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Chapter 26

THE SACRED ENGAGEMENT: OUTLINE OF A HYPOTHESIS ABOUT THE ORIGIN OF HUMAN 'RELIGIOUS INTELLLIGENCE'

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Introduction: why religion needs material culture?

The question that motivates the central hypothesis advanced in this paper regarding the emergence of early religious thinking is the following: 'why does religion need material culture?' What basic functional or symbolic need renders material culture an indispensable and universal component of religion and ritual activity? A common temptation, obvious in a number of recent archaeological and anthropological studies, is to seek an answer in the field of memory (Boyer 1993; 1996; 1998; 2001; McCauley and Lawson 2002; Whitehouse 2000; 2004; Mithen 1998a). This paper argues that material culture does much more than simply offer a symbolic channel for the externalization, communication, and thus successful cultural transmission, of religious ideas. Although the mnemonic significance of the ritual object is not denied, it is proposed that the argument from memory, as traditionally premised, fails to provide a cognitively adequate account of the complex affective ties and multimodal interactions that characterise the distinctive phenomenology of religious experience. Moreover, and from a long-term evolutionary perspective, it is argued that the commonly implied ontological priority of the religious idea, over its material expression, leaves us with no explanation about why,

and how, religious concepts emerge in the context of human cognitive evolution. Drawing on the theoretical lines of the Material Engagement approach (Malafouris 2004; Renfrew 2004) I want to advance a different hypothesis that places material culture at the heart of the human capacity for religious thinking (cf. Day 2004).

The human 'religious sense': basic ingredients of 'religious intelligence'

I want to start by clarifying how I conceptualise religious thinking or intelligence. Drawing on a number of recent studies at the interface between religious studies and cognitive sciences (Boyer 1993; 1996; 1998; 2001; McCauley and Lawson 2002; Whitehouse 2000; 2004; Guthrie 1993) I propose that there are three principal elements that characterize and constitute this type of thinking (Figure 26.1): (a) Animism: the attribution of life or spirit to inanimate things and events, (b) Anthropomorphism: the attribution of human characteristics to nonhuman things or events, and finally (c) The transcendental stance: beliefs about the supernatural (spirits, deities, soul, life after death, eschatology, imperceptibles, and Autoscopic phenomena (AP).

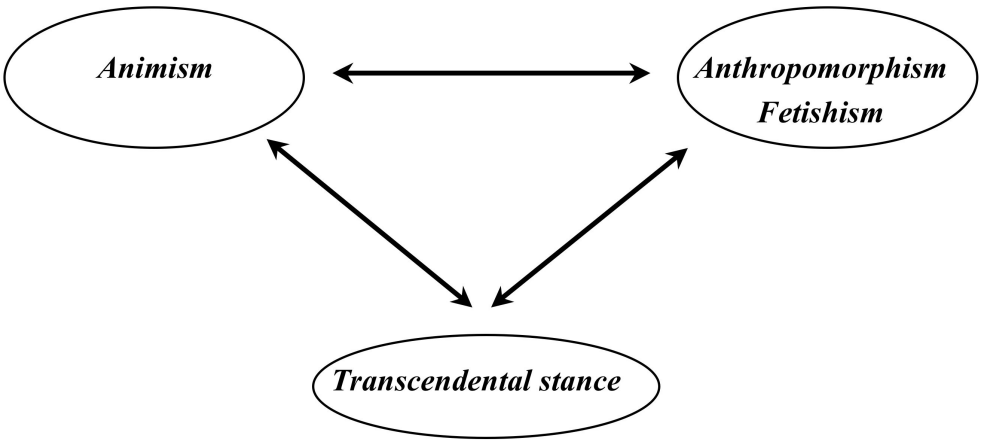

Figure 26.1. The basic cognitive nexus of Religious Intelligence.

For my purposes in this paper I suggest that the above three features taken together constitute what I call the basic human 'religious sense', and the aim of the hypothesis advanced in this paper is to point a possible direction of research for answering how did this basic religious sense evolve and originate? Answering that, I suggest, we need to consider each of the three features independently in order to explore their cognitive and

neurological foundation. This will enable us to overcome the problem of the folk-psychological status of these notions, and thus, to reveal some possible links and connections of interest at the intersection between cognition and material culture. But first two important clarifications are in order:

a) The first point pertains to the issue of ritual. The absence of ritual from the above triadic nexus of religious intelligence can raise a number of questions: Is not ritual a constitutive part of our basic religious intelligence? Is not ritual the principal means for the enactment and re-enactment of religious thinking through embodied action and mediated performances? Since I shall not be dealing with the issue of ritual in this paper it is necessary to summarize my position on this crucial issue. My claim, very briefly is, that although ritual is undoubtedly a constitutive element of religious behaviour it does not constitute a principal causal factor in the emergence of religious intelligence. More specifically, although ritual behaviour temporally precedes the origin of religious thinking, it should not be understood as the cause of it. Ritual may well be the performative, individual or collective, mnemonic device par excellence, but there is nothing inherently religious about it. Outside the nexus of religious intelligence ritual is simply a manifestation of the social character of the human mind. More simply, human religious intelligence did not emerge because of ritual, although it did made use of ritual (symbolism was another domain that religious thinking did capitalize) in order to solve the problem of its cultural transmission.

b) The second point concerns the cognitive and neurological processes that, as I will discuss below, can be associated with the identified anthropological phenomena that constitute the hypothesized nexus of human religious sense. It is important to clarify at the outset that the proposed associations do not mean to imply anything more than a mere correlation between processes manifest at radically different time scales and levels of experience. Thus, these processes should be perceived as the continuous and interactive aspects of an unfolding extended and distributed cognitive system. The (neuro-) archaeological perspective adopted in this paper is firmly grounded and emanates from the general theoretical framework of the Material Engagement approach (Malafouris 2004). Consequently, I have no intention of reducing the complicated, mediated and variable aspects of religious intelligence to the neuronal level. I simply believe that a naturalized account of religious thinking needs to start from some concrete and well identified elements of 'religious thought' and building upon that to explore the complicated and irreducible phenomenology of religious experience. The cognitive science of religious behaviour offers such a starting point.

Animism as Theory of Mind (ToM)

I start with animism, and I suggest, following Guthrie (1993), that far from a strange, primitive, or irrational way of engaging and making sense of the world, animism, from an evolutionary perspective should be understood as an intelligent perceptual strategy. Animism is universal because seeing as a form of active visual exploration and interpretation constantly embodies the element of choice and thus a gamble (cf. also Johnson 2003; Scholl and Tremoulet 2000). From such an angle, animism as a perceptual

strategy that 'aim highest (by attributing the most organization and hence significance to things and events) have the greatest potential payoffs and lowest risks' (Guthrie 1993, 6). Indeed as Guthrie characteristically observe 'it is better for a hiker to be mistake a boulder for a bear than to mistake a bear for a boulder' (Guthrie 1993, 6). If one wants to take this argument a step further the question to ask is what cognitive mechanism can account or explain animism. Attempting to offer a possible direction for answering that I suggest that animism, as a cognitive process, should be seen as a part of that aspect of human social intelligence that goes under the name Theory of Mind (ToM). Theory of Mind (ToM) or mentalizing (thinking about the contents of other people's minds) refers to the process(es) by which humans attribute unobservable mental states to others (Gallagher and Frith 2002; Frith and Frith 2003; Vogeley et al. 2001; Leslie 1987). ToM comprise the mental processes which allow us to apprehend the psychological properties and beliefs of another and thus what enables social relations as well as agency attribution.

For many years the crucial question for cognitive neurosciences has been whether ToM, and by extension human social cognition, draws on a unique and specialized set of cognitive processes and networks, evolved to deal with the human social domain, or whether ToM and social cognition simply represent a special instance of more general-purpose cognitive processes, like those involved in perception, language, memory etc. A number of recent imaging studies support the view of a distinct social cognition network, the neural correlates of which can be found primarily in the medial prefrontal cortex (mPFC) (e.g. Mitchell et al. 2005). But even if we accept that this distinct pattern of neural activation support inferences about the psychological aspects of other people, how does it relate, or, can help us understand the phenomenon of animism?

Putting it very briefly my suggestion is the following: What it means in neurological terms to apply ToM to the non-animate, is to process and interact with things using those mechanisms and neural networks that we customarily use for interacting with people. More simply it means that you expand the boundaries of social mind by incorporating into the field of social cognition inanimate elements and things. This 'hypertrophy of social cognition' (Boyer 2001), which may initially appear as a misapplication of ToM capacities or a false attribution of agency, can be used, in the context of religious experience as a powerful strategy of selective attention, memory and body schema expansion. What is also important to mention in relation to our present discussion is that ToM in addition to its traditional frontal lobe activations has been recently associated with a different area, known as the temporo-parietal junction (TPJ) (Saxe and Kanwisher 2003; Saxe and Wexler 2005). This area, traditionally associated with a number of tasks within the spectrum of human social cognition, such as human face identification tasks and identification of biological motion, has also been very recently identified as a key brain area behind various autoscopic phenomena that may also have played a crucial role in the development of religious thinking (Blanke et al. 2004; Blanke and Arzy 2005).

Autoscopic phenomena (AP) constitute a well definedgroup of primarily visual experiences during which the subject has the impression of seeing a second own body in extrapersonal space. Three distinct forms of autoscopic phenomena have been defined (Figure 26.2): (a) Autoscopy (AS), (b) Out-of-body experience (OBE), and (c) Heautoscopy (HAS). Autoscopic phenomena (AP) are important for our current discussion because they challenge the spatial unity of the isolated self as the subject of experience. In particular, in autoscopic situations the self experiences itself 'beyond the

corporeal boundaries' (Blanke et al. 2004; Blanke and Arzy 2005). Given the importance of the relation between self and the body in the context of religious experience many neuroscientists and philosophers have argued for a possible connection between AP and the origin of the proto soul-concept and of other religious experiences characterized by feelings of expanding one's body beyond its physical limits or by a sense of splitting the self (Metzinger 2005).

Anthropomorphism as metaphor

Anthropomorphism can be broadly defined as the attribution of human characteristics to nonhuman things, and according to Guthrie, similarly with the case of animism previously discussed, 'we anthropomorphize because guessing that the world in humanlike is a good bet' (2003, 3; cf. also Barrett and Keil 1996). For our purposes here however, I want to explore anthropomorphism from a different angle. Specifically, drawing on the general principles of Embodied Cognition and Metaphor Theory (e.g. Lakoff 1987; Lakoff and Johnson 1980) I suggest that anthropomorphism should be understood as a metaphoric projection. A metaphoric projection is essentially the conceptual mapping between a familiar or concrete and an unfamiliar or abstract, phenomenal domain. Obviously the crucial function of metaphoric mappings is to project – and not represent – the structure (spatial, perceptual or other) of a concrete and directly meaningful domain of experience (e.g. the embodied experience of weight) upon a meaningless abstract conceptual one (e.g. the concept of weight). Given that the human bodily experience offers the most intimate source of pre-conceptual structure, it follows that the human body will serve as the most basic source domain for such metaphoric conceptual mappings:

> Our brains are structured so as to project activation patterns from sensorimotor areas to higher cortical areas....Projection of this kind allow us to conceptualize abstract concepts on the basis of inferential patterns used in sensorimotor processes that are directly tied to the body (Lakoff and Johnson 1999, 77).

Until very recently little was known about the possible neurological foundation of the above processes and about how imagining and doing might use a shared neural substarte. It was primarily in the last decade that new exciting discoveries like the so-called 'mirror neurons' and the development of 'simulation' and 'neural exploitation' theories that provided for the first time a mechanism with a clear neurological foundation for grounding the general premises of embodied cognition (Gallese and Lakoff 2005; Gallese 2005). Moreover a recent neuroimaging study led by V. S. Ramachandran showed the brain area known as the angular gyrus is most probably the 'metaphor centre' of the human mind (Ramachandran et al. 2005). Lesions in the angular gyrus have been consistently associated with a deficit in methaphoric thinking, a fact which may explain the strategic location of this region at the crossroads of the temporo-parietal areas associated with touch, hearing and vision (occipital). This finding is important not only because of the close anatomical proximity between the temporo-parietal junction TPJ and the angular gyrus AG, but also because the latter is disproportionately larger in hominids than other primates.

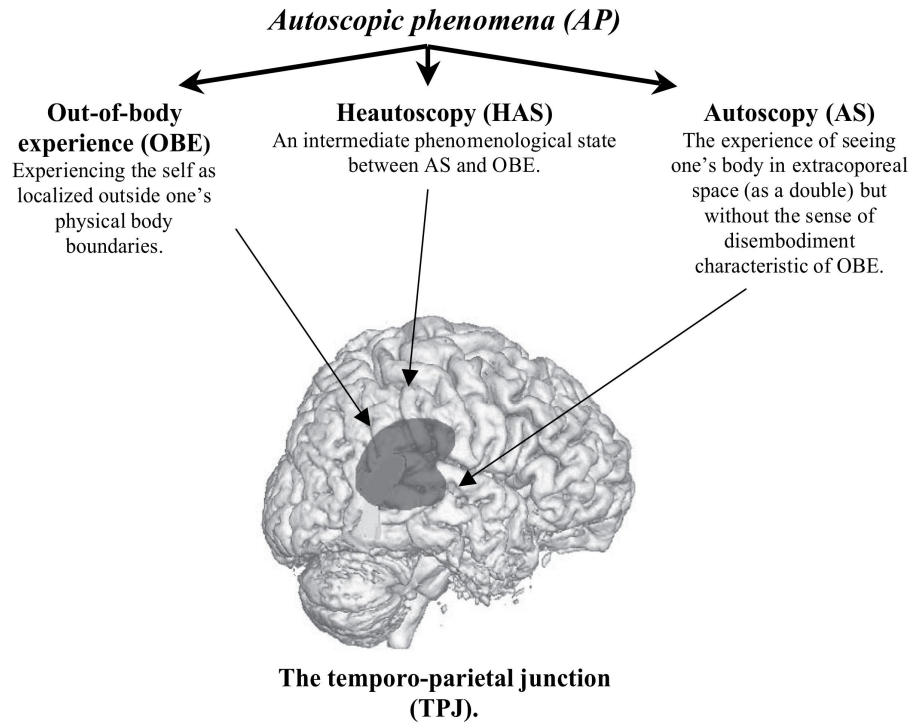

Figure 26.2. Types of autoscopic phenomena associated with the brain area known as the temporo-pariteal junction (redrawn from Arzy et al. 2005, figure 1 and 3).

The sacred engagement: anchoring the transcendental stance

So far we have exposed a possible neuromatrix between the identified core aspects of religious thinking placing our emphasis on a possible link between the TPJ and the angular gyrus. What remains to be sown is why the construction of such a link is important and what possible role material culture may have to play in this respect. To this end and within the limits of this paper two important things need to be emphasised: The first is the immediate connection that TPJ offers between embodiment, body schema and the complex experiences of OBE and AS. The second is the possible role of the angular gyrus AG in integrating these powerful phenomenal experiences with more abstract aspects and autonoetic conceptualisations, such as that of a dualistic proto-soul concept. These ideas fit nicely with many contemporary arguments that see early shamanic experiences having an important role in early religious thinking and the development of human cognition (Clottes and Lewis-Williams 1998; Lewis-Williams 2002; Rossano 2007). However, one crucial difference of the hypothesis advanced here needs to be underlined: The identified nexus of religious intelligence claims no particular association with shamanism. Although, the processes of animism, fetishism, anthropomorphism and

the transcendental stance (especially second order intentionality associated with autoscopic phenomena) may be familiar features of shamanic ritual; are before, and above all, basic features of the human social mind and of the complex ways this mind engages and interacts with the material world. In other words, I may suggest, critically rephrasing the title of a recent article on the topic by M. Rossano (2007), that if there was a single special element in the process of human becoming then it has to be 'mediation' rather than 'meditation', it was because of mediation that humans came to meditate after all. Having clarified that let me now return to answer the question we posed at the beginning of this paper and which motivates the hypothesis advance here: *Why does religious thinking need material culture?*

Obviously, no single answer can do justice to the complex affective and multifaceted operations that define the phenomenology of the sacred engagement in its many cross cultural and historical manifestations – a simple look o the variety of ritual and religious experiences described by the papers of this volume would suffice to confirm that. However, if we approach the above question from the specific view point that concerns the possible cognitive origin of early religious intelligence, a possible answer may start to be sketched – or so I claim in this paper. To focus the possible parameters of our discussion I will take issue with a recent argument by Steven Mithen (1998) and use the famous 30,000-year-old Hohenstein-Stadel lionman statuette from Germany (Marshack 1990; Mithen 1996) as a concrete example of such an early (Upper Palaeolithic) 'sacred engagement'. The question to ask is what can this specimen of therianthropic art tell us about early religious intelligence and its relationship with material culture? Why 'turning something that is eternal and supernatural into something that is transient and material' (Mithen 1998a, 100) like this small (28 cm) ivory figurine?

The answer that Mithen proposes to this question can be summarised as follows: First, following his well-known 'cognitive fluidity hypothesis' (1996) he suggests that the emergence of religious ideas 'is most likely no more than an epi-phenomenal consequence' (Mithen 1998a, 101) of this cognitive transition. Then he proposes that the critical feature and common characteristic of these ideas is that they contradict our intuitive understanding of the world. Drawing primarily on the work of Pascal Boyer (1993; 1996) he argues that the cognitive function of those violations to our intuitive understanding of the world is to make them attention-grabbing and thus enhance their cultural saliency and significance. This process according to Mithen is not itself sufficient to secure their cultural transmission because while religious ideas 'need to violate some aspects of our intuitive knowledge of the world to have salience, they also need to conform to some aspects of this to have survival value' (1998a, 102). This becomes possible by projecting onto them features that conform to our intuitive understanding of the world, and this is the reason behind the human-like, anthropomorphic or animistic elements that often characterize supernatural creatures. It is through such projections that religious ideas are 'anchored in the human mind' and it is only those ideas that most easily find such an 'anchor' that are likely to survive (1998a, 102).

Up to this point all the processes described above are 'mental' or 'internal', that is, firmly situated within the boundaries of skin and skull. Religious concepts and ideas emerge inside the mind and are subsequently anchored through various internal 'intuitive strategies' in order to gain survival value. Let me call that 'first order anchoring argument'; evidently in itself it does not answer our initial question about the

fundamental role that material symbols and images play in the context of religion and ritual. Yet it is this argument that formulates the conceptual basis from which Mithen's answer derives. For indeed there is a 'second, and perhaps far more significant, way in

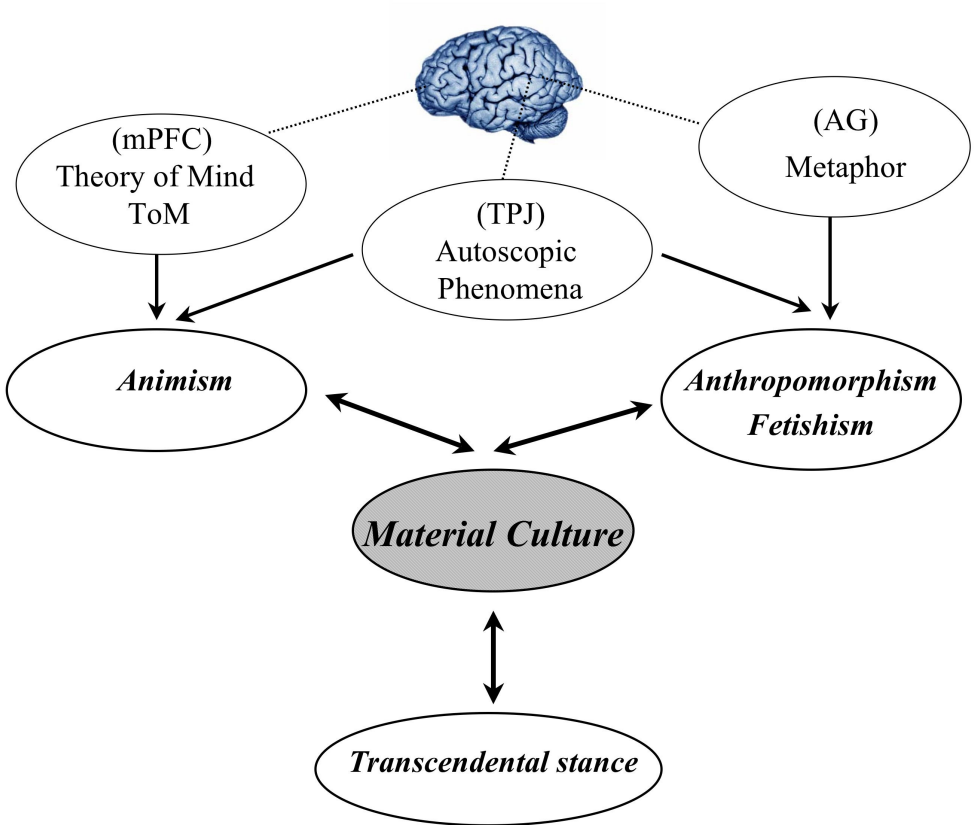

Figure 26.3. The neuro-cultural matrix active at the origin of 'religious intelligence'.

which religious ideas are anchored' and through which they gain extra survival value: 'they are represented in material form' (1998a, 103). I call this 'second order anchoring argument'. Obviously for Mithen the reason why religion needs material culture is essentially to overcome the limits that biological memory imposes on the process of religious transmission. Religious concepts and ideologies needed to be externalised in material form so that they can be effectively remembered. This is a part of the process that Mithen describes elsewhere as the 'disembodiment of mind into material culture' (1998b). Naturally, the mnemonic significance of the image is not to be disputed. I believe however, that the general argument from memory (see also McCauley and Lawson, 2002), although powerful, suffers from a very important shortcoming: it fails to provide an adequate explanation for how religious ideas emerge in the first place.

Take for instance our example of the 30,000-year-old Hohenstein-Stadel lion-man statuette. The first question that this object, of what we might term 'hybrid-type' imagery, raises is how such a strange creature – half lion and half man – could have originated in the image-maker's imagination? According to Mithen's argument our question, as stated above, poses no real problems. The cognitively fluid mind has no problem imagining and inventing concepts and creatures that violate our intuitive knowledge of the world. The

problem is rather how to remember and transmit such counterintuitive ideas (Mithen 1998a, 104). It is only at this point that material culture enters into the picture. In other words, religious ideas appear as the natural epiphenomenona of cognitive fluidity. Religious concepts and ideologies are natural because they relate to the intuitive knowledge regarding psychology, biology and physics, which are genetically encoded in the human mind (Boyer 1993; 1996; Mithen 1998a). I do not wish to dispute that altogether, however, I believe that those innate mechanisms are themselves insufficient to bring about those religious concepts; i.e. they create the potential but do not instigate the realisation of that potential. To claim the opposite is to assume that those concepts pre-exist their actual objectification, not only temporally but also ontologically. This is precisely the point where my disagreement with Mithen's argument lies. Whereas Mithen perceives material anchors in the conventional sense of external representations, I propose they should be instead perceived as enactive signs, that is, as signs that bring forth rather than simply represent a pre-existent concept (Malafouris 2007).

From such an enactive perspective, the capacity of cross domain conceptual mapping that characterize the counterintuitive projections, of the type we discussed in the above example, could not have been possible to realise in the absence of some 'external scaffolding' such as the one provided by the figuration itself. Thus, the cognitive significance of the Hohenstein-Stadel figurine is much more than a simple mnemonic trick. More specifically, my argument is that although the cognitive efficacy of the figurine may well be seen as that of a material anchor, this would be a material anchor that enacts and objectifies, rather than represents, the conceptual blending between intuitive and counterintuitive domains of experience (Hutchins 2005; Fauconnier and Turner 2002). From this point of view, cognitive projections like those we see realised in and through material culture are neither substitutes nor translations of pre-existing concepts into matter. The iconicity of the image does not simply reflect visual resemblances but rather establishes ontological ones; it is significant for what it does rather than what it refers to as a message or metaphor. In our previous example, the figurine serves as the tangible medium of integration between the domain 'human' and the domain 'animal' so that the domain 'supernatural creature' can emerge. In other words, 'first' and 'second' ordering anchoring are not the separate and discrete stages of a 'mentally' driven sequential process. They are instead the continuous and interactive parts of an extended cognitive system (Figure 26.3) that incorporates materiality in order to solve the problem of the absent 'representational stability' (see also Hutchins 2005) enabling thus the emergence of the transcendental stance.

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