Rhos-y-felin: A Welsh Megalith Quarry for Stonehenge. *Antiquity* **89 348**:1331-1352

Parker Pearson, M., A. Chamberlain, M. Jay, P. Marshall, J. Pollard, C. Richards, J. Thomas, C. Tilley and K. Welham

2008a Who Was Buried at Stonehenge? *Antiquity* **83**:23-39

Parker Pearson, M., R. Cleal, P. Marshall, S. Needham, J. Pollard, C. Richards, C. Ruggles, A. Sheridan, J. Thomas, C. Tilley, K. Welham, A. Chamberlain, C. Chenery, J. Evans, C. Knüsel, N. Linford, L. Martin L, J. Montgomery, A. Payne and M. Richards

2007a The Age of Stonehenge. *Antiquity* **81**:617-639

Parker Pearson, M., P. Marshall, J. Pollard, C. Richards, J. Thomas and K. Welham

2007b Stonehenge Riverside Project: 2007. Excavation III. The timber monuments south of Woodhenge
<https://www.sheffield.ac.uk/archaeology/research/2.4329/stonehenge07-03>

Parker Pearson, M., P. Marshall, C. Richards, J. Thomas and K. Welham

2013 Stonehenge. In H. Fokkens and A. Harding (eds) *The Oxford Handbook of European Bronze Age*, pp.159-178. Oxford University Press: Oxford

Parker Pearson, M., J. Pollard, C. Richards, J. Thomas, C. Tilley and K. Welham

2006a Stonehenge, Its River and Its Landscape: Unravelling the Mysteries of a Prehistoric Sacred Place. *Archäologischer Anzeiger* **2006/1**: 237-258. Halbband, Deutsches Archäologisches Institut, Sonderdruck

2006b A New Avenue at Durrington Walls. *Past: Newsletter of the Prehistoric Society* **52 April 2006**

2009 Who were the Stonehenge dead? *Antiquity* **83**:23-39

Parker Pearson, M., J. Pollard, C. Richards, J. Thomas, C. Tilley, K. Welham and U. Albarella

2006c Materializing Stonehenge: The Stonehenge Riverside Project and new discoveries. *Journal of Material Culture* **11**: 227-261.

Parker Pearson, M., J. Pollard, C. Richards, J. Thomas and K. Welham

2010 Bluestonehenge. *British Archaeology* **110**: 1-4

2007 Stonehenge Riverside Project: 2007: Excavation II-V. University of Sheffield

2008b The Stonehenge Riverside Project: Exploring the Neolithic Landscape of Stonehenge. *Documenta Prehistorica* **XXXV**:153-166

Parker Pearson, M., J. Pollard, C. Richards, K. Welham, C. Casswell, C. French, D. Schlee, D. Shaw, E. Simmons, A. Stanford, R. Bevins and R. Ixer

2019 Megalith Quarries for Stonehenge's Bluestones. *Antiquity* **93** 367:45-62

Parmenter C.R., E.V. Johnson and A.K. Outram

2015 Inventing the Neolithic? Putting evidence-based interpretation back into the study of faunal remains from causewayed enclosures. *World Archaeology* **47**:819-833

Patterson, T.C.

1989 History and the Postprocessual Archaeologies. *Man* **24**:555-556

Pauketak, T.R.

2009 *Cahokia: Ancient America's Great City on the Mississippi*. Penguin Group: New York

2013 *An Archaeology of the Cosmos: Rethinking Agency and Religion in Ancient America*. Routledge: London and New York

Pearson, J.L.

2002 *Shamanism and the Ancient Mind: A Cognitive Approach to Archaeology*. Archaeology of Religion Series **2**. AltaMira Press: Walnut Creek, CA

Peasnell, L.

2002 Intricacies of Hallan Çemi. *Penn Museum Expedition Magazine* 44.1. University of Pennsylvania Museum of Archaeology and Anthropology

Pels, P.

2010 Temporalities of "Religion" at Çatalhöyük. In Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.220-267. Cambridge University Press: Cambridge

Peregrine, P.N.

1988 Les Hommes de Mallaha (Eynan) Israël, I. Les Sépultres. *Mémoires et Travaux du Centre de recherché française Jérusalem* 7. Association Paléorient: Paris

2013 *Social Complexity at Cahokia: Summary of a Working Group held at the Santa Fe Institute 28-30 May 2013*. Summary providers and discussion leaders for the respective topics addressed: T. Emerson, T. Pauketak, M. Trubitt, J. Kelly and W. Iseminger

Perrot, J. and D. Ladiray

1988 Les Hommes de Mallaha (Eynan) Israël, I. Les Sépultres. *Mémoires et Travaux du Centre de recherché française Jérusalem* 7. Association Paléorient: Paris

Peters, J. and K. Schmidt

2004 Animals in the Symbolic World of Pre-Pottery Neolithic Göblekli Tepe, South-eastern Turkey: A Preliminary Assessment. *Anthropozoologica* **39.1**:179-218

Pfaffenberger, B.

- 1992 The Social Anthropology of Technology. *Annual Review of Anthropology* **21**:491-516

Phillips, P.

- 1979 Origins of Agriculture in Israel. In A. Horowitz (ed.) *The Quaternary of Israel*, pp.317-319. Academic Press: New York

Piggott, S.

- 1938 The Early Bronze Age in Wessex. *Proceedings of the Prehistoric Society* **4**: 52-106
- 1962 From Salisbury Plain to Siberia. *Wiltshire Archaeological and Natural History Society Magazine* **58**: 93-97.

Piloud, M.A. and C.S. Larsen

- 2011 “Official” and “Practical” Kin: Inferring Social and Community Structure from Dental Phenotype at Neolithic Catalhöyük, Turkey. *American Journal of Physical Anthropology* **145**:519-530

Pitts, M.

- 2001 Excavating the Sanctuary: New investigations on Overton Hill, Avebury. *Wiltshire Archaeological and Natural History Magazine* **94**:1-23
- 2008 The Henge Builders. *American Archaeology* **61(1)** January/February 2008
- 2009 The Devil’s Work. *British Archaeology* **107** July/August 2009
- 2010 Bluestonehenge. *British Archaeology* **110** January/February 2010
- 2017 Rings of West Kennet: New Story for Avebury. *British Archaeology* **155** July/August 2017

Plog, S.

- 1974 *The Study of Prehistoric Change*. Academic Press: New York
- 1990 Agriculture, Sedentism, and Environment in the Evolution of Political Systems. In S. Upham (ed.) *The Evolution of Political Systems*, pp.177-202. Cambridge University Press: Cambridge

Pollard, J.

- 1995 Inscribing Space: Formal deposition at the Later Neolithic monument of Woodhenge, Wiltshire. *Proceedings of the Prehistoric Society* **61**:137-156
- 1999 “These places have their moments”: thoughts on settlement practice in the British Neolithic. In J. Brück and M. Goodman (eds), *Making Places in the Neolithic World*, pp.76-93. University College London Press: London

- 2006 Solid Nature and Ephemeral Architecture? Understanding the architecture of Earlier Neolithic occupation in Southern Britain from a dwelling Perspective. *Journal of Iberian Archaeology* **8**:41-52
- 2008 The Construction of Prehistoric Britain. In P. Pollard (ed.) *Prehistoric Britain*, pp.1-17. Blackwell: Oxford, Malden
- 2009 The Materialization of Religious Structures in the Time of Stonehenge. *Material Religion* **5**:332-353.
- 2012 Living with Sacred Spaces: The henge monuments of Wessex. In A. Gibson (ed.) *Enclosing the Neolithic*, pp.99-100. BAR International Series **2440**. Archaeopress: Oxford
- 2017 The Uffington White Horse Geoglyph as Sun-Horse. *Antiquity* **91(356)**:406-420

Pollard, J. and A. Reynolds

- 2002 *Avebury: The Biography of a Landscape.* Tempus: Charleston SC

Pollard, J. and D. Robinson

- 2007 A Return to Woodhenge: The results and implications of the 2006 excavation. In M. Larsson and M. Parker Pearson (eds) *From Stonehenge to the Baltic: Living with cultural diversity in the third millennium BC*, pp.159-168. BAR International Series **1692**

Pollard, J. and C. Ruggles

- 2001 Shifting Perceptions: Spatial Order, Cosmology, and Patterns of Deposition at Stonehenge. *Cambridge Journal of Archaeology* **11**: 69-90.

Pollard, J. and A. Whittle

- 1999 Other Finds. In A. Whittle, J. Pollard and C. Grigson (eds) *Harmony of Symbols: The Windmill Hill Causewayed Enclosure, Wiltshire*, pp.338-343. Oxbow Books: Oxford

Porr, M. and K.W. Alt

- 2006 The Burial of Bad Dürrenberg, Central Germany: Osteopathology and Osteoarchaeology of a Late Mesolithic Shaman's Grave. *International Journal of Osteoarchaeology* **16**:395-406

Powell, A.B.

- 1994 Newgrange – Science or Symbolism. *Proceedings of the Prehistoric Society* **60**:85-96

Power, R., A. Rosen and D. Nadel

- 2014 *The Economic and Ritual Utilisation of Plants at Raqefet Cave Natufian Site.* *Journal of Anthropological Archaeology* **33**:49-65

Prendergast, K.

- 2012 The Neolithic Monument of Newgrange in Ireland: A cosmic womb? In T.G. Meaden (ed.) *Archaeology of Mother Earth Sites and Sanctuaries through the Ages*, pp.57-64. BAR International Series **2389**

Preston, J., I. Meighan, D. Simpson and M. Hole

- 2002 Mineral Chemical Provenance of Neolithic Pitchstone Artefacts from Ballygalley, County Antrim Northern Ireland. *Geoarchaeology* **17(3)**:219-236

Preucel, R.W and I. Hodder

- 1996 Prologue: Communicating Present Pasts. In R.W. Preucel and I. Hodder (eds) *Contemporary Archaeology in Theory: A Reader*, pp.1-20; Blackwell: Oxford

Price, B.J.

- 1982 Cultural Materialism: A Theoretical Review. *American Antiquity* **47**:709-741

Price, N.S.

- 2001 An Archaeology of Altered States: Shamanism and Material Culture. In N.S. Price (ed.) *The Archaeology of Shamanism*, pp.3-16. Routledge, London

Price, S.R.F.

- 1984 *Rituals and Power: The Roman Imperial Cult in Asia Minor.* Cambridge University Press: Cambridge

Price, T.D. and J.A. Brown

- 1985 *Prehistoric Hunter-Gatherers: The emergence of cultural complexity.* Academic Press: San Diego (CA)

Pryor, F.

- 1998 Etton: Excavations at a Neolithic causewayed enclosure near Maxey Cambridgeshire 1982-7. *English Heritage Archaeological Report* **18**.
- 2001 The Flag Fen Basin: Archaeology and environment of a Fenland landscape. *English Heritage Archaeological Reports*
- 2002 *Seahenge: A Quest for Life and Death in Bronze Age Britain.* Harper Collins: London
- 2003 *Britain BC: Life in Britain and Ireland before the Romans.* Harper Collins: London

Pumpelly, R.

- 1908 *Explorations in Turkestan.* Carnegie Institute: Washington

Rafferty, J.E.

- 1978 *Functional Analysis of Surface Collection, Tombigbee River Valley, Mississippi.* Paper presented at the 43rd annual meeting, Society for American Archaeology, Tucson
- 1985 The Archaeological Record on Sedimentariness: Recognition, Development and Implications. In M. B. Schiffer (ed.) *Advances in Archaeological Method and Theory* **8**. Academic Press: Orlando Fa

Ramírez, P.B., R.de B. Behrmann, L. Laporte, P. Gouézin, F. Cousseau, R.B. Bermejo, A.H. Gismero, M.I. Cela and L. Quesnel

2015 Natural and Artificial Colours: The Megalithic Monuments of Brittany. *Antiquity* **89**:55-71

Rapaport, A.

1969 *House Form and Culture*. Foundations of Cultural Geography Series. Prentice-Hall: New Jersey

Rappaport, R.A.

1968 *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People*. Yale University Press: New Haven Conn.

1971a Ritual, Sanctity and Cybernetics. *American Anthropologist* **73**:59-76

1971b The Sacred in Human Evolution. *Annual Review of Ecology and Systematics* **2**:23-44

1999 *Ritual and Religion in the Making of Humanity*. Cambridge University Press: Cambridge

Rathburn, T.A.

1984 Skeletal Pathology from the Palaeolithic through the Metal Ages in Iran and Iraq. In M.N. Cohen and G.J. Armelagos (eds), *Paleopathology at the Origins of Agriculture*. Academic Press: New York

Rathje, W.L.

1978 Praise the Gods and Pass the Metates: A hypothesis of the development of lowland rainforest civilizations in Mesoamerica. In M.P. Leone (ed.) *Contemporary Archaeology*, pp.365-392; Southern Illinois University Press: Carbondale

Rathje, W.L. and C. Murphy

1992 *Rubbish! The Archaeology of Garbage*. Harper Collins: New York

Rätsch, C. and C. Müller-Ebeling

2013 *The Encyclopedia of Aphrodisiacs Psychoactive Substances for Use in Sexual Practices*

Redfield, R.

1958 *The Little Community*. University of Chicago Press: Chicago

Redman, C.L.

1977 Man, Domestication, and Culture in Southwestern Asia. In C. A. Reed (ed.) *Origins of Agriculture*, pp.523-541. Mouton: The Hague

1978 *The Rise of Civilisation: From Early Farmers to Urban Society in the Near East*. WH Freeman: San Francisco

Reichel-Dolmatoff, G.

1975 *The Shaman and the Jaguar*. Temple University Press: Philadelphia

Renfrew, C.

1973a *The Emergence of Civilisation: The Cyclades and the Aegean in the Third Millennium BC*. Methuen: London

1973b Cognitive Archaeology: Some Thoughts on the Archaeology of Thought. *Cambridge Archaeological Journal* **3(2)**:248-250

1973c Monuments, Mobilization and Social Organisation in Neolithic Wessex. In C. Renfrew (ed.) *The Explanation of Culture Change: Models in Prehistory*, pp.539-558. Duckworth: London

1979 *Investigations in Orkney*. Reports of the Research Committee of the Society of Antiquaries of London No. **XXXVIII**. Eastern Press: London and Reading

1985 *The Prehistory of Orkney*. C. Renfrew (ed.). Edinburgh University Press: Edinburgh

1994 Towards a Cognitive Archaeology. In C. Renfrew and E.B.W. Zubrow (eds) *The Ancient Mind: Elements of Cognitive Archaeology*, pp.1-12. Cambridge University Press: Cambridge

2008 Neuroscience, Evolution and the Sapient Paradox: The Factuality of Value and of the Sacred. *Philosophical Transactions: Biological Sciences* **363(1499)**:2041-2047

Reynolds, F.

2009 Regenerating Substances: Quartz as an Animistic Agent. *Time and Mind: Journal of Archaeology, Consciousness and Culture* **2(2)**:153-166

2013 Tracing Neolithic Worldviews: Shamanism, Irish Passage Tomb Art and Altered States of Consciousness. In C. Adams, B. Sessa and A. Waldstein (eds) *Breaking Convention: Essays on Psychedelic Consciousness*, pp.22-27. Strange Attractor Press: London

2014 Early Neolithic Shamans? Performance, Healing and the Power of Skulls at Hambledon Hill, Dorset. In E. Gemi-Iordanou, S. Gordon, R. Matthew, E. McInnes and R. Pettitt (eds) *Medicine, Healing and Performance*, pp.6-24. Oxbow Books: Oxford

Reynolds, N. and I. Ralston

1979 *Balbridie, Discovery and Excavation in Scotland 1979*. Council for British Archaeology, Scottish Regional Group, Edinburgh

Rice, G.

1975 *A Systematic Explanation of a Change in Mogollon Settlement Patterns*. Dissertation, University of Washington. Ann Arbor University Microfilms International

Richards, C.

1990 The Late Neolithic House in Orkney. In R. Samson (ed.) *The Social Archaeology of Houses*, pp.111-124. Edinburgh University Press: Edinburgh

- 1991a Skara Brae: Revisiting a Neolithic Village in Orkney. In W.S. Hanson and E.A. Slate (eds) *Scottish Archaeology: New Perspectives*, pp. 24-43. Aberdeen University Press: Aberdeen
- 1991b Monuments as Landscape: Creating the Centre of the World in Late Neolithic Orkney. *World Archaeology* **28(2)**:190-208
- 1992a Doorways to Another World: the Orkney-Cromarty Chambered Tombs. In N. Sharples and A. Sheridan (eds) *Vessels for the Ancestors: Essays on the Neolithic of Britain and Ireland*, pp.62-76. Edinburgh University Press: Edinburgh
- 1992b Barnhouse and Maeshowe. *Current Archaeology* **131**:444-448
- 1993a An Archaeological Study of Neolithic Orkney: Architecture, Order and Social Classification. Ph.D. dissertation, Department of Archaeology, University of Glasgow
- 1993b Monumental Choreography: architecture and spatial representation in late Neolithic Orkney. In C. Tilley (ed.), *Interpretative Archaeology*, pp.143-178. Berg: Oxford
- 1996a Henges and Water: Towards an elemental understanding of monumentality and landscape in Late Neolithic Britain. *Journal of Material Culture* **1(3)**:313-336
- 1996b Monuments as Landscape: Creating the centre of the world in Late Neolithic Orkney. *World Archaeology: Sacred Geography* **28(2)**:190-208
- 1999 Rethinking the Neolithic of Orkney. *British Archaeology* **42**:1-3
- 2004 A Choreography of Construction: Monuments, mobilization and social organisation in Neolithic Orkney. In J. Cherry, C. Scarre and S. Shennan (eds) *Explaining Social Change: Studies in Honour of Colin Renfrew*, pp.103-113. McDonald Institute for Archaeology, University of Cambridge, Cambridge
- 2005a The Neolithic Settlement of Orkney. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.7-22. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge
- 2005b The Ceremonial House. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.129-156. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge
- 2005c The Anatomy of a Megalithic Landscape. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.249-259. McDonald Institute for Archaeological Research, University of Cambridge; Cambridge
- 2005d The Dwellings at Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.57-127. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge
- 2005e Structure 8: Monumentality at Barnhouse. In C. Richards (ed.) *Dwelling Among the Monuments*, pp.157-194. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge
- 2010 Investigating the Early Neolithic in Eday. *Orkneyjar*
<http://orkneyjar.com/archaeology/2010/08/19/investigating-the-early-neolithic-in-eday/>
- 2013 Interpreting Stone Circles. In C Richards (ed.) *Building the Great Stone Circles of the North*, pp.2-30. Windgather Press: Oxford

Richards, C., K. Brophy, M. Carruthers, A. M. Jones, R. Jones and T. Muir

- 2016 Good Neighbours: Stonehall Knoll, Stonehall Meadow and Stonehall Farm. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.91-127. Oxbow Books: Oxford

Richards, C. and A.M. Jones

- 2016 Houses of the Dead: the transition from wood to stone architecture at Wideford Hill. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.16-40. Oxbow Books: Oxford

Richards, C. and R. Jones

- 2016 Images of Neolithic Orkney. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.1-15. Oxbow Books: Oxford

Richards, C., J. Downes, C. Gee and S. Carter

- 2016 Materialising Neolithic House Societies in Orkney. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.224-253. Oxbow Books: Oxford

Richards, C., R. Jones, A. Challands, S. Jeffrey, A. M. Jones, S. Jones and T. Muir

- 2016 At Stonehall Farm, Late Neolithic Life is Rubbish. In C. Richards and R. Jones (eds) *The Development of Neolithic Houses in Orkney: Investigations in the Bay of Firth, Mainland, Orkney, (1994-2014)*, pp.128-159. Oxbow Books: Oxford

Richards, C. and J. Thomas

- 1984 Ritual Activity and Structured Deposition in Later Neolithic Wessex. In R. Bradley and J. Gardiner (eds) *Neolithic Studies: A Review of Some Current Research*, pp.189-218. British Archaeological Report 133

Richards, J.C.

- 1999 *The Stonehenge Environs Project*. English Heritage: London

Richards, M.P. and R.J. Schulting

- 2003 Characterising Subsistence in Mesolithic Britain using Stable Isotope Analysis. In L. Bevan and J. Moore (eds) *Peopling the Mesolithic in a Northern Environment*, pp.119-128. BAR International Series 1157. Archaeopress: Oxford

Rick, J.W.

- 1977 *Identifying Prehistoric Sedentism in Hunter-Gatherers: An Example from Highland Peru*. Paper presented at the 76th Annual Meeting, American Anthropological Association, Houston

Rifkin, R.F.

- 2009 Engraved Art and Acoustic Resonance: Exploring Ritual and Sound in North-Western South Africa. *Antiquity* **83**:585-601

Ritchie, A.

- 1983 Excavation of a Neolithic Farmstead at Knap of Howar, Papa Westray, Orkney. *Proceedings of the Society of Antiquities of Scotland* **113**:40-121
- 1985 The First Settlers. In C. Renfrew (ed.) *The Prehistory of Orkney*, pp.36-53. Edinburgh University Press: Edinburgh
- 1995 *The Ancient monuments of Orkney.* P. Ashmore (ed.) Historic Scotland
- 2000 *Neolithic Orkney in its European Context.* A. Ritchie (ed.). McDonald Institute for Archaeological Research, University of Cambridge, Cambridge

Ritchie, G.

- 1985 Ritual Monuments. In C. Renfrew (ed.) *The Prehistory of Orkney*, pp.118-130. Edinburgh University Press: Edinburgh

Robb, J. and P. Miracle

- 2007 Beyond 'migration' versus 'acculturation': New models for the spread of agriculture. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, pp. 99-116. British Academy and Oxford University Press: London

Robbins, M.C.

- 1966 House Types and Settlement Patterns: An application of ethnology to archaeological interpretation. *Minnesota Archaeologist* **28**:3-26

Robson, J.R.K. and G.R. Wadsworth

- 1977 The Health and Nutritional Status of Primitive Populations. *Ecology of Food and Nutrition* **6**:187-202

Rolle, R. and Walls, G.

- 1989 *World of the Scythians.* B.T. Batsford: London

Rollefson, G.O.

- 1989 The Late Aceramic Neolithic of the Levant: A synthesis. *Paléorient* **15(1)**:168-173

Rosenberg, M.

- 1998 Cheating at Musical Chairs: Territoriality and Sedentism in an Evolutionary Context. *Current Anthropology* **39(5)**: 653-681
- 1999 Hallan Çemi. In M. Ozdoğan and N. Başgelen (eds) *Neolithic in Turkey*, pp.25-33. Arkeoloji ve Sanat Yay: Istanbul

Rosenberg, M., M. Nesbitt, R.W. Redding and T.F. Strasser

- 1995 Hallan Çemi Tepesi: Some Preliminary Observations concerning Early Neolithic Subsistence Behaviours in Eastern Anatolia. *Anatolica* **XXI**:3-12

Rosenberg, M. and R.W. Redding

- 2000 Hallan Çemi and Early Village Organisation in Eastern Anatolia. In I. Kuijt (ed.) *Life in Neolithic Farming Communities: Social Organisation, Identity and Differentiation*, pp.39-61. Kluwer Academic/Plenum: New York

Rowlands, M.

- 1993 The Role of Memory in the Transmission of Culture. *World Archaeology* **25**(2):141-151

Rowley-Conwy, P.

- 1983 Sedentary Hunters: the Ertebølle example. In G.N. Bailey (ed.), *Hunter-Gatherer Economy in Prehistory*, pp.111-126. Cambridge University Press: Cambridge

Rudenko, S.I. and M.W. Thompson

- 1970 *Frozen Tombs of Siberia: The Pazyryk Burials of Iron Age Horsemen.* University of California Press: Berkeley

Ruggles, C.L.N.

- 1982 A Reassessment of the High Precision Megalithic Lunar Sightlines, 1: Backsites, Indicators and the Archaeological Status of the Sightlines. *Archaeoastronomy Supplement 4, Journal for the History of Astronomy* **13**:S21-S40
- 1999 *Astronomy in Prehistoric Britain and Ireland.* Yale University Press: New Haven and London
- 2006 Interpreting Solstitial Alignments in Late Neolithic Wessex. *Archaeoastronomy. The Journal of Astronomy in Culture* **20**:1-27.

Ruggles, C.L.N. and R.D. Martlew

- 1992 The North Mull Project: Prominent Hill Summits and their Astronomical Potential. *Archaeoastronomy* **17**:1-13

Russell, M.

- 2002 *Monuments of the British Neolithic.* Tempus: Stroud

Russell, M. and K.J. McGowan

- 2003 Dance of the Cranes: Crane Symbolism at Çatalhöyük and Beyond. *Antiquity* **77**:445-455

Sahlins, M.

- 1972 *Stone Age Economics.* Aldine: New York
- 1985 *Islands of History.* University of Chicago Press: Chicago

Saidel, B.A.

- 1993 Round House or Square? Architectural Form and Socio-Economic Organisation in the PPNB. *Journal of Mediterranean Archaeology* **6**(1):65-108

Samson, R.

- 1990 Introduction. In R. Samson (ed.) *The Social Archaeology of Houses*, pp.1-18. Edinburgh University Press: Edinburgh

Sánta, G.

- 2014 Archaeoastronomical Study Tour in the Vicinity of Halle. *Hungarian Archaeology E-Journal* **2014 Summer**

Sauer, C.O.

- 1961 Sedentary and Mobile Bents in Early Societies. In S. Washburn (ed.) *Social Life of Early Man*, pp.256-266. Viking Fund Publications in Anthropology **31**. Aldine: Chicago

Saunders, N.J.

- 1998 Stealers of Light, Traders in Brilliance: Amerindian Metaphysics in the Mirror of Conquest. *RES: Anthropology and Aesthetics* **33**(1):225-52
- 1999 Biographies of Brilliance: Pearls, transformations of matter and beings, c.AD 1492. *World Archaeology* **31**(2):243-257
- 2002 The Colours of Light: Materiality and chromatic Cultures of the Americas. In A. Jones and G. MacGregor (eds) *Colouring the Past: The Significance of Colour in Archaeological Research*, pp.209-226. Berg: Oxford

Saville, A.

- 1994 A Skail Knife from Skara Brae, Orkney. *Proceedings of the Society of Antiquaries of Scotland* **124**:103-111

Scarre, C.

- 2002 Epilogue: Colour and Materiality in Prehistoric Society. In A. Jones and G. MacGregor (eds) *Colouring the Past: The Significance of Colour in Archaeological Research*, pp.227-242. Berg: Oxford

Schalk, R.F.

- 1977 The Structure of an Anadromous Fish Resource. In *For Theory Building in Archaeology: Essays on Faunal Remains, Aquatic Resources, Spatial Analysis, and Systematic Modelling*, pp.207-249. Academic Press: New York

Scham, S.

- 2008 The World's First Temple. *Archaeology Archive* **61**(6):1-3
<https://www.archaeology.org/0811/abstracts/turkey.html>

Schiffer, M.B.

- 1975 The Effects of Occupation Span on Site Content. In M.B. Schiffer and J.H. House (eds) *The Cache River Archaeological Project*, pp.265-269 Arkansas Archaeological Survey Research Series 8

Schmidt, K.

- 2000a Göblekli Tepe and the Rock Art of the Near East. *TÜBA-AR* 3:1-14
- 2000b Göblekli Tepe, Southeastern Turkey: A preliminary report on the 1995-1999 excavations. *Paléorient* 26.1:45-54
- 2000c Vorläufiger bericht zu den Grabungen am Göbekli Tepe und am Gürcütepe 1995-1999. *Istanbul Mitteilungen* 50:5-41
- 2006a *Sie bauten die ersten Tempel. Das rätselhafte Heiligtum der Steinzeitjäger. Die archäologische Entdeckung am Göblekli Tepe*. Verlag CH Beck: München
- 2006b Interview with Klaus Schmidt. In *Abenteuer Archäologie Kulturen, Menschen, Monumente*. Spektrum der Wissenschaft: Heidelberg
- 2006c Göbekli Tepe, Southeastern Turkey: A preliminary report on the 1995-1999 Excavations. *Paléorient* 26(1): 45-54
- 2009 Göblekli Tepe – Eine Beschreibung der wichtigsten Befunde erstellt nach den Arbeiten der Grabungsteams der Jahre 1995-2007. In *Erste Tempel – Frühe Siedlungen. 12000 Jahre Kunst und Kultur*, p.188; Oldenburg
- 2010 Göblekli Tepe – the Stone Age Sanctuaries: New results of ongoing excavations with a special focus on sculptures and high relief. *Documenta Praehistorica* XXXVII:239-256
- 2012 *Göblekli Tepe: A Stone Age Sanctuary in Southeastern Anatolia*. dbusiness: Berlin

Schortman E., P. Urban and M. Ausec

- 1996 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* 37(1):61-63

Schroeder, A.H.

- 1965 Unregulated Diffusion from Mexico into the Southwest prior to A.D. 700. *American Antiquity* 30:297-309

Schultes, R.E. and A. Hoffmann

- 1980 *Plants of the Gods: Origins of hallucinogenic use*. Hutchinson: London

Schulting, R.J.

- 1995 *Mortuary Variability and Status Differentiation on the Columbia-Fraser Plateau*. Archaeology Press: Simon Fraser University

- 2000 New AMS Dates from the Lambourn Long Barrow and the Question of the Earliest Neolithic in Southern England: Repacking the Neolithic Package? *Oxford Journal of Archaeology* **19(1)**:25-35
- 2008 Foodways and Social Ecologies from the Early Mesolithic to the Early Bronze Age. In P. Pollard (ed.) *Prehistoric Britain*, pp.90-120. Blackwell: Oxford, Malden

Seger, J. and H. J. Brockman

- 1987 What is Bet-Hedging? In P. H. Harvey and L. Partridge (eds) *Oxford Surveys in Evolutionary Biology* **4**:182-211. Oxford University Press: Oxford

Service, E.R.

- 1963 *Profiles in Ethnology*. Harper and Row: New York
- 1975 *Origins of the State and Civilisation: The Process of Cultural Evolution*. WW Norton: New York

Sharer, R.J. and W. Ashmore

- 1987 *Archaeology: Discovering Our Past*. Palo Alto: Mayfield

Sharer, R.J. and S.G. Morley

- 1992 *The Ancient Maya*. Stanford University Press: Stanford, Ca

Sharon, D.

- 1978 *Wizard of the Four Winds: A Shaman's Story*. The Free Press: New York

Sharples, N.

- 1984 Excavations at Pierowall Quarry, Westray, Orkney. *Proceedings of the Society of Antiquaries of Scotland* **114**:75-125

Shell, C.A.

- 2000 Metalworker or Shaman: Early Bronze Age Upton Lovell G2a Burial. *Antiquity* **74**:271-271

Shepherd, A.

- 2000 Skara Brae: Expressing Identity in a Neolithic Community. In A. Ritchie (ed.), *Neolithic Orkney in its European Context*, pp.139-158. McDonald Institute for Archaeological Research, University of Cambridge, Cambridge

Sheridan, A.

- 2000 Achnacreebeag and its French Connections: vive the 'auld alliance'. In J. C. Henderson (ed.), *The Prehistory and Early History of Atlantic Europe*, pp.1-16. Brit. Archaeol. Rep. Brit. Ser., 862: Oxford

- 2007 From Picardie to Pickering and Pencraig Hill? New Information on the 'Carinated Bowl Neolithic in northern Britain. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, pp.441-492. Oxbow Books: Oxford
- 2010 The Neolithization of Britain and Ireland: The 'Big Picture'. In B. Finlayson and G. Warren (eds), *Landscapes in Transition*, Levant Series 8, pp.89-105. Oxbow Books: Oxford

Sherratt, A.

- 1990 The Genesis of Megaliths: Monumentality, Ethnicity and Social Complexity in Neolithic North-West Europe. *World Archaeology* 22:147-167
- 1991 Sacred and Profane Substances: The Ritual Use of Narcotics in Late Neolithic Europe. In P. Garwood, R. Jennings, J. Skeates and D. Toms (eds) *Sacred and Profane: Proceedings of 1989 Conference on Archaeology, Ritual and Religion*. Oxford Committee for Archaeology: Oxford
- 1997 *Economy and Society in Prehistoric Europe: Changing Perspectives*. Princeton University Press: New Jersey
- 2005 Settling the Neolithic. In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.140-146; Oxbow Books: Oxford

Shirokogoroff, S.M.

- 1935 *Psychomental Complex of the Tungus*. Kegan Paul, Trench Trubner: London

Shore, B.

- 1996 *Culture in Mind: Cognition, Culture and the Problem of Meaning*. Oxford University Press: Oxford

Shults, F.L.

- 2010 Spiritual Entanglement: Transforming Religious Symbols at Çatalhöyük. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.73-98. Cambridge University Press: Cambridge

Sieveking, A.

- 1997 Cave as a Context in Palaeolithic Art. In C. Bonsall and C. Tolan-Smith (eds) *The Human Use of Caves*, pp.25-34. BAR International Series 667. Archaeopress: Oxford

Siikala, A.

- 1978 *The Rite Technique of the Siberian Shaman*. Folklore Fellows Communication 220. Soumalainen Tiedeakatemia Academia Scientiarum Fennica, Helsinki

Siikala, A. and M. Hoppál

- 1992 *Studies on Shamanism*. Finnish Anthropological Society, Helsinki/Akadémiai Kiadó, Budapest; Akaprint: Budapest

Simmons, A.H.

2007 *The Neolithic Revolution in the Near East: Transforming the Human Landscape*. University of Arizona Press: Tuscon

Sims, L.

2008 Integrating Archaeoastronomy with Landscape Archaeology: Silbury Hill – A Case Study. *Archaeologia Baltica* **10**: 220:224

2009 Entering, and Returning from, the Underworld: Silbury Hill – Where Archaeoastronomy meets Archaeology. *Journal of the Royal Anthropological Institute* **15(2)**:386-408

2010 Which Way Forward? West Kennet Avenue a Test case. *Journal of Cosmology* **9**:2160-2171

Smith, B.D.

1995 *The Emergence of Agriculture*. Scientific American Library, New York

Smith, I.F.

1965 *Windmill Hill and Avebury: Excavations by Alexander Keillor, 1925-1939*. Clarendon Press: Oxford

Smith, M.E.

2010 The Archaeological Study of Neighbourhoods and Districts in Ancient Cities. *Journal of Anthropological Archaeology* **29**:137-154

Smith, P.E.

1972 *The Consequences of Food Production*. Addison-Wesley Modular Publication **31**

1976 *Food Production and Its Consequences*, 2nd edition. Cummings: Menlo Park California

Smith, P.O.

1972 Diet and Attrition in the Natufians. *American Journal of Physical Anthropology* **37**:233-238

Smythe, J.

2009 Brú na Bóinne World Heritage Site: Research Framework. *The Heritage Council, Dublin*

2010 The House and Group Identity in the Irish Neolithic. *Proceedings of the Royal Irish Academy* **111C**:1-31

Snoeck, C., J. Pouncett, P. Claeys, S. Goderis, N. Mattielli, M. Parker Pearson, C. Willis, A. Zazzo, J. Lee-Thorp and R. Schulting

2018 Strontium Isotope Analysis on Cremated Human Remains from Stonehenge supports Links with West Wales. *Scientific Reports* **2018(8)**:10790

Solecki, R.L.

1977 Predatory Bird Rituals at Zawi Chemi Shanidar. *Sumer* **XXXIII**:42-47

1980 *An Early Village Site at Zawi Chemi Shanidar*. Undena Publications: Malibu

Solecki, R.L. and R.S. Solecki

2004a The Zagros Proto-Neolithic and Cultural Developments in the Near East. In R.L. Solecki, R.S. Solecki and A.P. Agelarakis (eds) *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.114-158. Texas A&M University Press: College Station

2004b Cultural Materials Found in the Cemetery Fill. In R.L. Solecki, R.S. Solecki and A.P. Agelarakis, *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.64-104. Texas A&M University Press: College Station

2004c The Zagros Proto-Neolithic and Cultural Developments in the Near East. In R.L. Solecki, R.S. Solecki and A.P. Agelarakis, *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.114-158. Texas A&M University Press: College Station

2004d Preface. In R.L. Solecki, R.S. Solecki and A.P. Agelarakis, *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.ix-xiv. Texas A&M University Press: College Station

2004e Summary Discussion of the Proto-Neolithic Cemetery in Shanidar Cave. In R.L. Solecki, R.S. Solecki and A.P. Agelarakis, *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.105-113. Texas A&M University Press: College Station

Solecki, R.L., R.S. Solecki and A.P. Agelarakis

2004 *The Proto-Neolithic Cemetery in Shanidar Cave*. Texas A&M University Press: College Station

Solecki, R.S.

1971 *Shanidar: The First Flower People*. Alfred A. Knopf: New York

2004 Catalog of the Burials in the Proto-Neolithic Cemetery. In R.L. Solecki, R.S. Solecki and A.P. Agelarakis (eds) *The Proto-Neolithic Cemetery in Shanidar Cave*, pp.11-31. Texas A&M University Press: College Station.

Speth, J. D., K. Newlander, A. A. White, A. K. Lemke and L. E. Anderson

2013 Early Paleoindian Big-Game Hunting in North America: Provisioning or Politics?; *Quaternary International* **285**: 119-139

Spikins, P.

2008 The Bashful and the Boastful: prestigious leaders and social change. *World Prehistory* **21**(3-4), pp.173-193

Srejović, D.

1972 *Europe's First Monumental Sculpture; New Discoveries at Lepenski Vir*. Translated from the Serbo-Croat by L. F. Edwards. Thames and Hudson: Great Britain

Staller, J.E. and E.J. Currie

- 2001 Introduction. In J.E. Staller and E.J. Currie (eds) *Mortuary Practices and Ritual Associations: Shamanic Elements in Prehistory Funerary Contexts in South America*, pp.1-4. BAR International Series **982**. Archaeopress: Oxford

Stark, B.L.

- 1981 The Rise of Sedentary Life. In J.A. Sabloff (ed.) *Supplement to the Handbook of Middle American Indians, Volume I, Archaeology*, pp.345-372. University of Texas Press: Austin

Stein, G.

- 1998 Heterogeneity, Power and Political Economy: Some Current Research Issues in the Archaeology of Old World Complex Societies. *Journal of Archaeological Research* **6**:1-44

Stone, J.F.S. and F.W. Wallis

- 1951 Third Report of the Sub-Committee of the South-Western Group of Museums and Art Galleries on the Petrological Identification of Stone Implements. *Proceedings of the Prehistoric Society* **17**:99-158

Stooke, P. .

- 1994 Neolithic Lunar Maps at Knowth and Baltinglass, Ireland. *Journal for the History of Astronomy* **XXV**:39-55

Stouff, F. and W.B. Twitty

- 1971 *Sacred Chitimacha Indian Beliefs*. Twitty and Twitty: Pompano Beach, Florida

Stout, G.

- 2002 *Newgrange and the Bend of the Boyne*. Irish Rural Landscapes **Vol. 1** Cork University Press: Cork

Straus, L.G.

- 1975-76 The Upper Palaeolithic Cave Site of AltaMira (Santander, Spain). *Quaternaria* **19**:135- 147

Strehlow, T.

- 1965 Cultural, Social Structure, and Environment in Aboriginal Central Australia. In R Berndt and C Berndt (eds) *Aboriginal Man in Australia*. Angus and Robertson: Sydney

Sturt, F

- 2010 From Big Beat to Bebop. In B. Finlayson and G. Warren (eds) *Landscapes in Transition*; pp.23-33. Oxford Books: Oxford

Stutley, M.

- 2003 *Shamanism: A Concise Introduction*. Routledge: London

Styles, B.W. and J.R. Purdue

- 1996 Animal Exploitation. In M.J. O'Brien *Middle and Late Woodland Subsistence and Ceramic Technology in the Central Mississippi River Valley: Selected Studies from the Burkemper Site, Lincoln County, Missouri*. Illinois State Museum Reports of Investigations **52**

Sullivan, L.E.

- 1988 *Icanchu's Drum: An Orientation to Meaning in South American Religions*. Macmillan: New York
- 2003 *Native Religions and Cultures of North America: Anthropology of the Sacred*; L. E. Sullivan (ed.). Continuum: London

Sundstrom, L.

- 1996 Mirror of Heaven: Cross-cultural transference of the sacred geography of the Black Hills. *World Archaeology* **28(2)**:177-189

Tait, C.

- 2002 *The Watchstone, Barnhouse Stone and Odinstone, Stenness*
<http://www.odinorkney.com/pages/maeshowe/stones.html>

Taksami, C.M.

- 1998 Siberian Shamans. In J. Pentikäinen, T. Jaatinen, I. Lehtinen and M-R Saloniemi (eds) *Shamans*, pp.11-26. Tampere Museum: Tampere

Taylor, J.C.

- 1977 Diet, Health and Economy: Some Consequences of Planned Social Change in an Aboriginal Community. In R.M. Berndt (ed.) *Aborigines and Change: Australia in the '70s*, pp.147-158. Australian Institute of Aboriginal Studies: Canberra

Tchernov, E.

- 1984 Commensal Animals and Human Sedentism in the Middle East. In J. Clutton-Brock and C. Grigson (eds) *Animals and Archaeology Vol. 3: Early Herders and Their Flocks*, pp.91-115. BAR International Series **202**
- 1991 Of Mice and Men - Biological Markers for Long-Term Sedentism: A Reply. *Paléorient* **17(2)**:153-160

Teather, A.

- 2008 *Mining and Materiality in the British Neolithic*. Doctoral dissertation. University of Sheffield

Testart, A.

- 1982 The Significance of Food Storage among Hunter-Gatherers: Residence Patterns, Population Densities and Social Inequalities. *Current Anthropology* **23**:523-537

THC (The Heritage Council: An Chomhairle Oidhreachta)

- 2017a Section 4.3: Belderg Beg, Co. Mayo E109. In *Significant Unpublished Irish Archaeological Excavations 1930-*
- 2017b Section 4: Neolithic. In *Significant 1997*
http://www.heritagecouncil.ie/unpublished_excavations/section4.html
- Unpublished Irish Archaeological Excavations 1930-1997*
http://www.heritagecouncil.ie/unpublished_excavations/section4.html

Thissen L.

- 2005 The Role of Pottery in Agropastoralist Communities in Early Neolithic southern Romania. In D. Bailey, A. Whittle and V. Cummings (eds) *(Un)settling the Neolithic*, pp.71-78; Oxbow Books: Oxford

Thom, A.

- 1967 *Megalithic Sites in Britain*. Oxford University Press: Oxford

Thom, A. and A.S. Thom

- 1978 A Reconsideration of the Lunar Sites in Britain. *Journal for the History of Astronomy* **IX**: 170-179

Thomas, J.

- 1991 *Rethinking the Neolithic*. Cambridge University Press: Cambridge
- 1993a The Hermeneutics of Megalithic Space. In C. Tilley (ed.) *Interpretive Archaeology*, pp.73-98. Berg: Oxford
- 1993b The Politics of Vision and the Archaeologies of Landscape. In B. Bender (ed.) *Landscape: Politics and Perspectives*, pp.19-48. Providence and Oxford: Berg
- 1993c Discourse, Totalisation and the Neolithic. In C. Tilley (ed.) *Interpretive Archaeology*, pp.357-394. Berg: Oxford
- 1999/2002 *Understanding the Neolithic*. Routledge: New York
- 2004 Current Debates on the Mesolithic-Neolithic Transition in Britain and Ireland. *Documenta Praehistorica* **31**:113-130
- 2004 The Ritual Universe. In I.A.G. Shepherd and G.J. Barclay (eds), *Scotland in Ancient Europe: The Neolithic and Early Bronze Age of Scotland in Their European Context*, pp171-178; Society of Antiquities of Scotland: Edinburgh
- 2007 Mesolithic-Neolithic Transitions in Britain: From Essence to Inhabitation. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, pp.423-439; Oxford University Press for the British Academy: Oxford
- 2016 *Cattle, Consumption and Causewayed Enclosures: Response to Parmenter, Johnson and Outram*. University of Manchester

- 2007 The Internal Features at Durrington Walls: Investigations in the Southern Circle and Western Enclosures 2005-6. In M. Larsson and M. Parker Pearson (eds) *From Stonehenge to the Baltic: Living with Cultural Diversity in the Third Millennium BC*, pp.145-157. BAR International Series **1692**
- 2008 The Mesolithic-Neolithic Transition in Britain. In P. Pollard (ed.) *Prehistoric Britain*, pp.58-89. Blackwell Publishing: Oxford: Malden
- 2013 *The Birth of Neolithic Britain: An Interpretive Account.* Oxford University Press: Oxford
- 2016 Cattle, Consumption and Causewayed enclosures (response to Parmenter, Johnson and Outram). *World Archaeology* **48**:729-744
- 2017 Dorstone Hill, Herefordshire: Excavations 2011-2015. *University of Manchester Archaeology Research Projects*

Thompson, S., M. Leivers and A. Barclay

- 2017 The Larkhill Causewayed Enclosure: Rethinking the early Neolithic Stonehenge Landscape. *Current Archaeology* **326**.

Tilley, C.Y.

- 1981 Economy and Society: What Relationship? In *Economic Archaeology*. BAR International Series **96**:131-148
- 1984a Ideology and the Legitimation of Power. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*. Cambridge University Press: Cambridge
- 1984b Ideology and the Legitimation of Power in the Middle Neolithic of Southern Sweden. In D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, pp111-146; Cambridge University Press: Cambridge.
- 1994 *A Phenomenology of Landscape.* Berg: Providence and Oxford
- 1996 *An Ethnography of the Neolithic: Early Prehistoric Societies in Southern Scandinavia.* Cambridge University Press: Cambridge

Tilley, C., C. Richards, W. Bennett and D. Field

- 2007 Stonehenge – Its Landscape and Its Architecture: A Reanalysis. In M. Larsson and Parker Pearson M. (eds) *From Stonehenge to the Baltic: Living with Cultural Diversity in the Third Millennium BC*, pp.183-204. BAR International Series **1692**

Tobolczyk, M.

- 2016 The World's Oldest Temples in Göbekli Tepe and Nevali Çori, Turkey in the Light of Studies in Ontogenesis of Architecture. In *Procedia Engineering* **161**:1398-1404

Todd, I.A.

- 1976 *Çatal Hüyük in Perspective.* Cummings: California

Tolan-Smith, C.

- 2008 Mesolithic Britain. In G. Bailey and P. Spikins (eds) *Mesolithic Europe*, pp.132-157. Cambridge University Press: New York

Towers, R., N. Card and M. Edmonds

- 2015 *The Ness of Brodgar*. Archaeological Institute, University of the Highlands and Islands: Kirkwall

Towrie, S.

- 2007a Stone Wall Hints at Neolithic Spiritual Barrier. *Orkneyjar*
<http://www.orkneyjar.com/archaeology/nob2007.htm>)
- 2007b On Earth as it is in Heaven: Was Orion linked to Orkney's Neolithic Heartland? *Orkneyjar*
<http://www.orkneyjar.com/archaeology/2007/01/30/on.earth.as.it.is.in.heaven.was.orion.linked.to.orkneys.heartland>
- 2008a Experts Stunned by Scale of Brodgar Structure. *Orkneyjar*
<http://www.orkneyjar.com/2008/08/14/experts-stunned-by-scale-of-brodgar-structure>
- 2008b New Contender for Orkney's Oldest Settlement Site. *Orkneyjar*
<http://www.orkneyjar.com/archaeology/2008/03/20/new-contender-for-orkneys-oldest-settlement-site>
- 2008c Brodgar Excavation Ends, but the Secrets of the Stone Circle are Becoming Clearer. *Orkneyjar*
<http://www.orkneyjar.com/archaeology/2008/08/01/brodgar-excavation-ends-but-the-secrets-of-the-ring-becoming-clearer>
- 2008d Brodgar Assumptions Questioned at End of Ness Dig. *Orkneyjar*
<http://www.orkneyjar.com/brodgar-assumptions-questioned-at-end-of-ness-dig/>
- 2010a From Stonehenge to the Ness of Brodgar ... or Vice Versa? *Orkneyjar*
<http://www.orkneyjar.com/archaeology/2010/08/26/from-stonehenge-to-the-ness-of-brodgar-or-vice-versa/>
- 2010b Friday, August 6, 2010: Excavation Diary. *Orkneyjar.com The Ness of Brodgar Trust*.
<http://www.orkneyjar.com/archaeology/nessofbrodgr/aug0610.hym>
- 2011a Radiocarbon Dates Point to a Millennium of Activity on the Ness Of Brodgar. *Orkneyjar.com*
<http://www.orkneyjar.com/archaeology/2011/10/27/radiocarbon-dates-point-to-a-millennium-of-activity-on-the-ness-of-brodgar/>
- 2011b Do Survey Results Show a Massive Prehistoric Monument under the Water of the Stenness Loch? *Orkneyjar*
<http://www.orkneyjar.com/archaeology/2011/10/03/do-survey-results-show-a-massive-prehistoric-monument-under-the-of-the-stenness-loch/>
- 2012 Painting a Picture of Scapa Flow 10,000 Years Ago. *Orkneyja.com*
www.orkneyjar.com/archaeology/2012/05/18/painting-a-picture-of-scapa-flow-10000-years-ago/

- 2012b [Wednesday, August 15, 2014. Orkneyjar.com. Excavation Diary. The Ness of Brodgar Trust](http://www.orkneyjar.com/archaeology/nessofbrodgr/2014/07/dig-diary-Wednesday-july-23-2014/)
- 2014 [The Barnhouse Neolithic Settlement. Orkneyjar](http://www.orkneyjar.com/history/barnhouse)
- 2014b [Wednesday, July 23, 2014. Orkneyjar.com. Excavation Diary. The Ness of Brodgar](http://orkneyjar.com.archaeology/nessofbrodgar/2014/07/dig-diary-wednesday-july-23-2014)
- 2015a [The Odin Stone. Orkneyjar](http://www.orkneyjar.com/history/odinstone)
- 2015b [Orkney's Standing Stones: The Barnhouse Stone, Stenness. Orkneyjar](http://www.orkneyjar.com/history/monoliths/barnst.htm)
- 2015c [The Ring o' Bookan, Sandwich. Orkneyjar](http://www.orkneyjar.com.history/worldheritagesite/bookan.htm)
- 2015d [The Bookan Chambered Cairn, Sandwich. Orkneyjar](http://www.orkneyjar.com.history/worldheritagesite/bookancairn.htm)
- 2015e [The Barnhouse Settlement: Structure 8 – A Neolithic Temple? Orkneyjar](http://www.orkneyjar.com/history/barnhouse/barnh3.htm)
- 2015f [Maeshowe. Orkneyjar](http://www.orkneyjar.com/history/maeshowe)
- 2015g [A Timeline of Early Orkney. Orkneyjar](http://www.orkneyjar.com/history/timeline.htm)
- 2016 [Westray 'Sauna' Named One of Top Ten Archaeological Discoveries of 2015. Orkneyjar](http://www.orkneyjar.com/archaeology/2016/01/21/westray-sauna-named-one-of-top-ten-archaeological-discoveries-of-2015/)

Trigger, B.G.

- 1996 [Ideology, Materialisation, and Power Strategies](#). Comments and replies. *Current Anthropology* **37**(1):63-64

Tuan, Y.

- 1977 *Space and Place: the perspective of experience*. University Press: Minneapolis

Turner, V.W.

- 1977 [Symbols in African Ritual](#). In J.L. Dolgin, D.S. Kemnitzer and D.M. Schneider (eds), *Symbolic Anthropology: A reader in the study of symbols and meanings*, pp183-194. Columbia University Press: New York

Twohig, E.S.

- 1981 *The Megalithic Art of Western Europe*. 1st ed. Clarendon Press: Oxford

Tyler, E.

- 1871 *Religion in Primitive Culture (Primitive Culture Vol. 2)* John Murray: London, (reprinted 1958, Harper Torchbooks: New York)

(USN) University of Sheffield News

- 2012 *Research finds Stonehenge was monument marking unification of Britain*

Valla, F.F.

- 1991 Les Natoufians de Mallaha et l'espace. In O. Bar-Yosef and F.R. Valla (eds), *The Natufian Culture in the Levant*. International Monographs in Prehistory, pp.111-122. Ann Arbor: MI)

Valla, F.R., H. Plisson and R. Baxo

- 1991 Notes preliminaries sur les fouilles en cours sur la Terrasse d'Hayonim. *Paléorient* 15(1):245-257

van Hoek, M.

- 1993 The Spiral in British and Irish Neolithic Art. *Glasgow Archaeological Journal* 18(18):11-32

van Huyssteen, J.W.

- 2010 Coding the Nonvisible: Epistemic Limitations and Understanding Symbolic Behaviour at Çatalhöyük. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.99-121. Cambridge University Press: Cambridge

Vanmount, B.

- 2007 Bridging the Gap: the Mesolithic-Neolithic transition in a frontier zone. *Documentia Praehistorica XXXIV*:105-118

van Pool, C.S.

- 2009 The Signs of the Sacred: Identifying Shamans Using Archaeological Evidence. *Journal of Anthropological Archaeology* 28(2):177-190

van Wijngaarden-Bakker, L.H.

- 1986 The Animal Remains from the Beaker Settlement at Newgrange, Co. Meath: Final Report. *Proceedings of the Royal Irish Academy* 86C:17-111

Viner, S., J. Evans, U. Albarela and M. Parker Pearson

- 2010 Cattle Mobility in Prehistoric Britain: Strontium Isotope Analysis of Cattle Teeth from Durrington Walls (Wiltshire, UK). *Journal of Archaeological Science* 37:2812-2820

Vita-Finzi, C. and E.S. Higgs

- 1970 Prehistoric Economy in the Mount Carmel Area of Palestine: Site Catchment Analysis. *Proceedings of the Prehistoric Society* 34:1-37

Voorhies, B.

1978 Previous Research on Nearshore Coastal Adaptation in Middle America. In B.L.Stark and B. Voorhies (eds) *Prehistoric Coastal Adaptations*, pp.5-21. Academic Press: New York

Waddington, C., G. Bailey, A. Bayliss, I. Boomer, N. Milner, K. Pedersen, R. Shiel and T. Stevenson

2003 A Mesolithic Settlement at Howick, Northumberland: a Preliminary Report. *Archaeologia Aeliana* **32**:1-12

Wadley, L.

1987 Later Stone Age Hunters and Gatherers of the Southern Transvaal: Social and Ecological Interpretation. *Cambridge Monographs in African Archaeology* **25**. BAR International Series **280**

1989 Legacies from the Later Stone Age. *South African Archaeological Society Goodwin Series* **6**:42-53

Wainwright, G.J.

1989 *The Henge Monuments: Ceremony and Society in Prehistoric Britain*. Thames and Hudson: London

Walker, K.

2015 Axe-heads and Identity: An investigation into the roles of imported axe-heads in identity formation in Neolithic Britain. Volume 1 of *An Investigation into the Contexts of Jade Axe-heads found in Britain, using GIS Terrain Modelling of HER Data*. Ph.D. thesis, Faculty of Humanities, University of Southampton

Warren, G. M.

2001 Making Space? Stone Tool Deposition in Mesolithic and Early Neolithic Eastern Scotland. In K. Frewster and M. Zvelebil (eds) *Ethnography and Hunter-Gatherers: Pictures at an Exhibition*. BAR International Series **955**

2007 Mesolithic Myths. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, pp.303-326. British Academy: London

Warren, G.M., D. McIlreavy, S. Rathbone and P. Walsh

2009 *Archaeological Excavations at BEHY (E747): Stratigraphic Report*. UCD School of Archaeology, Dublin

Warren, G.M. and K. Rice

2007 *Excavations in 2007 at Belderrig, Co. Mayo: Stratigraphic Report*. UCD School of Archaeology, Dublin

Wasson, P.K.

2010 The Neolithic Cosmos at Çatalhöyük. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.268-299. Cambridge University Press: Cambridge

Watanabe, H.

- 1968 Subsistence and Ecology of Northern Food Gatherers with Special Reference to the Ainu. In R.B. Lee and I. DeVore (eds) *Man the Hunter*, pp.69-77. Aldine: Chicago
- 1977 Some Problems in the Comparative Ecology of Food Gatherers. In H. Watanabe (ed.) *Human Activity System: Its Spatiotemporal Structure*, pp.21-39. University of Tokyo Press: Tokyo

Watkins, T.

- 2015 The Cultural Dimension of Cognition. *Quaternary International* **405**:91-97

Watson, A.

- 2001 The Sounds of Transformation: Acoustics, Monuments and Ritual in the British Neolithic. In N.S. Price (ed.), *The Archaeology of Shamanism*, 1st ed., pp.178-192. Routledge: London
- 2010 Composing Avebury. *World Archaeology* **33(2)**:296-314

Watson, A. and D. Keating

- 1999 Architecture and Sound: An Acoustic Analysis of Megalithic Monuments in Prehistoric Britain. *Antiquity* **73**:325-326
- 2002 The Natufian Human Skeletal Remains from Wadi Hammeh 27 (Jordan). *Paléorient* **28(1)**:103-124

Watts, C.

- 2013 Relational Archaeologies: Roots and Routes. In C. Watts (ed.), *Relational Archaeologies: Humans, Animals and Things*, pp.1-20. Routledge: New York

Webb, S.G. and P.C. Edwards

- 2002 The Natufian Human Skeletal Remains from Wadi Hammeh 27 (Jordan). *Paléorient* **28(1)**:103-124

Weber, M.

- 1993 *The Sociology of Religion.* Beacon Press: Boston

Weisberger, M.

- 2016 12,000Year-Old Shaman's Elaborate Funeral had 6 Stages. *Live Science*
<http://www.livescience.com/55295-female-shaman-burial-reconstructed.html>

Wesler, K.W.

- 2012 *An Archaeology of Religion.* 1st ed. Rowman & Littlefield Publishing Group Inc

Wessex Archaeology

- 2005 *Northborough Neolithic Causewayed Enclosure, Peterborough, Cambridgeshire: Archaeological Evaluation and Assessment of Results*
- 2013 *Kingsmead Quarry, Horton*
- 2017 *Bulford*

White, I.M.

- 1977 From Camp to Village: Some Problems of Adaptation. In R. M. Berndt (ed.) *Aborigines and Change: Australia in the '70s*, pp.100-105. Australian Institute of Aboriginal Studies, Canberra

White, J. C.

- 1995 Incorporating Heterarchy into Theory on Socio-Political Development: The Case from Southeast Asia. In R. M. Ehrenreich, C. L. Crumley and J. E. Levy (eds), *Heterarchy and Analysis of Complex Societies*, pp.101-123. Archaeological Papers of the American Anthropological Association **6**. Arlington Va

Whitehouse, H. and I. Hodder

- 2010 Modes of Religiosity at Çatalhöyük. In I. Hodder (ed.) *Religion in the Emergence of Civilization: Çatalhöyük as a Case Study*, pp.121-145. Cambridge University Press: Cambridge

Whiting, J.W.M. and B. Ayres

- 1968 Inferences from the Shape of Dwellings. In K.C. Chang (ed.) *Settlement Archaeology*. National Press Books: Palo Alto

Whiteley, D.S.

- 1994 Shamanism, Natural Modelling and the Rock Art of Far Western North American Hunter-Gatherers. In S.A. Tyrpin (ed.) *Shamanism and Rock Art in North America*. Rock Art Foundation Inc., Special Publication **1**:124-151. San Antonio, Texas
- 2000 *The Art of the Shaman: Rock Art of California*. University of Utah Press: Salt Lake City

Whiteley, D.S., R.I. Dorn, J.M. Simon, R. Rechtman and T.K. Whitley

- 1999 Sally's Rockshelter and the Archaeology of the Vision Quest. *Cambridge Archaeological Journal* **9**:221-246

Whiting, J.W.M. and B. Ayres

- 1968 Inferences from the Shape of Dwellings. In K.C. Chang (ed.) *Settlement Archaeology*. National Press Books: Palo Alto

Whitlam, R.G.

- 1981 *Settlement-Subsistence Type Occurrence and Change in Coastal Environments: A Global Archaeological Perspective*. Dissertation, Department of Anthropology, University of Washington

Whittle, A.

- 1993 The Neolithic of the Avebury Area: Sequence, Environment; Settlement and Monuments. *Oxford Journal of Archaeology* **12**:29-53
- 1996 *Europe in the Neolithic: The Creation of New Worlds*. Cambridge University Press: Cambridge
- 1997a *Sacred Mound, Holy Rings: Silbury Hill and the West Kennet Palisade Enclosures: A later Neolithic Complex in North Wiltshire*. Oxbow Books: Oxford
- 1997b Moving On and Moving Around: Neolithic Settlement Mobility. In P. Topping (ed.) *Neolithic Landscapes*, pp.15-22. Monograph **86**, Neolithic Group Seminar Papers **2**. Oxbow: Oxford
- 2007 The Temporality of Transformation: Dating the early development of the southern British Neolithic. In A. Whittle and V. Cummings (eds), *Going Over: The Mesolithic-Neolithic transition in north-west Europe*, pp.377-398. Oxford University Press for the British Academy

Whittle, A., A. Bayliss and F. Healy, F.

- 2011a Gathering Time: the social dynamics of change. In Whittle, A., F. Healy and A. Bayliss (eds) *Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland*, pp.848-914; Oxbow Books: Oxford
- 2011b The North Wiltshire Downs. In Whittle, A., F. Healy and A. Bayliss (eds) *Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland*, pp.60-110; Oxbow Books: Oxford

Whittle, A., J. Davies, I. Dennis, A. Fairbairn and M. Hamilton

- 2000 Neolithic Activity and Occupation outside Windmill Hill Causewayed Enclosure, Wiltshire: Survey and Excavation 1992-93. *Wiltshire Archaeological and Natural History Magazine* **93**:131-180

Whittle, A., F. Healy and A. Bayliss

- 2011 *Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland*. Oxbow Books: Oxford

Whittle, A. and J. Pollard

- 1998 Windmill Hill Causewayed Enclosure: the Harmony of Symbols. In M. Edmonds and C. Richards (eds) *Understanding the Neolithic in North-Western Europe*, pp.231-247. Cruithne Press: Glasgow

Whittle, A., J. Pollard and C. Grigson

1999 *Harmony of Symbols: The Windmill Hill Causewayed Enclosure, Wiltshire*. Oxbow Books: Oxford

Wickham-Jones, C.

2015a *The Rising Tide: Investigations into the Submerged Archaeology of Orkney*
www.abdn.ac.uk/geosciences/departments/archaeology/the-rising-tide-investigations-into-the-submerged-archaeology-of-Orkney-261.php

2015b *The Scapa Flow Landscape Partnership Scheme*
http://www.scapaflow.co/index.php/the_scheme/the_48_projects/the_submerged_landscape_of_scapa_flow

2015c *Between the Wind and the Water* (2nd ed.). Windgather Press: Oxford

Wickham-Jones, C. and G.H. Collins

1977-78 The Sources of Flint and Chert in Northern Britain. *Proceedings of the Society* **1977-78**

Wiessner, P.W.

1977 *Hxaro: A Regional System of Reciprocity for Reducing Risk among the !Kung Sa*. Ph.D. dissertation, University of Michigan, Ann Arbor

Wilbert, J.

1972 Tobacco and Shamanistic Ecstasy among the Warao Indians of Venezuela. In P.T. Furst (ed.) *Flesh of the Gods: The Ritual Use of Hallucinogens*, pp.55-83. Allen and Unwin: London

Willis, C., P. Marshall, J. McKinley, M. Pitts, J. Pollard, C. Richards, J. Thomas, J. Thomas, T. Waldron, K. Welham and M. Parker Pearson

2017 The Dead of Stonehenge. *Antiquity* 90: 337-356.

Wills, W.H.

1992 Foraging Systems and Plant Cultivation during the Emergence of Agricultural Economies in the Prehistoric American Southwest. In A.B. Gebauer and T.D. Price (eds) *Transitions to Agriculture*, pp.153-176. Monographs in World Archaeology 4. Prehistory Press: Madison, Wisconsin

Wiltshire Museum

2015a *Upton Lovell 'Golden Barrow'*

2015b *Bush Barrow*

Winkelman, M.

2002 Shamanism and Cognitive Evolution. *Cambridge Archaeological Journal* **12(1)**:71-101

Winkelman, M. and D. White

- 1987 A Cross-Cultural Study of Magico-Religious Practitioners and Trance States: Data Base. In D. Levinson and R. Wagner (eds) *Human Relations Area Files Research Series in Quantitative Cross-Cultural Data* 3. HRAF Press: New Haven

Wobst, H.M.

- 1974 Boundary Conditions for Palaeolithic Social Systems: A Simulation Approach. *American Antiquity* 39:147-178

Wolters, O. W.

- 1982 *History, Culture, and Region in Southeast Asian Perspectives.* Institute of Southeast Asian Studies: Singapore

Woodward, A.

- 2000 *British Barrows: A Matter of Life and Death.* Tempus: Stroud

Wright, K. and A. Garrard

- 2002 Social Identities and Expansion of Stone-Bead Making in Neolithic Western Asia: New Evidence from Jordan. *Antiquity* 77:267:284

Wrobel, G.D., C. Helme, L. Nash and J.J. Awe

- 2012 Polydactyly and the Maya: A review and a case from the site of Peligroso, Upper Macal River Valley, Belize. *Ancient Mesoamerica* 23:131-142

Wyncoll, G. and D. Tangri

- 1991 The Origins of Commensalism and Human Sedentism. *Paléorient* 17(2):157-159

Yablonsky, L.T.

- 2013 Extraordinary Kurgan Burial Shines New Light on Sarmatian Life. *Past Horizons* 09/2013 <http://www.pasthorizonspr.com/index.php/archives/09/2013/extraordinary-kurgan-burial-shines-new-light-on-sarmatian-life>

Yellen, J.E. and H. Harpending

- 1972 Hunter-Gatherer Populations and Archaeological Inference. *World Archaeology* 4(4):244-253

Yengoyan, A.A.

- 1972 Ritual and Exchange in Aboriginal Australia: An Adaptive Interpretation of Male Initiation Rites. In E. M. Wilmsen (ed.) *Social Exchange and Interaction.* Anthropological Papers 46:5-9. University of Michigan, Ann Arbor

Yeshurun, R., G. Bar-Oz and D. Nadel

- 2013 The Social Role of Food in the Natufian Cemetery of Raqefet Cave, Mount Carmel, Israel. *Journal of Anthropological Archaeology* 32:511-526

Yeshurun, R., G. Bar-Oz and M. Weinstein-Evron

- 2014 Intensification and Sedentism in the Terminal Pleistocene Natufian Sequence of el-Wad Terrace (Israel). *Journal of Human Evolution* **70**:16-35

Yesner, D.R.

- 1980 Maritime Hunter-Gatherers: Ecology and Prehistory. *Current Anthropology* **21**:727-750

Young, B.W. and M.L. Fowler

- 2000 *Cahokia: The Great Native American Metropolis*. University of Illinois Press: Urbana and Chicago

Young, M.J.

- 2005 Astronomy in Pueblo and Navajo World Views. In V.D. Chamberlain, J.B. Carlson and M.J. Young (eds) *Songs from the Sky*, pp.49-64. Bognor Regis: UK

Zeitlin, R.N.

- 1996 Ideology, Materialisation, and Power Strategies. Comments and replies. *Current Anthropology* **37**(1):64

Zienkiewicz, L. and M. Hamilton

- 1999 Pottery. In A. Whittle, J. Pollard and C. Grigson (eds) *Harmony of Symbols: The Windmill Hill Causewayed Enclosure, Wiltshire*, pp.257-317. Oxbow Books: Oxford

Zohary, D. and P. Spiegel-Roy

- 1975 Beginning of Fruit Growing in the Old World. *Science* **187**:319-327