The Origins of Symbolism, Spirituality & Shamans: Exploring Middle Stone Age Material Culture in South Africa

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Introduction

The rapid and widespread appearance of ‘symbolically mediated’ material culture characterizes the Upper Palaeolithic associated with *Homo sapiens* after c. 40 ka. Among others, cave art, personal ornaments and tools with elaborate engraved designs are typically portrayed as central to understanding the origins of our symbolic abilities (Mellars, 1973, 1989; Mithen, 1996; Gamble, 1999). At the core of this ‘symbolic explosion’ was the development of fully syntactic language that provided the means for “semantically unbounded discourse” (Rappaport, 1999). Archaeological relics from the period provide evidence for individuality, innovation and a rapidly evolving social complexity (Gabora, 2001). While the interpretation of these ‘symbolic’ finds may be polysemic (Conkey, 1996), it has long been argued, too, that the first inklings of what is euphemistically referred to by archaeologists as ‘spirituality’, ‘ritual’ or ‘shamanism’ (Insoll, 2004:154) can be teased out from a plethora of symbolic material culture (e.g. Haddon, 1934; Childe, 1958; Gamble, 1999; Gabora, 2001; for a review see Insoll, 2004). Representational wall paintings of animals in deep cave recesses, abstract geometric patterns and elaborate grave goods suggest that the exosomatic evolution of *H. sapiens*, at least in Europe, included ‘spiritual’ values, ‘shamanistic’ practices and belief in an afterlife (Lewis-Williams & Clottes, 1998). Although beyond the scope of this paper, a similar line of reasoning is suggested for
Neanderthal modernity emerging at about this time or just earlier (for a review see d’Errico et al, 2003).

In the absence of written records or ethnographic analogy, interpretation of these ancient finds is open to error: ‘unfortunately the external symbols themselves never contain enough information to allow us to rediscover the detailed thought-habits of an ancient culture a posteriori. Symbolic artefacts, even of the more elaborate kind, rarely encode the conventions governing their use” (Donald, 1999: 184).

Despite these sentiments a common assumption is that the origins of symbolism and religion are closely linked (e.g. Lewis-Williams & Dowson, 1990; Lewis-Williams & Clottes, 1998; see a review in Insoll, 2004). Essential perhaps to the early development of religious beliefs and practices was a society mediated by symbolism. Without symbolism there could arguably be no link to supernatural agency, a key feature, some believe, of most religious concepts (Boyer, 2003; Lewis-Williams & Pearce, 2004). Once symbolism was in place, innovative material culture, including ‘religious’ icons, flourished in Europe and continued to do so in subsequent generations. As Lock (2000) points out “the process of elaborating the symbolic support for, and amplification of, cognitive abilities, is embedded in a nexus of influences that feed forward and back to each other’. The crafted physical settings of cave art (see Lewis-Williams & Dowson, 1990; Lewis Williams & Clottes, 1998), for example, may have functioned symbolically in multiple dimensions, one perhaps being a conduit for ‘spirituality’ or ‘religious notions’, another perhaps being the means of entry into another world. Associated with the adoption of a ‘spiritual’ culture is a social behaviour that is increasingly complex and probably mediated by these emerging belief systems.

Interpretations of the archaeological evidence from the African Middle Stone Age (MSA) suggested, until recently, that modern human behaviour developed late on the continent and probably not before about 45 ka (Klein, 2000). With some exceptions (see McBrearty & Brooks, 2000) evidence for symbolically driven material culture seemed absent from the MSA and initially patchy in the Later Stone Age (LSA) - a few beads at c. 40 ka and some mobiliary art at c. 27 ka. In their review Lindly and
Clark (1990: 233) conclude that “neither archaic *H. sapiens* nor morphologically modern humans demonstrate symbolic behavior prior to the Upper Paleolithic”.

An obvious question is if anatomically modern *H. sapiens* had evolved in Africa by at least 160 ka (White et al, 2003), and probably before 200 ka (Ingmann et al, 2000) then were the same features that define behavioral modernity in Europe (Mellars, 1973; Gamble, 1996) present in Africa before 50 ka? Did anatomically *Homo sapiens* who left Africa between 70-40 ka have the capacity for symbolism and was their behaviour symbolically driven? If the earliest evidence of religious practice does lie in Africa, then when modern humans left the continent to spread across Eurasia the capacity for spirituality, for ‘religious’, for ‘shamanistic’ experience must already have been in place. They must have been behaviourally modern when they left. Does the available evidence support this scenario or could the earliest evidence for religion and symbolism in Africa fit only into a post 50 ka timeframe?

**The Archaeology of Religion**

Different methodological tools are required for examining the origins of religion, whether religious behaviour has ecological determinants, the development of religious institutions and whether religions is adaptive (Sosis & Alcorta, 2003). In this paper the physical evidence for early religious practice is highlighted. Seeking the ‘origins of spirituality’ in prehistory is fraught with the same kinds of problems that confront archaeologists seeking material evidence for the origins of language. No direct evidence for language exists and similarly evidence for religion. Recovered material culture arguably provides the only means of recovering such data.

A starting point in this search is the suggestion by Boyer (2003) that religion cannot function without symbolism. Evidence that early members of our species, *H. ergaster* or *H. heidelbergensis* or even archaic *H. sapiens*, were functioning symbolically is scarce. Even if they were capable of symbolic behaviour, as has been argued for the production of handaxes, then the symbol systems they were using were minimally elaborated (Lock, 2000). Psychologists generally agree that we have several different
kinds of 'intelligence' or types of cognitive abilities that are associated with specialised situations: social sense, naïve physics, numerosity, etc. Cognitive fluidity occurs, Mithen (1996:143) argues when the separate domains of thought (natural history intelligence, technical intelligence, social and linguistic intelligence) are integrated – his description is a ‘super chapel’ of the mind. Sperber's (1994) ‘module of meta-representation’ a place where we represent facts about representation itself, is likened by Mithen (1996) to this ‘super chapel’. Early hominids, Mithen (1996) argues, had not linked these intelligences and were thus incapable of cognitively fluid communication. Belief in non-corporeal beings (the supernatural) is the most commonly offered definition for religion in anthropology, although the distinction between the supernatural associated with ritual practices and paranormal beliefs that are not ritualised is often ignored (Sosis & Alcorta, 2004:265). Only when religious ideas are translated into material artefacts, Mithen (1996) suggests, can religion become possible. These material artefacts take on the role of ‘anchors’, in some ways similar to that of a rosary, and that enable early modern humans to recall, understand and transmit these ideas.

If we assume then that hominids prior to *H. sapiens* in Europe were not cognitively modern (see Mithen, 1996), then we should not expect to find physical evidence of symbolic artefacts, ritual or other material culture associated with the paranormal in sites that predate the Upper Palaeolithic, or in the Middle Stone Age in Africa. – but we should find this evidence in sites occupied by behaviourally modern *H.sapiens*. The argument is somewhat circular but begs the question – how do we recognise material culture associated with the paranormal and how do we distinguish artefacts that may have functioned in a symbolic but non-religious mode from those that were integral to a belief system or perhaps even ritualised? Also is the separation likely to be distinct? According to Mithen (1996:165) there is no evidence that material symbols existed beyond the start of the Upper Paleolithic, and he maintains that without them shared ideas about supernatural beings could not exist. It is at this point, about 30 ka that ritual, symbolic culture and emerging cognitive fluidity intersected - what Mithen describes as a ‘spandrel of religion’. This assertion, if correct, may make the task of the archaeologist seeking these material beginnings of religion somewhat
easier, or at least constrains the period within which such ‘sacred’ or ‘ritual’ objects are likely to first appear.

A brief review of what religion is, or might have been, may also contribute some ideas to the above questions but anthropology has no widely accepted, universal definition of the concept "religion" (Lambeck, 2002). Insoll (2004:155) describes it as an “an awe-inspiring creature … irreducible and complex”. “What sort of science is it”, Durkheim asks of religion, “whose principle discovery is that the subject of which it treats does not exist?” (Jones 1986). He rejected animism as a basis for religion on the grounds that such a doctrine implies that religious symbols are products of the vague, ill-conceived hallucinations of our dream-experience. To him this was untenable as was naturism whereby religion ultimately rests upon a real experience, that of the principal phenomena of nature and which is sufficient to directly arouse religious ideas in the mind (Jones, 1986; Insoll, 2004). In *The Elementary Forms* published in 1912 Durkheim opted instead for totemism (Sosis & Alcorta, 2004). Totemism is not a religion of emblems or animals or men at all, but rather of an anonymous, impersonal "force," immanent in the world and diffused among its various material objects. He stressed that God is nothing more than society apotheosized (Haddon, 1934: Jones, 1986). Interestingly, this argument was bound to his conception of the role of symbols in society. Symbols can stand as expressions of social sentiment but also serve to create the sentiments themselves. Collective symbols are attributed solely, he thought, to the mutual reactions of individual minds, one upon the other and representations would rapidly diminish or disappear in the absence of these collective symbols. Society ‘in all its aspects and in every period of its history, is made possible only by a vast symbolism” (Jones, 1986; Insoll, 2004). To confirm his theories for the origins of religion Durkheim turned to ethnography and the Arunta in Australia. In this, he failed as first he ignored counter-beliefs of nearby groups and second, his developed argument contained a *petitio principii* (Jones, 1986). Durkheim, with minor changes effectively presumed the conclusion, which was at question in the first place.

Durkheim’s search for the ‘essence of religion’ among the Arunta contains a stark warning for archaeologists seeking to associate ‘religious intent’ with ancient material
culture. “What one finds among the Arunta are the beliefs and practices of the Arunta, and even to call these ‘religious’ is to impose the conventions of one’s own culture and historical period’ (Geertz, 1973:22). Carrying the theme further to the archaeology of religion’, Insoll (2004:153) emphasizes the importance of examining the context of recovered material culture in both its individual and communal forms before we can begin to reconstruct relevant past meaning.

The ‘essence of religion’ is obviously multifaceted and extraordinarily complex and is perhaps the reason that humans are the only species that engage in religious behaviour (e.g. Mithen, 1999). It is also the contradictory nature of religion that is one of its critical and complex features (e.g. Rappaport, 1999; Wilson, 2002; Boyer, 2003). Factors that favoured religious practice in our evolutionary history may help shed some light on how the material culture of religion may manifest in the archaeological record. What is also puzzling is how religious behaviour is apparently so pervasive throughout human populations after about 30 ka (Mithen, 1996:149).

A comprehensive review of the history of religion oriented research is elegantly presented by Insoll (2004). Three approaches that may be useful for archaeologists contemplating the material evidence for religion are briefly considered here: one that religion is adaptive, two, that its origins lie in a biological capacity for hypnosis (shamanism) and, three that it is a byproduct of brain function. Individual actions are generally not effective in the exploitation of resources and to maximise the benefits humans groups coalesce. These adaptive units that form do so because they have moral systems and the group’s behaviour is regulated through religious imagery and symbolism (Wilson, 2002). Cultural selection, an ongoing process, adaptively selects for those religious practices most beneficial to the group and may reject or modify those that are deleterious. The latter may not necessarily be the case as maladaptive traits are known also to survive among some groups (Mithen, 1996). Groups function as adaptive units through their ability to relate to supernatural agents. The essence of Wilson’s argument is that unifying systems enable humans to form adaptive groups and that religion is one example of this. He emphasises that group selection does occur, that inter-group solidarity is promoted by religion and that the genetic isolation
of religious groups could lead to fitness differences (see also Boyer, 2004). His viewpoint is not in agreement with an emerging consensus that is rooted in evolutionary psychology (see e.g. Mithen, 1996; Boyer, 2001, 2003; Rappaport, 1999). Both the possibility and importance of group selection are highlighted by Wilson who is opposed to the individual or gene-level selection model (Boyer, 2004:431). But perhaps the major problem with the adaptive approach for archaeologist seeking the origins of religion in prehistory is that Wilson’s approach considers religions that are institutionalised and whose beliefs and dogma are controlled and managed by doctrinal specialists – in essence the religions of complex state society.

Nevertheless, if religion in early hunter gatherer societies was adaptive would it leave material traces and if so what? One could argue that reciprocity formed an essential part of inter and intra-group cohesion to maintain amicable social relations. One part of this may have been exchange and reciprocity – in essence ‘gift giving’. Imbued with value due to rarity or fine craftsmanship gift items may acquire intrinsic symbolic/spiritual meaning. The recovery of such items may be one indicator of symbolically mediated behaviour, without which spirituality can arguably not function.

An innate biological function that underlies hypnotic capacity is argued by McClenon (2001) as the origin of religious beliefs and healing practices. In 1870, Lubbock proposed a not dissimilar idea except that he ranked shamanism low on an evolutionary scale of religion and just above totemism, then fetishism and atheism (Insoll, 2004: 43). A hypnotic capacity that produces an altered state of consciousness enhanced survival, reproduction and aided with recovery from disease. Manifestations during a hypnotic state include creative visions, perceptions of spirits and out of body experiences. It is the association of these anomalous experiences during hypnosis and ritual that form the foundations for shamanism and religion (McLenon, 2001). Supporting this argument Lewis Williams & Pearce (2004:36) contend that a neurological foundation lies at the base of a diverse, worldwide spirituality - "spirituality is a construct, but one with a material, neurological function".
The contribution of individuals in the evolution of cultural complexity is a topic addressed by a number of researchers (e.g. Gabora, 1997, Richerson & Boyd, 1998; Pearce, 2002; Alvard, 2003). Individual innovation may have played a key role in the origins of religion (also see Gabora, 2001) as hypnotic experience enhanced access to the unconscious mind. The most distinctive characteristic of human cultural evolution is described as the “ratchet effect”, by Tomasello (1999) as it allows for the ideas and inventions of an individual to build on the ideas and inventions of others. Modifications to an artefact or a social practice made by one individual or a group of individuals may spread within the group, and then stay in place until some future individual or individuals make further modifications. Which memes spread and which die is determined by the dynamics of the entire society of individuals which hosts these ideas and inventions (Gabora, 1997:5). Creativity is a collective affair that derives from within the group’s cognitive system and the concept of individual creativity should not however obscure that fact.

Most agree that the birth of a creative idea can only lie with an individual. A group of individuals may discuss the pros and cons of a new concept and each individual within the group may contribute ideas but the final idea that is accepted by the group would have been generated by one individual, even if it came about through group input. Gabora’s (2000: 3) concept of an ‘inkling’, describes well the concept of individual creativity “…An inkling, then, is a collapse on an association or relationship amongst memories or concepts that, although their distribution regions overlap, were stored there at different times, and have never before been simultaneously perturbed, and evoked in the same collapse. Though it is a reconstructed blend, something never actually experienced, it can still be said to have been evoked from memory. It is like getting a 'bite' on many fishing rods at once, and when you reel them in you get a fish that is a mixture of the characteristics of the various fish that bit”.

Richerson & Boyd (1998:14) suggest that the complexities of subsistence systems, artistic productions, languages, and the like would have prohibited one individual from inventing them. The same reasoning can equally be applied to formative conceptions of spirituality. It was most likely the incremental, marginal modifications
of many innovators, arguably with some change being contributed or created through altered states of consciousness that over many generations contributed to the complexity of religious practice and behavioural modernity.

Altered states of consciousness and hypnosis interrupt the normal cycle of transmitters producing a dreamlike state of mind, anomalous experiences and assist with physical recuperation. McClenon (2001) proposes that biology provides the basis for religion, physiologically and genetically. Spirits, an after life, haunting, possession and out of body experiences are universal features of shamanistic healing and point to a neurological foundation for religious experience and spiritual healing. An almost universal belief in a tiered cosmos with spiritual realms above and below the level in which they live is produced by the human nervous system and can be verified by altered states of consciousness (Lewis-Williams & Pearce, 2004:35). Hallucinating shamans or seers that retell of this phenomenon are thought to have access to unseen realms beyond the ordinary. A powerful tool is created for understanding the origins of human cultural complexity, and archaeological materials, by linking shamanic and other religious experiences and beliefs with contemporary hypnotic phenomena. Can material culture be a proxy for that which cannot be seen in the past, for that which existed primarily within the human brain? How are we to interpret these fragmentary remains? Unraveling the origins and meaning of abstract imagery, representational paintings, personal ornaments and other symbolic material culture may be aided by reference to shamanistic practice but caution is advised. We just cannot be certain that the neurological systems of \textit{H. sapiens} 70 ka ago were the same as ours, or that the recovered material we now label as non-functional, symbolic, religious etc. was generated within the same frame of reference (Insoll, 2004:32).

Some evolutionary psychologists consider the origins of religion and religious thought to be ‘natural’, a by-product of brain function (e.g. Kirkpatrick, 1999; Mithen, 1996, 1999; Pinker, 1997; Boyer, 1994, 2001, 2003, 2004). Religious ideas develop as a result of cognitive capacities within the human brain that developed originally to handle non-religious information (Boyer, 2001). Religion is therefore not an intrinsic part of the cognitive capacities of modern humans, as is the case for language acquisition. Boyer (2001) argues that all normal humans acquire a natural language
and that this acquisition is an adaptation. Not so for music or religion, he says, and the evidence is that although most humans can recognize music and religious concepts, the extent to which they may enjoy music or adhere to religious concepts may be profoundly different. Not all humans are naturally religious, in fact many are not. Evidence that some genes code for religion and that religion is therefore a function of natural selection has not been proven - despite the fact that Hamer (2004) deduced from a questionnaire that sampled about one thousand people that there was a correlation between the presence of a particular gene and his interpretation of the meaning of ‘spirituality’.

Boyer’s (2000:11) criticism of most ‘origin of religion theories’ is that they are functionalist and untestable. Accounts of religious systems are often ethnocentric and focus on cognitive and emotional aspects of religion that cannot be generalized for human society. Others seek to account for our mortality, justify social orders and seek life’s meaning. Adherents to the ‘by product’ view maintain it is empirically justifiable and more prudent to consider religion as the offshoot of an evolutionary cognitive system that developed through natural selection (Boyer & Ramble, 2001), although some argue this approach is essentialist (Insoll, 2004: 93). Evidence for this approach is that religious ideas do not fall within a separate realm of cognitive functioning. Boyer (2001) provides three reasons why religion is ‘natural’ and not the result of a ‘sleep of reason’. First, religion defies many of our most basic instinctual perceptions and hence are relevant (for example, we all grow old and die but spirits do not); second, the survival of religious concepts confirms many of our intuitive principles; third, the systems that create similar norms, like moral intuition, or emotions, like a fear of contaminants, are the same ones that drive religious ideas and emotions. To sustain religious thoughts, such as ancestor spirits, an afterlife or ghosts means tweaking ordinary cognition. Intuitive physics tells us that unsupported objects fall, that humans cannot fly unaided etc yet we adhere to many religious notions that defies our own logic (see Boyer, 2000:197). The reason, Boyer (2001) argues, is not because humans suspend ordinary cognitive processes but rather because the context in which these cognitive resources are used is different to that for which they were designed.
A potentially useful insight for archaeologists is the view that there are not many ways of tweaking intuitive ontology (Boyer, 2000:198). This suggests that supernatural concepts produced within the human mind may be constrained to include only person, animal, plant, artefact, natural object. Violations of these basic categories are produced by ‘breach’ or by ‘transfer’. Breaching is a contradiction of intuitive expectations, for example an animal that disappears and thus breaches intuitive physics (see Boyer, 2000:197). Transfer is when intuitive knowledge of one category is extended to another category, for example a rock that flies. The resultant list of templates is thus relatively small and compatible, according to Boyer (2001:199) with the anthropological record. Most religious concepts, the evidence suggests, are based on one of these ‘templates’. While the possible physical evidence for religious practice may still be considered wide this concept may aid archaeologists at least in narrowing down likely evidence for ‘religious’ material culture. Interestingly, artefacts are included in this list. Alterations of artefacts are likely to be by breach of physical expectations, by transfer of biological expectations and by transfer of psychological expectation. Of course, these alterations are most likely conceptual and may not be visible on recovered material. Nevertheless it does suggest that at least some artefacts, apart from paintings or carvings may have been imbued with religious significance. The challenge of how this might be recognized on a bone or stone tool made 50 000 years ago remains.

Religion and its origins is a neglected area of archaeological method and theory. The few approaches to religion that were touched on above provide some insights into the problems faced by archaeologists in constructing an archaeology of religion. Whether religion evolved as a by-product of the brain, because it was adaptive, or due to the physiological ability of humans to go into trance, will continue to stimulate debate. Sosis & Alcorta (2003:272) suggest that a basic point that has been missed is that traits are adaptive with respect to a particular set of selective pressures. Whether religious traits contribute directly to reproductive success, as has been suggested for selection within ecological contexts, has yet to be demonstrated. The selective pressures within various ecological contexts may also lead to religious behaviour adapting. The maladaptive traits that are suggested as being costly in religion (see
Mithen, 1996) may not be so; in fact, the contrary may be true in that costliness may
be a critical adaptive feature of religious behaviour (Sosis & Alcorta, 2003:272). It is
appropriate that archaeologists keep an open mind and adopt a critical,
multidisciplinary approach. The stones won’t speak but perhaps some aspects of the
material culture of ancient religions will be revealed if the door is kept open.

**Modern Humans in Africa**

‘If the ‘Out of Africa’ hypothesis is correct ... it is in Africa that we shall find clues
that point to the earliest manifestations of ‘spirituality’ - if only we can spot them. The
problem is that we do not know what they may look like’ (Lewis-Williams & Dowson,
2004:5)

If human cognitive abilities underwent a major transition about 45 ka is there
physiological evidence of this. While nothing palaeoneurological can be said with
confidence about possible changes with the emergence of anatomically modern *H. sapiens*
(Holloway, 1996) it seems certain that hominid brains evolved through the
same selection processes as other body parts (Gabora, 2001). Biological evolution
selected for genes that promoted a capacity for symbolism thus the foundations for
symbolic culture must be grounded in biology.

New genetic and fossil evidence suggests that humans were anatomically near modern
in Africa by 160 ka (e.g. Ingman et al 2000; Cavalli-Sforza 2000; White et al 2003).
Key questions are whether anatomical and behavioural modernity developed in
tandem, and what criteria archaeologists should use to identify modern behavior.
Correlating anatomical with behavioural modernity is problematic as, unlike fossils,
the evidence for behaviour is not easily extractable from the archaeological record. It
is probable that post c. 160 ka the only hominid in Africa was anatomically modern *H. sapiens*, and behavior changes during this period are restricted to one species of
hominid.

mosaic pattern of cognitive advances associated with anatomically modern humans
(AMH) can be detected in the MSA. A number of other authors also make the point
that the development of ‘modern’ behaviour is likely to have been a vast and complex
series of events that developed in a mosaic way, and that the likely scale and
repertoire of ‘modern’ behavior in the Middle to Late Pleistocene is enormous (cf. Chase & Dibble 1990; Foley & Lahr 1997; Gibson 1996; Renfrew 1996; Deacon 1998; McBrearty & Brooks 2000; Henshilwood & Marean, 2003). For example, at 160 ka AMH’s in Ethiopia show evidence for deliberate treatment of the dead associated with modern type behaviour yet their lithic technology remains a mix of Acheulean and MSA (Clark et al, 2003). At Katanda in West Africa sophisticated bone harpoons are manufactured at c. 90 ka (Yellen et al 1995; Brooks et al 1995). During the transition from Mode 2 to Mode 3 (Foley & Lahr, 2003) there is directional change but the development of inter-assemblage variation is mainly the result of local style developing. The Still Bay dated at c. 75 ka (Henshilwood et al, 2002; Jacobs et al, 2003a,b) is specifically regarded by Foley & Lahr (2003:121) as one example. In southern Africa, Wurz et al. (2003) demonstrate distinct technological changes in lithic style between the MSA I period (c. 110 – 115 ka) and the MSA II (c. 94 -85 ka). They identify these MSA sub-stages as separate ’techno-traditions’ and argue for volatility rather than stasis at the MSA I / II interface that can be extended to other parts of Africa. Cognitively modern behaviour, they contend, is associated with these observed changes in technological conventions at the Klasies MSA site.

What defines modern or non-human behaviour? A typically classic marker of non-modern human behaviour is a lack of innovation in material culture. For instance, some archaeologists take the relative technological stasis of the Middle Stone Age between about c. 250 – 40 ka as an argument against behavioural modernity. It seems there is no clear agreement as to what constitutes ‘modern’ or ‘fully modern’ (cf. Chase & Dibble 1990; Gibson 1996; Renfrew 1996; Foley & Lahr 1997; Deacon 1998; McBrearty & Brooks, 2000; Henshilwood & Marean, 2003). One definition is that fully modern behavior is mediated by socially constructed patterns of symbolic thinking, actions and communication that allow for material and information exchange and cultural continuity between and across generations and contemporaneous communities (Henshilwood & Marean, 2003). The key factor here is the use of symbolism to mediate behaviour rather than just having the capacity for symbolic thought. Donald’s (1991) 3-stage model provides a useful framework. In the
third stage he suggests that the ability to store and apply symbols externally allows material culture to intervene directly on social behavior. The transition to symbolically literate societies, according to Donald, (1991, 1998) is a defining factor for behavioral modernity.

Critical innovative elements for defining modern behaviour include, among others, advanced subsistence practices especially fishing, shaped bone tools, rapid change in tool kits, art and personal ornaments, and deliberate burial with grave goods. This is an approach based on a comparison of the material culture of Neandertals with that of Cromagnons at c. 35 ka in Europe (see Mellars, 1973). Alternative approaches to recognising modern behaviour in the archaeological record have been proposed (e.g. McBrearty & Brooks, 2000; Henshilwood & Marean, 2003). Principal among these is the recognition of material culture that carries an implicit symbolic message. Agreement on the best approach is lacking and for many the European ‘list’ based approach holds sway.

Blombos Cave – early evidence for symbolism

Over the past 12 years Blombos Cave (BBC), situated near Still Bay in the southern Cape, South Africa, has yielded a well preserved sample of faunal and cultural material in MSA levels. The MSA phases are separated from the < 2 ka LSA levels by a blanketing aeolian dune sand 5 – 50 cm thick dated at c. 70 ka by optically stimulated luminescence (OSL) (Henshilwood et al, 2002; Jacobs et al, 2003). Careful examination of sediments and anthropogenically derived deposits within individual levels over the past few years have allowed us to sub-divide the MSA levels into three major phases: i) a Still Bay, or M1 phase dated at c.75 ka by OSL and thermoluminescence, ii) a middle M2 phase, perhaps early Still Bay, provisionally dated by OSL at c. 78-82 ka, iii) a lower M3 phase that is provisionally dated at > 125 ka. Subsistence behaviour in the upper two phases is similar to that found in the LSA levels and includes the ability to hunt large bovids, collect shellfish and catch large marine fish. Artefacts unusual in a Middle Stone Age context have been recovered.
These include engraved ochre and bone, marine shell beads, and finely made bifacial points in M1, and shaped bone tools in M1 and M2. The likely symbolic significance of these finds suggests levels of cognitively modern behaviour not previously associated with Middle Stone Age people. Two of these finds are described here: the engraved ochres and the shell beads.

*Engraved ochres*

More than 8000 pieces of ochre, many bearing signs of utilisation, have been recovered from the MSA layers at BBC. Nine pieces are potentially engraved and under study. Two unequivocally engraved pieces were recovered in situ from the M1 phase (Henshilwood, 2002). Both specimens were located in a matrix of undisturbed and well consolidated ash and sand. On one piece, SAM-AA 8937 both the flat surfaces and one edge are modified by scraping and grinding. The edge has two ground facets and the larger of these bears a cross-hatched engraved design. The engraving on the second piece, SAM-AA 8938 consists of a row of cross-hatching, bounded top and bottom by parallel lines, and divided through the middle by a third parallel line which divides the lozenge shapes into triangles. Choice of raw material, situation and preparation of the engraved surface, engraving technique, and final design are similar for both pieces indicating a deliberate sequence of choices and intent. Arguably the engraved BBC ochres are the most complex and best formed of claimed early representations (Noble & Davidson, 1996, d’Errico & Villa 1997. Bahn, 1998; Lewis-Williams & Pearce, 2004). They are not isolated occurrences or the result of idiosyncratic behaviour, as suggested for many early ‘palaeo-art’ objects. They would certainly not be out of place in a UP context. The transmission and sharing of the symbolic meaning of these pieces must arguably have depended on syntactical language.
Marine Shell Beads

Thirty-nine marine shell beads were recovered from the M1 phase and two from the M2 phase (Henshilwood et al., 2004; d’Errico et al., 2005). The beads were made by piercing *N. kraussianus* ‘tick’ shells and then stringing them, probably for use as personal ornaments. Tick shells occur only in estuaries and were probably brought to the site from rivers located 20 km west and east of the cave. All the tick shells found in the MSA levels are adult, contra-indicating a random collection and rather a deliberate selection for size. Non-human taphonomic processes are known to produce
pseudo personal ornaments that appear morphologically similar to human-modified and used beads. Unlike a natural collection all the recovered MSA shells are perforated dorsally, and 88% have unique medium size perforations located near the lip (d’Errico et al, 2005). These perforations are anthropogenic and deliberate. Microscopic analysis of the MSA tick shells reveals a distinct use-wear consisting of facets which flatten the outer lip or create a concave surface on the lip close to the anterior canal. A similar concave facet is often seen opposite to the first one, on the parietal wall of the aperture. Use-wear patterns on the tick shells are consistent with friction from rubbing against thread, clothes or other beads and are the principal factor that defines the MSA shells as beads. Microscopic residues of ochre detected inside the MSA shells may also result from such friction or deliberate colouring of the beads. Beads were found in groups of two to seventeen, clustering in the same or neighbouring 50 x 50 cm quadrates. Within a group, beads display a similar size, shade, use-wear pattern and type of perforation. Each cluster may represent beads coming from the same beadwork item, lost or disposed during a single event (d’Errico et al, 2005).

A new dimension is added to the modern human behaviour debates by the excavation of the MSA beads from accurately dated and stratigraphically secure horizons at Blombos Cave; that beads are regarded as symbolic is undisputed (Henshilwood et al, 2004). The symbolic meaning of these beads must have been shared and transmitted through syntactical language, as is suggested for the engraved ochre pieces. The recovery of shell beads provides material evidence that by 75 ka human communication was mediated by symbolism, an unambiguous marker of modern human behavior.
Fig. 2. *Nassarius kraussianus* marine shell beads from Blombos Cave, 75 ka levels: 
a) perforated hole opposite aperture; b) use facets on aperture; c) ochre traces on bead; d) beads with apertures showing wear traces

**Discussion**

Neural reorganisation within the human brain over millennia, rather than as a punctuated event, may have led to periods of rapid innovation or stasis depending on selective criteria that favoured or disfavoured innovation. The introduction of innovative ideas such as a new subsistence practice, remodelling of space within a living site or the shaping of a bone point may act as crucial archaeological markers for the recognition of ‘modern’ type behaviour in sites such as BBC. However, detecting evidence for symbolically mediated behaviour is distinctly more subtle. An essential attribute of cognitively modern societies is their capacity to create symbolic systems and to reflect these visibly in their material culture. The combined presence of shell beads and engraved ochres in the same MSA phase provides absolute evidence that the behaviour of the makers and users of these artifacts was mediated by symbolism. Perhaps, the Blombos evidence also tells us that at this point modern humans were cognitively fluid and already possessed a generalized type of intelligence, as suggested by Mithen (1996).

Does the BBC MSA provide any indicators for supernatural imagination, a behaviour closely linked to religious notions? We have no evidence for two of the categories that
may be typical indicators of religion (Boyer, 1994); first, spirits after death and second the performance of rituals aimed at spiritual manipulation of the natural world. A third category, the ‘divine’ ability of individuals who have a different ‘essence’ to others within a group (Boyer, 1994) and are able to communicate with supernatural agencies is open to interpretation. Innovative behaviour, such as the engraving of abstract images on ochre, may be the result of the inspirational ‘essence’ of one individual, perhaps a ‘shaman’, and be generated by ‘religious’ thoughts typically activated when people deal with emotions like death, disease or birth (Boyer, 2003). Similarly, the Blombos beads may also represent a ‘religiously’ derived symbol that mediates and is mediated by group behaviour. Both categories of material culture are symbolic and innovative, and plausibly were linked to religious agency.

The “identity” imparted by the engravings and beads probably formed part of a collective set of characteristics by which these and other symbolic items were recognizable within a cognition system that operated in imaginary and real dimensions that were inseparable. Symbols change through time because of remodeling the original concepts. Meanings can also change and the origins of the concept can be lost. This may have been the case for the BBC engravings and beads as succeeding MSA phases in the region do not, as far as we know, contain similar artefacts. Individuals play a major role in this process, either stimulating changes in the meanings of symbolic representations or experimenting with novel material expression of the same concepts. Some change may be driven by individuals intuitive ‘religious’ thoughts, salient personal experiences or interpretation of doctrine. As Boyer (2003:119) points out, religious thoughts are not a dramatic departure from, but a predictable by-product of, ordinary cognitive function. Religious concepts likely derive from the same notions experienced in dreams, fantasy and legends. The same functionally distinct neural resources that are activated by concepts such as social exchange, moral intuition and representations of animacy are also activated by religious concepts but some tweaking is likely that allows notions of supernatural agency to be intuitively plausible (Boyer, 2003).

The Blombos evidence and new finds at other African sites is debunking the myth that Africans were behaviourally non-modern until about the time of the Palaeolithic
cultural revolution. Although evidence of a ‘symbolic explosion’ in the African MSA is lacking it can be argued that by at least 75 ka the social intelligence of humans had been invaded by non-social ideas to create what Sperber (1994) describes as the ‘superchapel of the mind’. Once the human mind had advanced to this point, peoples’ cognitive domains could expand into spiritual dimensions not previously explored. The origins of religion may not have been a dramatic phenomenon, or even had particularly auspicious beginnings. It may have started in a cave somewhere in Africa, perhaps a cave like Blombos, at least 75 000 years ago, probably earlier. Whether religion was inevitable or not is debatable, but it seems certain that only when human cognition allowed for the interpretation of one’s own mental state that belief in supernatural agents became possible.
References


