

---

# Women in Prehistoric Art

*Camilla Power*

In this chapter I will first discuss women's role in the emergence of art. I will then show how this evolutionary approach can illuminate imagery of women in art from the European Upper Paleolithic and African Later Stone Age. Current Darwinian models argue that female strategies drove the earliest symbolic behavior. As brain sizes increased in *Homo heidelbergensis* and the immediate ancestors of *Homo sapiens* (specifically the period from 500 to 130,000 B.P.), so did reproductive stress on females. Evolutionary ecology predicts conflict between the sexes over investment in offspring. Once ovulation had been concealed in the human lineage, menstrual bleeding became the only good indicator of impending fertility. But while concealed ovulation withholds information from males about which females are fertile at any time, the salience of the menstrual signal undermines this effect, marking out imminently fertile females from pregnant or lactating ones. To resist male discrimination between cycling and noncycling females, coalitions of late archaic/early modern *Homo sapiens* women began cosmetically manipulating menstrual signals—sham menstruation. Collective, deceptive, and amplified use of red pigments as body paint confused information available to men about women's reproductive status, and effectively formed a pre-adaptation to ritual. This model predicts that the earliest art will be evidenced by a cosmetics industry, dominated by red pigments. The model offers further predictions in relation to the rock art record. Particularly I will address: (a) the focus on women's reproductive signals; (b) the importance of coalitions; (c) the link between women and game animals; and (d) the original signature of ritual power.

## INTRODUCTION

From a Darwinian perspective, symbolism in general and art in particular present a puzzle. Evolutionary ecologists are concerned with calcu-

lating the costs and benefits of behavior. From this point of view, human engagement with the symbolic realm in elaborate ritual, religious, and artistic traditions appears inordinately costly. And for what end? In a world rife with competition for mates and resources, why would it be adaptive for an individual to expend time and energy trying to communicate her dreams and illusions? Why would it benefit others to bother with such unverifiable fantasies? What evolutionary process could have led human ancestors to waste so much time and energy on things that don't exist?

Given the late dating for any secure archeological evidence of art and symbolism, we can agree with Philip Chase that "there is no reason to believe symbolic culture was ever essential for survival."<sup>1</sup> Rather than an adaptation to environment, the extraordinary wastefulness of art may better be explained in terms of sexual or signal selection.<sup>2</sup> Here, I will use sexual selection theory to outline a model for the emergence of art and ritual. I aim to "employ theory to deduce the conditions under which particular social or behavioral forms will emerge or persist. This deduction must then be framed in testable (operational) terms, and compared with relevant observations."<sup>3</sup> The model should constrain what we expect to see as evidence of art and ritual in the archeological record, indicating correlatives of that evidence. If initial conditions can be specified with sufficient precision, it may be possible to make predictions which are testable against the ethnographic database of recently extant ritual and rock art traditions. Such testing is not a matter of appeal to particularist ethnographic precedents, projected back onto a patchy Pleistocene record. The model is theory-driven, constraining our expectation of the way symbolic systems emerge and are transmitted. If a narrative of symbolic cultural origins fails to offer parsimonious, predictive accounts of symbolic systems, it hardly amounts to a theory at all.

## **A DARWINIAN MODEL FOR THE EVOLUTION OF ART AND RITUAL**

The model is succinctly stated: cosmetic and symbolic signaling arose as a strategic response by female coalitions to the reproductive stress experienced as a result of rapid encephalization in the late Middle Pleistocene. Males who were relatives of female coalition members would be included, whereas males who were potential or actual mates would be excluded from these coalitions. These outgroup males were the targets of the female coalitionary signals, which were designed to motivate them to produce high-energy foods for consumption by members of the coalition.

The basic premise of the model is the expectation of conflicting reproductive strategies between the sexes. Crudely put, for any sexually reproducing species, males and females get their genes into the next generation

by different means. For mammals and especially primates, this involves lengthy periods of gestation and lactation requiring investment of considerable resources by females, while males are not necessarily committed to more than the energy needed to access and impregnate mates.<sup>4</sup> There will be differential trade-offs between the sexes over investment of energy in current offspring (parental effort) as against energy expended for producing future offspring (mating effort). In the case of human evolution, these trade-offs are likely to be especially critical because of the extraordinary energetic costs imposed on human mothers by encephalization.<sup>5</sup>

Critical to the reproductive success of females as they came under selection pressure for larger-brained offspring was extracting energy from new sources. The first major increase in brain size occurs with the appearance of early *Homo* more than two million years ago, culminating in *Homo ergaster*. These costs could have been offset by shifts to a high quality diet, allowing reduction of gut size;<sup>6</sup> increases in female body size;<sup>7</sup> and changes in life history variables, such as increased longevity, promoting grandmothering,<sup>8</sup> and secondary altriciality, slowing down maturation rates of the larger-brained offspring.<sup>9</sup> Investment by males may have been intermittent rather than systematic, and directed as mating effort towards cycling females, rather than pregnant/lactating females.<sup>10</sup> A period of more than a million years, from the Lower to early Middle Pleistocene, is characterized by stasis in relative brain size.<sup>11</sup> The accelerated encephalization rates of the late Middle Pleistocene brought increased reproductive costs, particularly to mothers in early stages of lactation. These steeply increasing costs of reproduction are likely to have driven major social and sexual behavioral changes.<sup>12</sup> Above all, those females who secured increased levels of investment provided by males would have enhanced their fitness.<sup>13</sup>

For females, sexual signals are the primary mechanisms for eliciting behavioral changes in males. Once signs of ovulation were phased out in human evolution, there still remained a highly visible signal giving information to males about imminent fertility. On Darwinian theoretical grounds we can expect that Pleistocene males would be very interested in knowing which female is menstruating, since that female is likely to be fertile within a short period. Males can be expected to compete to put effort—mating effort—into bonding with such a female if this is likely to improve their prospects of a fertile mating. This means that the menstrual signal is economically valuable, and it could be used by females to manipulate male behavior. In a natural fertility population with interbirth intervals of several years and long periods of lactation, a minority of the female population would be cycling at any one time. The menstrual signal does not enable a philanderer (i.e., a male who aims to find fertile females but avoids any further investment) to pinpoint a female's moment of fertility with accuracy, but it does allow a would-be philanderer to target a

female who is likely to be fertile in the near future. This makes possible a type of philanderer strategy whereby a male locates a cycling female and directs mating effort toward her to gain fertile matings. But once she is pregnant or early in lactation, the philanderer is liable to desert her if another cycling female becomes available.

From the viewpoint of a pregnant or lactating female, a cycling female represents a threat, capable of diverting male investment away from her. What strategies can noncycling females develop to deal with this problem? We could expect to see noncycling females cooperating to prevent any cycling female from flaunting her menstrual signal. But there is an important reason why this is not going to be the most productive strategy from the viewpoint of noncycling females. Remember that the menstrual signal is economically valuable. It promotes male mating effort; males should compete to bond with menstrual females. Above all it is important for noncycling females to control access to the attractive cycling female, surrounding her and preventing any philanderer male from abducting her.

If they are able to do this (possibly with help of male kin), then they are in a position to use her attractions for their own benefit. Now, all the females can join in with the menstruant, borrowing her signal and amplifying it by use of blood-colored substances. This has the effect of broadcasting to potential male provisioners that there is an imminently fertile female in the vicinity, to mobilize male mating effort. But it also aims to deter males from discriminating between cycling and noncycling females.

This strategy of sham menstruation generates protosymbolic ritual coalitions. It is effective as long as noncycling females receive some of the benefits of male mating effort mobilized by the prospect of access to cycling females. It has an inbuilt reciprocity, since any fertile female alternates between cycling and not cycling. It also generates a basic sexual morality. Each time she menstruates, a female is put on the spot. Is she going to cheat on noncycling females, and use her attractions for short-term gain? Or will she cooperate in using her attractions for the benefit of a wider coalition? In cooperating, a cycling female offers a costly and reliable signal of commitment to a long-term alliance with noncycling members of the coalition. Once she herself is pregnant and subsequently lactating, she expects to receive reciprocal benefits, derived from the signals of other cycling members of the coalition.

Such a strategy of coalitionary cosmetics use offers the prototype for ritual in general, and puberty and initiation rites in particular. I argue that investor males came to sexually select such cosmetically decorated females because these females ritually displayed social alliances that were invaluable for the support of large-brained offspring.

Members of these cosmetically decorated coalitions had a strong interest in sharing and sustaining imaginary constructs. A full-blown symbolic

repertoire would emerge as a result of the specific form of signaling used by females in their strategy of resisting male philanderers. The last thing that any female coalition wants is for a dominant male philanderer to grab the most attractive, cycling member(s) of the coalition. So they surround these menstruating females, creating a fence or picket line around them, drawing on the support of male kin, sons and brothers, in this protective strategy. It is in signaling "no access" that symbolism is born. If a female chimp signals (with her large estrous swelling) to a male chimp that she is ready to mate, she is communicating that she is the right species, the right sex, and that this is the right time for fertile mating. In the ritual resistance strategy of human females, we predict the precise opposite: signals communicating "we are the WRONG species, the WRONG sex, and this is the WRONG time (we're all menstruating which implies that soon it will be the right time)." Multimedia effects of song, dance, body paint, and ritual pantomime will be used to get that message across to outsider males who may initially be reluctant to comply. The result will be a collective repertoire of shared fantasy constructs, things that do not and cannot exist in the real world, but only in a symbolic realm—gods that are at the same time male and female, human and animal. The flag which highlights these constructs of ritual power will be red. Females in a taboo state of menstruation are as if transformed into animals and males, while their male kin inside the protective coalition also become animal and bloody, gender ambiguous, quasi female. During ritual action, perceptual categories are transcended by a signal of ritual power which reads "WRONG!"

#### **PREDICTIONS FROM THE SHAM MENSTRUATION MODEL**

The main prediction derived from the sham menstruation model is that the earliest evidence of ritual traditions in the archaeological record will take the form of a cosmetics industry focused on red pigment. Male sexual selection for cosmetically decorated females should drive an explosive spread of such traditions, such processes of sexual selection reinforcing speciation of anatomically modern humans.<sup>14</sup> This first evidence for ritual should correlate with the first evidence for modern hunting and homebase behaviors. Since sham menstruation is a response to the stress of encephalization, the model would be falsified if significant pigment use were found prior to major increase in brain size, or only subsequent to cranial capacities maximizing. The onset is predicted in the period roughly from 500,000 to 100,000 B.P.

The model predicts that the first gods should be wrong species/sex metaphors linked with red or menstrual cosmetics. These signals establish taboos—rules about access or consumption—on the flesh of women and

game animals. As women ritually identify themselves as animals, the blood of menstruating women becomes equated with the blood of hunted prey.<sup>15</sup>

## EVIDENCE OF PIGMENT USE IN ARCHAEOLOGY AND ETHNOGRAPHY

I do not intend to test all these predictions in this chapter, since some have been addressed in more detail elsewhere.<sup>16</sup> Here I briefly review the Middle Stone Age record of ocher use in sub-Saharan Africa, and ethno-historical accounts of Khoisan pigment use.

### The Archaeological Record of Pigment Use

The archeological record suggests that *Homo heidelbergensis* was the first human to use iron oxides. Ian Watts has comprehensively examined the geographic and temporal record of ocher use.<sup>17</sup> He finds that no claim for pigments associated with *Homo erectus* can be substantiated, and lists some dozen possible and definite cases of pigment use predating the Late Pleistocene worldwide.<sup>18</sup> Nearly all involve small assemblages, mostly single pieces, of ocher and hematite, a pure iron oxide producing red streak. While definitely striated pieces are found in Europe and Asia, the majority occurs in the Late Acheulean and early Middle Stone Age (MSA) in sub-Saharan Africa—within the past 300,000 years. To these cases can be added material from the Kapthurin Formation, Kenya,<sup>19</sup> and Twin Rivers, Zambia.<sup>20</sup> The Twin Rivers site probably illuminates the Acheulean–Middle Stone Age transition. More than 300 pieces of pigment have been recovered, largely specularite and hematite, dating between 270,000 and 170,000 B.P.<sup>21</sup>

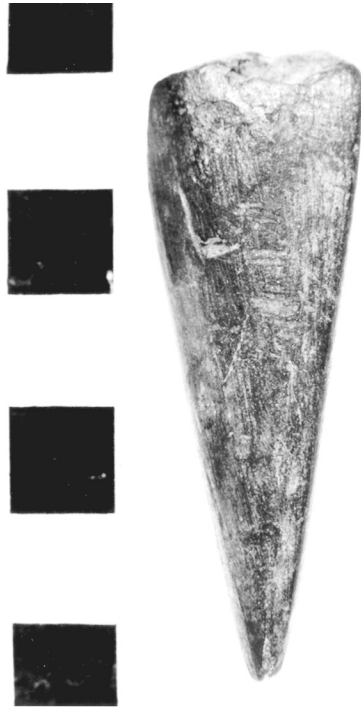
Following these sporadic early occurrences, the records in Eurasia and Africa diverge. Between c. 220,000 and 100,000 B.P. no more ocher is reported in Eurasia. By contrast, in Africa there appears to be continuity to the end of the Middle Pleistocene.<sup>22</sup> The early Late Pleistocene (120,000 to 100,000 B.P.) sees an efflorescence of ocher use in southern Africa, which persists thereafter and is not matched outside Africa until the European Upper Paleolithic (UP). In the European Late Pleistocene, although there is some evidence of pigment use in the French Mousterian (with black manganese predominating over iron oxides), the major change occurs at the Middle/Upper Paleolithic boundary, associated with both Châtelperronian<sup>23</sup> and Aurignacian<sup>24</sup> industries, when red ocher becomes the focus. That is 50,000 to 60,000 years later than in Africa.

But is this material actually pigment? Some archeologists, resisting the implication of an early date for symbolic behavior, have proposed alternative hypotheses of metal oxides being used as a hide preservative or

environmental protection. Watts decisively rejects these arguments, pointing out that such uses imply no selection for color—blacks and yellows should be equally useful.<sup>25</sup> Analyzing more than 4,000 pieces of potential pigment from 17 southern African MSA sites, Watts found that reds comprised 81.4 percent, with browns (including reddish-browns) and then yellows accounting for most of the rest; black was virtually absent.<sup>26</sup> Light and strong reds made up similar proportions of the sample which produced a streak, but when it came to modification, "MSA people were clearly selecting the most saturated shades of red."<sup>27</sup> Of 383 definitely ground specimens, 52 percent were strong reds, compared with 30 percent light reds. Forty-eight of these ground pieces were classified as crayons: "intensively utilized pieces where ground facets tended to converge to a point"<sup>28</sup> (Figure 1). Among these, color selection was even more pronounced, over 60 percent showing strong red streak. The shape of some of these pieces, with honed points and small facets, may have been produced by intensive grinding, but it is also possible that they could have

**Figure 4.1**

**Middle Stone Age specularite crayon from Olieboompoort Bed 2, South Africa. Photo by Ian Watts.**





been applied to produce defined areas of color, design, or pattern on certain surfaces.

Watts concludes that ritual and symbolic uses for ocher were primary, with strong selection bias for qualities of redness and brilliance showing that ocher was used for visual signaling.<sup>29</sup> Recent excavations at Blombos Cave in South Africa have unearthed more than 8,000 pieces of ocher, many bearing signs of utilization, from MSA layers.<sup>30</sup> It is again material of saturated red and brown-red that appears most highly prized. At Blombos, two unequivocally engraved pieces of ocher bearing geometric representations have been dated to c. 76,000 B.P.<sup>31</sup>—twice as old as any comparable evidence for design in the European UP record.

### **The Ethnohistorical Record of Pigment Use in the Region**

Most archeologists working on southern and Central African MSA sites interpret ocher as evidence for body painting and ritual activity.<sup>32</sup> They recognize that art on the body is likely to precede art in other media, but rarely offer any theoretical model of why these specific behaviors should emerge as part of the modern human repertoire. Ritual body art appears as a mere epiphenomenon of emergent human cognitive complexity.

Such an art-for-art's-sake argument cannot be satisfying from an evolutionary perspective because of the costs involved in procuring and processing materials. The sham menstruation hypothesis is the only Darwinian explanation for the presence of red ocher in African MSA sites, and its association with the earliest evidence of modern human occupation of the Middle East, Australia, and Europe. Rather than appeal weakly to ethnographic analogy, here the expectations of the sham menstruation model are assessed against ethnohistorical accounts of Khoisan pigment use. Do female reproductive or economic strategies underlie ritual usage? Do women advertise their imminent fertility, particularly in coalitions? And is it women who spend most time and effort getting and preparing ocher? If it were men, then the sham menstruation model would be undermined.

The Khoisan value bright red and brilliant pigments most highly,<sup>33</sup> especially hematite and specularite, but where mineral pigments were scarce, "red dye woods (particularly *Pterocarpus angolensis*) were held in similar esteem."<sup>34</sup> People selected these materials by the same criteria as identified for the MSA, and traveled long distances to obtain them. Historically and cross-culturally in southern African, women have "played a major role in the quarrying of earth pigments."<sup>35</sup> If procurement of pigments was predominantly a female task, it was even more so when it came to processing.<sup>36</sup>

In Ju/'hoan (!Kung) oral narratives, one metaphor for impending ritual action was the sound of women pounding red ocher in camp.<sup>37</sup> In various



groups, ritual injunctions governed pigment procurement and processing. Overwhelmingly, Khoisan peoples used red pigment in ritual contexts, especially menarcheal observances.<sup>38</sup> A /Xam female initiate, on emergence from seclusion, would present the women of the band with lumps of hematite for decorating their faces and cloaks and also for adorning the young men to protect them when out hunting,<sup>39</sup> as did the Ju/'hoan maiden.<sup>40</sup> Ritualization of ocher use at menstruation among herder groups was at least as elaborate. For Khoisan generally, redness and brilliance signaled supernatural potency, overlapping with a range of cosmological concepts revolving around rain, fertility, hunting luck, horned antelope, the moon, death, and the trickster.<sup>41</sup> It appears that menarcheal ritual provides a template for other rituals of transition, including first-kills, marriage, and death. I argue below that it provides the metaphor for the movement to the other world involved in trance death. The preoccupation of /Xam narratives with the dire consequences of violation of proper menarcheal observances confirms that no other ritual context is so vital to reproduction of the Khoisan cosmos, affecting the fertility of women, the land and the game, and success in the hunt.

Even where no specific ritual contexts are mentioned, use of cosmetics may be directly linked to women's fertility cycles. Fischer<sup>42</sup> noted that Khoisan in Namibia painted their faces with red iron oxides at "the time of menstruation." In default of the desired hematite, women used other substances such as soot mixed with fat as cosmetics. Wilhelm<sup>43</sup> writes that !Kung women when menstruating would smear their inner thighs with fat of a large antelope, and paint soot around their eyes. A menstruating !Kung woman would also cut a tonsure in the hair of her youngest child and paint that with fat and soot—as if advertising her imminent fertility after lactational amenorrhea.

## THE SIGNATURE OF RITUAL POWER IN ROCK ART

The archeological and ethnohistorical records of pigment use in southern African appear consistent with predictions of the sham menstruation model. The primary signature of ritual power is expected to take the form of wrong species/sex metamorphosis coupled with the flow of blood. I now consider how the model may be used as a key to interpretation of rock art in the region, again drawing on ethnographic data to inform the argument.

The most renowned of Khoisan initiation practices is the Eland Bull dance, the climax of a girl's first menstruation ceremony. Prevalent in the Kalahari, this dance or its close equivalent probably belonged to Southern groups as well. A painting at Fulton's Rock in the Drakensberg Mountains has been interpreted as representing the dance (Figure 2).<sup>44</sup>

Figure 4.2

Fulton's Rock, Drakensberg, Natal. After Lewis-Williams, *Believing and Seeing* (London: Academic Press, 1981: 42). Courtesy of the Rock Art Research Institute, University of Witwatersrand.



A Ju/'hoan initiate lies under a cloak inside a seclusion hut. The new maiden is created an adult when the women of the band dance, pretending to be eland.<sup>45</sup> In costume for the dance, women remove their rear aprons, tying strings of ostrich eggshell beads to hang down between their bare buttocks "simulating the tail of the Eland."<sup>46</sup> Heinz reports similar costume for the !Xõ.<sup>47</sup> Such exposure is considered highly erotic, men being banished to a distance to protect themselves and their hunting weapons.<sup>48</sup> In typical Ju/'hoan or Nharo practice, an older man, or possibly two—in the grand-relative category to the maiden—may join the dance wearing horns as "bulls."<sup>49</sup> The dance mimics the rutting behavior of eland, especially in the climax when the women move their buttocks violently from side to side, causing the tails of ostrich eggshell beads to lash

to and fro. In imitating mating behavior of female eland, the dancing women are clearly signaling wrong species. Do they also play at wrong sex? Men do not always wield the horns. There are accounts of Ju/'hoan<sup>50</sup> and !Xõ<sup>51</sup> women dancing without men, while among the Kua, the name used by Valiente-Noailles for G/wi and G//ana groups, it is women who perform as eland bulls.<sup>52</sup>

Who really is the Eland Bull? Part of the ambiguity here lies in the eland's own liminal characteristics. Alone among the antelopes hunted by the Ju/'hoansi, the male eland is fatter than the female. !Kun/obe, an old Ju/'hoan woman, told Lewis-Williams: "The Eland Bull dance is danced because the eland is a good thing and has much fat. And the girl is also a good thing and she is all fat; therefore they are called the same thing."<sup>53</sup>

This identity of the Ju/'hoan girl with the Eland Bull, marked by androgyny and fatness, is prescribed during seclusion through language use and taboo: her menstruation is *eland sickness*; she must use special respect terms for eland; and she must not eat eland meat. On her emergence, the identity is ritually enacted: she is painted in ocher with an antelope mask and anointed with eland fat; as she comes out she must keep her eyes down, so that the eland will not see the stalking hunter.<sup>54</sup> Similar injunctions were placed on /Xam, !Xõ, and Kua maidens. Merely by looking up, the /Xam girl could make the game wild.<sup>55</sup>

The fat of the girl and the Eland Bull embody the fat of the land. The Ju/'hoan girl receives the Eland Bull dance, according to !Kun/obe, "so that she won't be thin . . . she won't be very hungry . . . all will go well with the land and the rain will fall."<sup>56</sup> The Kua dance as eland "because the eland is the biggest antelope, and has a big croup, giving the idea of fertility and body development."<sup>57</sup> The desirable fatness of the buttocks, associated with eland and emphatically signaled by women performers during the eland dance, carries connotations of eroticism combined with ritual respect and avoidance. Lewis-Williams<sup>58</sup> and Solomon<sup>59</sup> discuss examples in rock art of rear-end views of female eland in mating posture or female therianthropes—human females with large buttocks and eland heads. The /Xam respect word for eland is translated by Lewis-Williams as "when it lashes its tail."<sup>60</sup> A probable equivalent of the respect word used by a Ju/'hoan girl during puberty ritual, it evokes the characteristic signal of the mating female eland, imitated by the women eland dancers.

Since his early interpretation of the Fulton's Rock painting as a puberty dance, Lewis-Williams has altered his view to argue that the image refers to trance experience and healing. Anne Solomon has vigorously defended the position that initiation ritual is an important referent of Khoisan rock art.<sup>61</sup> I strongly support that view. Several specific features of the Fulton's Rock image indicate that it depicts a Drakensberg version of the eland dance. There is emphasis on the characteristic posture of dancers bending

over and baring round female buttocks with swinging tails attached toward the figure inside the hut. The inner ring of dancers is dominated by women, with two figures of uncertain sex, but probably male, carrying sticks as horns. Such a structure, with women on the inside and all definite male figures distanced towards the periphery, in association with their hunting weapons, recalls the context of female initiation rather than a healing dance. In addition, a number of males have bars across the penis, indicative of the strong sexual taboos in place on such an occasion.

The marginal position of the hunting weapons refers to a paradox of the menarcheal girl's power. Contact with her blood threatens hunters and the efficacy of their arrow poison,<sup>62</sup> yet if her potency is harnessed through proper ritual observance, the new maiden will bring "the benefits of, specifically, 'fatness,' rain and successful hunting."<sup>63</sup> This effect of the girl's potency on future hunting is channeled in the Fulton's Rock painting by the game shaman (seated right) who points a finger of power at the giant eland summoned by the women's dance.

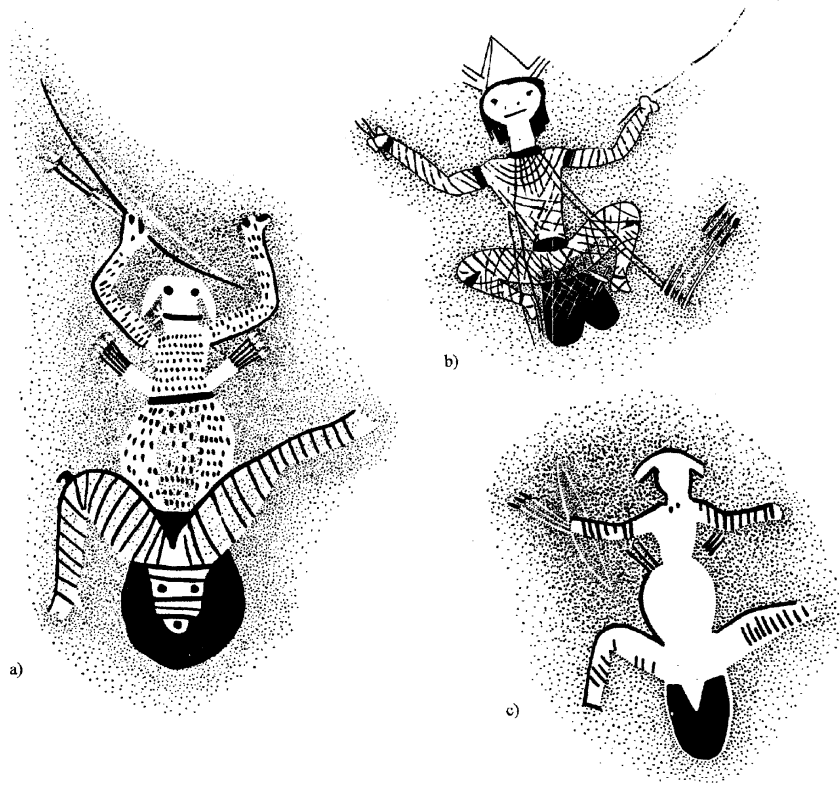
Not only does the girl share the eland's power, standing "between this world and the spirit world,"<sup>64</sup> but in Kalahari tradition she also acts out as a hunter—further illustration of wrong sex. A Ju/'hoan metaphor for first menstruation is: "She has shot an eland!"<sup>65</sup> Among the !Xõ, on the last day of seclusion, a gemsbok-skin shield is hung at the back of the menstrual hut and the maiden is helped to shoot it with arrows by the mistress of ceremonies.<sup>66</sup>

Evidence from Drakensberg paintings suggests that the Maluti Bushmen played out a similar drama at female initiation. Solomon identifies a series of gender-anomalous images holding bows and arrows as representing initiate girls.<sup>67</sup> Characteristic features include thighs spread wide apart and, besides possession of weaponry, ambiguous genitalia with central emphasis on large, red blobs of potency between the thighs. Equipped as hunters, the Drakensberg images have animal heads, or are linked to game animals by lines of power. Each has a penis *and* blob of menstrual potency, appearing double-sexed. The figures may also bear reference to the rain, with patterns of stripes and dots on Figures 3a and 3c, and a special cap on the head in Figure 3b. In Kalahari initiation tradition for both sexes, special precautions surround initiates in relation to the rains. Caps must be worn to ward off the sun or until the rain breaks.<sup>68</sup> A Kua girl must cover herself if it rains "so that her body's smell cannot reach the rain, lest the lightning might kill people."<sup>69</sup> This closely recalls /Xam narratives of the great Rain being !Khwa whose terrible wrath is aroused by any violation of menarcheal observance, and who is attracted by "the odour of the girl."<sup>70</sup> Such power of thunder, lightning, and whirlwind is conceptualized as male,<sup>71</sup> while soft, gentle female rain is not mentioned in puberty lore.<sup>72</sup>

Interpreted through the wrong species/sex model of the primary sig-

Figure 4.3

Double-sexed, spread-legged figures from Drakensberg, Natal: (a) Willcox's Shelter; (b) Sorcerer's Rock; (c) Orange River. After Patricia Vinnicombe, *People of the Eland* (Pietermaritzburg: University of Natal Press, 1976: 160).



nature of ritual power, these enigmatic figures are seen as emblems of ritual potency or taboo. Just as the peculiarly fat and female Eland Bull serves to unite opposites in initiation ceremony, these images signal ritual potency through the metaphor of the female initiate whose attributes are paradoxically male.

#### FATNESS, TRANCE, AND MENSTRUAL POTENCY

In line with their shamanist theory of rock art, Lewis-Williams and Dowson read the Willcox's shelter figure (Figure 3a) as "hallucinatory," deriving from the spirit world of trance experience. Faced with the artist's exaggerated emphasis on the genital region, they choose to ignore it, pointing out "the ears, whiskers and dots."<sup>73</sup> Lewis-Williams' radical and

illuminating hypothesis of Bushman art as the depiction of trance experience has led to an unfortunate bandwagon effect, whereby every paradoxical or enigmatic image is simply ascribed to a general category of hallucination. We are in danger of losing explanatory power, where an interpretation based in initiation ritual allows greater insight into specific details. Given the central importance of menstrual potency in Bushman ideology, ritual, and narrative of initiation, resistance to seeing portrayal of that metaphor of power in rock art is surprising. This defers to our own culture's deep-seated taboos, but obstructs our understanding of Bushman cosmology and its representation.

To attempt to counterpose trance to initiation in this imagery is to miss a fundamental aspect of Khoisan representation of supernatural potency. Whether belonging to a healer or to a menarcheal girl, it is the same potency. The experience of one may be rendered in terms of the experience of the other, conflating the world of trance with the body of the menarcheal maiden. Gender ritual provides an organizing principle of the cosmos, a template for movement to the other world. This unity of power is beautifully expressed in Megan Bieseles's discussion of a Ju/'hoan narrative:

When /Asa N!a'an told her story about G!kon//'amdima's heart turning into a steenbok, I asked her how it happened that a human heart could become an animal. Her answer made . . . clear something that all the metaphors had pointed to, that womanly power and manly power and the power of shamans, of *n/omkxaosi*, are really one power . . . /Asa N!a'an said, "Her heart left G!kon//am'dima's back through her *n//ao* spot and became a steenbok, and that was the first meat."<sup>74</sup>

In the idiom of healing, potency boils and rises up the spine to emerge at the back of the healer's neck as trance is achieved. Here, it is used to describe metamorphosis of woman into meat, most often a metaphor associated with hunting and initiation. While the menarcheal maiden is herself the eland wounded with arrow poison, depiction of the dying eland in southern Bushman rock art was a "powerful metaphor of the trancing medicine man."<sup>75</sup> In the paintings, trance death is constructed as transformation into the wrong species combined with the flowing of blood.

Within the gender conventions of Bushman art, the fat, round bellies of Figure 3a and 3c strongly connote female, but it is this quality of fatness that identifies the initiate with the androgynous eland. By contrast, the slender shape of Figure 3b suggests a male initiate, a first-kill hunter, who displays menstrual potency since he would be treated ritually as if a menstruant.<sup>76</sup> These double-sexed Drakensberg images belong to a much larger set of more or less detailed spread-legged figures found from the Cape to Tanzania. The age of the Drakensberg paintings cannot be reliably estimated,<sup>77</sup> but Maluti Bushmen persisted in the region to the end of the

nineteenth century. Zimbabwean Later Stone Age paintings are likewise difficult to date, but with the Bushmen long since driven from the area, Peter Garlake suggests a probable range of 10,000 to 2,000 B.P.,<sup>78</sup> some evidence pointing to even earlier dates. Highly characteristic of these Matapo Hills paintings are obese, female figures with exaggerated flows between the legs. They carry as their prime emblem a crescent symbol.<sup>79</sup> Appearing in pairs, the women may have manes of hair which only otherwise appear on hunters (Figure 4).

Garlake documents these dramatic figures in *The Hunter's Vision*<sup>80</sup> without mentioning menstruation, or referring to any ethnography of Khoisan initiation. In his Ph.D. thesis he discusses the possibility that the flows refer to menstruation, but rejects it on the grounds that Khoisan rituals connected with menstruation do not involve trance.<sup>81</sup> Hence, by adopting the trance hypothesis as his premise, Garlake can only see trance. The swollen stomachs of the figures, he argues, connote activation and expansion of potency similar to the Ju/'hoan concept of *n/om*.<sup>82</sup> I see nothing wrong with that idea, but only ask: Why are females in a condition of potency regularly shown with genital flows? This leads us back to the *n/om* potency of the girl at menarche.

In Figure 5, the large, round body, full of potency, holds up a distinctive crescent shape (only partly visible here). From between her legs, great rainbows of blood arch up to pass between the horns of two large ante-

**Figure 4.4**

**Obese female pair with crescent, manes, and stream of potency, Mutoko, Zimbabwe After Garlake, *The Painted Caves* (Harare: Modus Publications, 1987: 51).**





**Figure 4.5**

**Obese female with streams of potency and crescent (partly visible) linked to horned antelope, Mutoko, Zimbabwe. After Garlake, *The Hunter's Vision* (London: British Museum Press, 1995: 88).**



lope. Extreme caution is needed in comparing material from the Drakensberg. But it is worth observing the similarity of structure between this figure and the Sorcerer's Rock image (Figure 3b), which has red lines of potency extending from the figure to nearby rhebok. The red blob of potency between the legs of Figure 3b may correspond to the potent fatness in Figure 5. The crescent symbol supports an interpretation of the Mutoko panel in terms of initiation. Lunar periodicity, and specifically the appearance of new moon, is central to Khoisan ideology of hunting and initiation.<sup>83</sup> Just as in Ju/'hoan conception, the initiate girl brings benefits of fatness, rain, and good hunting, so in Figure 5, the maiden at menarche, identified with the new moon, is linked through lines of potency to the great horned antelope, which may themselves refer to seasonal rains.

Such swollen-bellied figures can also be anatomically male.<sup>84</sup> After puzzling over the way "the imagery transcends designations of gender," Garlake suggests these figures are "in a sense androgynous. This may be one of the sources of their power."<sup>85</sup> He compares this to the ideology connected with the fat male eland, the fundamental metaphor of initiation.

The Mutoko panel (Figure 5) also has superimposed referents to trance, notably the male figures with nosebleeds striding over the arches of blood. Immediately juxtaposed on the left hand side of this panel is a prostrate male figure pierced with arrows,<sup>86</sup> which can certainly be interpreted as referring to a stage of trance when the trancer has been shot with "arrows of *n/om*."<sup>87</sup> There are a number of instances of small figures, with diagnostics of trance such as nose-bleeding, depicted clambering along blood-lines of potency emanating from fat women.<sup>88</sup> Figures 6a and 6b make abundantly clear the equivalence in Khoisan conception of menstrual and trance potency as means of moving to the other world.

In the Wedza panel (Figure 6a), a large-bellied figure with antelope ears<sup>89</sup> produces a zig-zag flow on which tiny figures float and crawl, upwards and downwards. Similar movement between worlds is portrayed in the Marondera image (Figure 6b), where a group of women watch a recumbent figure lying at the bottom of a rectilinear ladder to the sky. Several small figures near the foot of the ladder appear caught in the process of transformation as they approach and move upwards. Near the top, the straight lines lead into a curvilinear snake in whose folds figures tumble and are lost. The snake has similar large ears to the Wedza female and a female figure with a stick in close attendance.

Snakes are among the key symbols that motivate overlap and conflation of the ideologies surrounding trance and initiation. Also prominent in both fields is the symbolism of arrows, which are shot into trance dancers. Menarcheal maidens, as we have seen, possess arrows, and their blood is conceptually linked to arrow poison.<sup>90</sup> Transmission of potency via bodily fluids—noseblood, menstrual blood, sweat, and amniotic fluids<sup>91</sup>—is featured in both trance and menarcheal ritual. An allied concept shared in both arenas is synchrony, whether rhythmical synchrony of the dance or physiological synchrony of bleeding. All these—snakes, arrows, flow, and synchrony—are regularly represented in Khoisan rock art. The same concept of wrong species metamorphosis with blood flow underlies both initiation and trance. One other power which links trance and initiation experience is the trickster, or lesser god. Custodian of the arrows of trance medicine, this being also governs initiation observances.<sup>92</sup>

Finally, further afield than Zimbabwe, there is more evidence for parallel representation of trance and initiatory experience. Figure 7 shows a famous but sadly faded panel from Kisese 2, near Kolo in Tanzania.

The round belly of a spread-legged figure on the left is echoed by motifs of concentric circles. Extraordinarily elaborate and finely drawn, these

**Figure 4.6**

**Movement between worlds conflating trance and menstruation: (a) Wedza, Zimbabwe; (b) Marondera, Zimbabwe. After Garlake, *The Hunter's Vision* (Zimbabwe Publishing House, 1995: 87, 131).**



may be seen as entoptic images, while another spread-leg figure appears on the edge at the right. Figure 8, from Thawe near Kolo, shows another small but elaborate spread-legged figure, with significant entoptic imagery enveloping the head. Juxtaposed on the right is a large figure whose elongation probably refers to trance. The two figures appear by themselves on the rockface.

These and many other such deliberate juxtapositions suggest that artists producing imagery derived from the neurophysiological experience of trance sought to appropriate cultural constructions of potency embedded in initiatory, particularly menarcheal, ritual. Equations were being drawn

Figure 4.7

Spread-legged figures with concentric circles, Kisesse, Tanzania. After Mary Leakey, *Africa's Vanishing Rock Art: The Rock Paintings of Tanzania* (London: Hamish Hamilton, 1983: 102–103).



between two modes of access to the spirit world, two manifestations of the same potency.

#### CAN WRONG SPECIES/SEX APPLY TO THE EUROPEAN UPPER PALEOLITHIC RECORD?

While there is no space here for any systematic analysis, several prevalent themes and motifs in the European Upper Paleolithic record suggest that the model of the original signature of ritual power described here could be used as a tool for interpretation. In particular, it may elucidate the focus on women's reproductive signals or periodicity, the relationship of women and game animals, and imagery of women's coalitions.

Anthropomorphic and therianthropic constructs—by definition, wrong species—are found in the earliest European traditions of painting and sculpture, notably the lion-headed statuette from Hohlenstein-Stadel (c. 33,000 B.P.), and the half-bison, half-human figure from Chauvet Cave of roughly similar date.<sup>93</sup> From the same period come the Aurignacian

**Figure 4.8**

**Spread-legged figure next to elongated "trancer," Thawe, Tanzania. Photo by Elena Mouriki.**



vulva images found in the Dordogne as rock engravings. These abstract and geometric female signs may be grouped together or be seen in association with animals.<sup>94</sup>

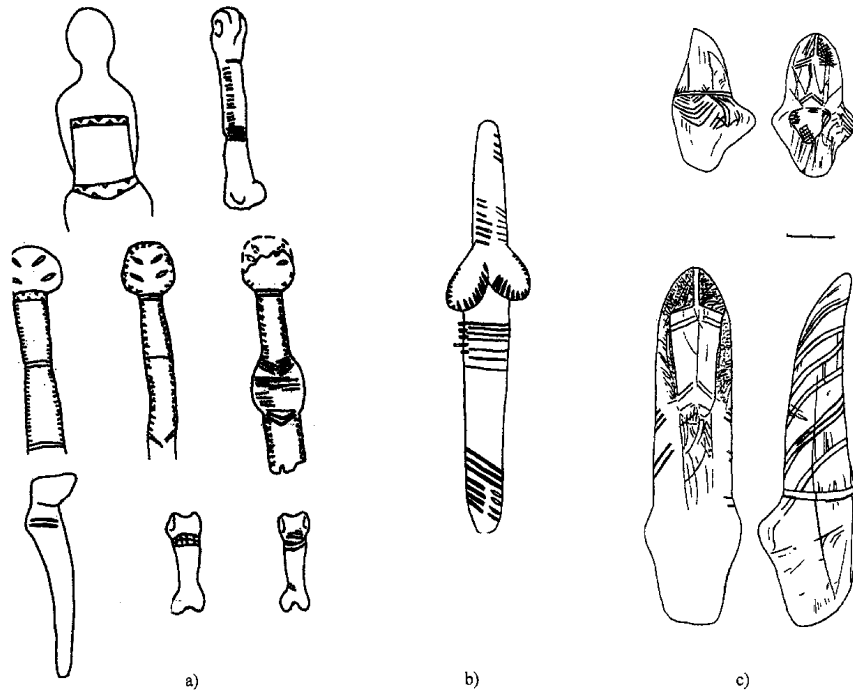
Among more than 200 female figurines of the Gravettian period (c. 29,000 to 20,000 B.P.), from West and especially Central and East Europe, a number show significant focus on dress.<sup>95</sup> Including such famous examples as the Venus of Willendorf and the Venus of Lespugue, these have a variety of special ornaments—caps and head-dresses, bandeaux, belts, skirts, and jewelry. Soffer and colleagues argue that these “transcendent cultural facts carved into stone, ivory and bone”<sup>96</sup> display the prestige items of a highly valued textile industry. The selective iconography of

these widespread figurine traditions highlights signifiers of women's ritual and perhaps reproductive status. In the case of some Ukrainian figures, from Kostenki and Avdeevo (Figure 9a), and more recent examples from Mezin (Figure 9c), the stylization leads to an extraordinary degree of gender ambiguity. Evidently female decorated bodies become overtly phallic. An abstract ivory figurine with breasts from Dolní Věstonice (Figure 9b) also falls into this category. This bears engraved marks, which in Alexander Marshack's analysis may fit a lunar tradition of notation.<sup>97</sup>

The renowned Gravettian sculpted relief at Laussel of a woman holding a bison horn shows no evidence of wrong sex or species, beyond the emblematic connection with the bison. But it is hard to resist comparing this icon (Figure 10a) to Figure 5 above, from the Zimbabwe tradition. In both images, a large-bodied, potent female holds up a crescent shape. In the

Figure 4.9

Female figurines with overt phallic form: (a) Kostenki and Avdeevo. After Marianna Gvozdozer, "The Typology of Female Figurines of the Kostenki Paleolithic Culture," *Soviet Anthropology and Archaeology* 27: 4 (1989), Fig. 8; (b) Dolní Věstonice. After Marshack, *The Roots of Civilisation* (London: Weidenfeld and Nicolson, 1972: 290); (c) Mezin. After I. G. Šovkopljās, *Mezinskaja stojanka* (Kiev, 1965).

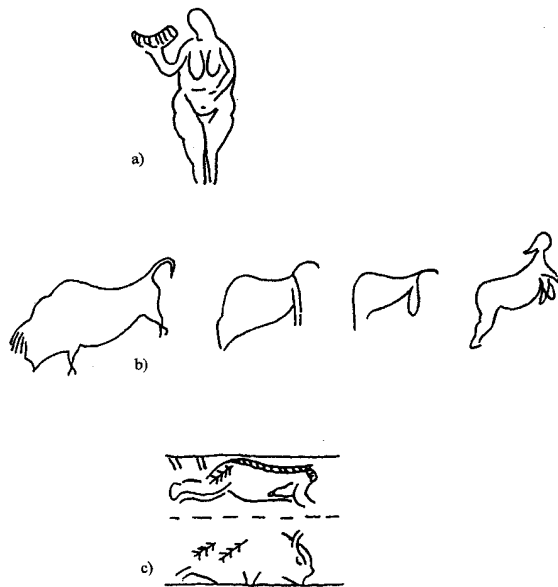


Zimbabwe case, with the prominent flow, this appears to relate to ideology of initiation, connected to game animals and lunar periodicity. The Laussel figure has been ochered, the horn being notched with 13 marks—probably a lunar reference.<sup>98</sup>

Leroi-Gourhan collected together several examples from the Franco-Cantabrian Upper Paleolithic associating women with bison (Figure 10).<sup>99</sup> These suggest transformation and identification of females with bison, resembling the identification of Khoisan initiate girls with the Eland. Notable is the sequence of metamorphosis from woman to bison from Pech-Merle (Figure 10b). Again, the interpretation could be either in terms of trance or initiation. Pech-Merle has one of two examples in the region of an arrow-pierced male figure, seen in conjunction with a geometric which is possibly a spread-legged image.<sup>100</sup> The engraved bone from Isturitz (Figure 10c) makes a direct equation between a female with an arrow wound in the thigh on one side, and a bison with arrow wounds to the body on the other.

In later Magdalenian traditions, iconography of women shows increasing schematization, whether in sculpture or engraving on stone plaquettes. Two lines may be sufficient to render a female silhouette—one vertical stroke attached to a looped shape for the buttocks.<sup>101</sup> Where the

**Figure 4.10**  
Women identified with bison: (a) Laussel; (b) Pech-Merle; (c) Isturitz. After Leroi-Gourhan, *L'Art pariétal*, p.158.





loop is reversed, similar to the form of a "P," Marshack considers this to represent pregnancy, with the bulge in front rather than behind.<sup>102</sup> An engraved horse with flowing wound in its hindquarters at Les Trois-Frères has superimposed upon it a line of 14 "P" figures (Figure 11). The figure has been redrawn on a number of occasions.

Portable limestone plaquettes from Gönnersdorf in Germany and Lalinde in France show numbers of schematized female figures in dance formation.<sup>103</sup> In his microscopic analysis of female imagery from Gönnersdorf, Lalinde, and Mezin, among other sites, Marshack demonstrates that vulvas, vaginas, and buttocks were repeatedly overmarked, presumably on different ritual occasions.<sup>104</sup> On the Lalinde plaquette (see detail, Figure 12), women are linked by lines running between the deeply gouged powerpoints of their vulvas. It is tempting to read this in terms of ritualized menstrual synchrony.

In numerous articles, Marshack has discussed Paleolithic symbol systems as "time-factored." He has documented lunar notation systems, and illustrated the repeated marking of female sexual images, often through use of red ocher. Yet, he has been reticent on the subject of menstruation. Ethnography of hunting peoples the world over shows that lunar and menstrual periodicity is critical in governing hunting success.<sup>105</sup> Menstruation provides a natural body metaphor for cosmic periodicity and renewal. But the evolutionary model of sham menstruation enables us to understand why shared, periodic blood flow came to symbolize ritual solidarity and taboo. The strategies of female coalitions, symbolically

Figure 4.11

Horse with flowing wound and superimposed line of female figures, Les Trois Frères. After H. Begouën and H. Breuil, *Les Cavernes du Volp. Trois Frères, Tuc d'Audoubert* (Paris: Arts et Métiers Graphiques, 1958).



**Figure 4.12**

**Detail of heavily overmarked female figures, Lalinde (Dordogne). Photo © Alexander Marshack.**



linked by potent flows and identified with wounded game animals, haunt a large subset of Upper Paleolithic images. Such strategies relate to real problems of hunter-gatherer social organization, including such familiar features of the ethnographic record as the gendered division of labor, bride service, initiation, and taboos surrounding menstruation, hunting, and meat. Cognitive models based in the neurophysiology of shamanic experience may be valid and relevant for the production of the art, but do not inform us about social contexts.

If these female images of power are showing us the earliest gods, it is also likely that such imagery of periodic ritual potency was at some stage appropriated by ritual collectives of men. Attempts to reconstruct Upper Paleolithic sexual politics should be treated cautiously and examined in contexts of particular ecologies. In Aboriginal Australian cultures, initi-

ated men substantiate claims to ritual power through rock art and ritual enactment of the story of how synchronously menstruating sisters conjured up the Rainbow Snake.<sup>106</sup> By subincizing their penises, male initiates usurp the ability to menstruate collectively. Acknowledging that they have stolen what belongs to women, initiated men of Arnhem Land now turn the ideology of menstrual potency against women themselves.<sup>107</sup>

## CONCLUSION

Drawing on principles of evolutionary ecology, I have outlined a testable model for the emergence of symbolic culture. The sham menstruation hypothesis argues that as they came under increasing pressure from encephalization, coalitions of evolving modern human females began to cosmetically manipulate their reproductive (menstrual) signals to motivate male labor. The model offers predictions testable across the disciplines of paleontology, archeology, and ethnography. It provides the only Darwinian explanation for the presence of red ocher in early modern human industries throughout Africa, the Middle East, Australia, and Eurasia.

Women's strategy of ritual resistance generates symbolic constructs of wrong species/sex in conjunction with cosmetic menstrual flow. I examine the record of Khoisan rock art in the light of this model, alongside ethnography of Khoisan initiation. I extend the argument to aspects of the European Upper Paleolithic record. While powerful, the shamanic interpretation of rock art neglects questions about social organization and gender relations because of its cognitive focus. In Khoisan conception, experiences of trance and initiation are not counterposed but regularly conflated, with artists producing entoptic imagery while appropriating the grammar of gender ritual. We need models that raise questions about the social conditions leading to elaboration of religious experience. Other primates lack such collectively imagined otherworlds, which can emerge only given certain uniquely human forms of social life.

## NOTES

1. Philip G. Chase. "On Symbols and the Palaeolithic." *Current Anthropology* 35:5 (December 1994): 627.

2. Amotz Zahavi and Avishag Zahavi. *The Handicap Principle*. New York and Oxford: Oxford University Press, 1997.

3. Eric Alden Smith. *Inujjuamiut Foraging Strategies*. New York: Aldine de Gruyter, 1991: 8.

4. Robert L. Trivers. "Parental Investment and Sexual Selection." In *Sexual Selection and the Descent of Man 1871-1971*, ed. Bernard Campbell. Chicago: Aldine, 1972: 136-179.

5. Robert Foley and Phyllis Lee. "Ecology and Energetics of Encephalization

in Hominid Evolution." *Philosophical Transactions of the Royal Society, London* 334 (1991): 223–232.

6. Leslie C. Aiello and Peter Wheeler. "The Expensive Tissue Hypothesis: The Brain and the Digestive System in Human and Primate Evolution." *Current Anthropology* 36 (1995): 199–221.

7. Henry M. McHenry. "Sexual Dimorphism in Fossil Hominids and its Socioecological Implications." In *The Archaeology of Human Ancestry*, ed. James Steele and Stephen Shennan. London: Routledge, 1996: 91–109.

8. James F. O'Connell, Kristen Hawkes, and Nicholas G. Blurton Jones. "Grandmothering and the Evolution of *Homo erectus*." *Journal of Human Evolution* 36 (1999): 461–85.

9. Foley and Lee. "Ecology and Energetics of Encephalization."

10. Camilla Power and Leslie C. Aiello. "Female Proto-symbolic Strategies." In *Women in Human Evolution*, ed. Lori D. Hager. New York and London: Routledge, 1997: 153–171.

11. Christopher B. Ruff, Erik Trinkaus, and Trenton W. Holliday. "Body Mass and Encephalization in Pleistocene *Homo*." *Nature* 387 (8 May 1997): 173–176.

12. Robert Foley and Phyllis Lee. "Finite Social Space and the Evolution of Human Social Behaviour." In *The Archaeology of Human Ancestry*, ed. James Steele and Stephen Shennan. London: Routledge, 1996: 63–64.

13. Frank Marlowe. "Male Contribution to Diet and Female Reproductive Success Among Foragers." *Current Anthropology* 42 (2001): 755–760.

14. Camilla Power. "Beauty Magic: The Origins of Art." In *The Evolution of Culture*, ed. Robin Dunbar, Chris Knight, and Camilla Power. Edinburgh: Edinburgh University Press, 1999: 100–101.

15. Chris Knight, Camilla Power, and Ian Watts. "The Human Symbolic Revolution: A Darwinian Account." *Cambridge Archaeological Journal* 5:1 (1995): 82.

16. Ian Watts. "The Origin of Symbolic Culture." In *The Evolution of Culture*, ed. Robin Dunbar, Chris Knight, and Camilla Power. Edinburgh: Edinburgh University Press, 1999: 113–146.

17. Ibid.

18. Ibid., p. 122.

19. Sally McBrearty. "The Archaeology of the Kapthurin Formation." In *Late Cenozoic Environments and Hominid Evolution: A Tribute to Bill Bishop*, ed. Peter Andrews and Peter Banham. London: Geological Society, 1999: 143–156.

20. Lawrence S. Barham. *The Middle Stone Age of Zambia, South-central Africa*. Bristol: Western Academic and Specialist Press, 2001. See also Barham, this volume.

21. Lawrence S. Barham. "Systematic Pigment Use in the Middle Pleistocene of South-central Africa." *Current Anthropology* 43:1 (February 2002): 188.

22. See Watts. "The Origin of Symbolic Culture," p. 122; Barham: "Systematic Pigment Use in the Middle Pleistocene"; J. Desmond Clark and K. Brown: "The Twin Rivers Kopje, Zambia: Stratigraphy, Fauna, and Artifact Assemblages from the 1954 and 1956 Excavations." *Journal of Archaeological Science* 28 (2001): 305–330.

23. C. Couraud. "Les Pigments des grottes d'Arcy-sur-Cure (Yonne)." *Gallia Préhistoire* 33 (1991): 17–52.

24. Randall White. "Comment on Bednarik's 'Concept-mediated Marking in the Lower Palaeolithic.'" *Current Anthropology* 36 (1995): 623–625.

25. Watts. "The Origin of Symbolic Culture," p. 121.
26. Ibid., pp. 126–127.
27. Ibid.
28. Ibid.
29. Ibid., p. 128.
30. Christopher S. Henshilwood, Judith C. Sealy, Royden Yates, K. Cruz-Urbe, P. Goldberg, F. E. Grine, Richard G. Klein, C. Poggenpoel, K. van Niekerk, and Ian Watts. "Blombos Cave, Southern Cape, South Africa: Preliminary Report on the 1992–1999 Excavations of the Middle Stone Age Levels." *Journal of Archaeological Science* 28:4 (April 2001): 421–448.
31. Christopher S. Henshilwood, Francesco d'Errico, Royden Yates, Zenobia Jacobs, Chantal Tribolo, Geoff A. T. Duller, Norbert Mercier, Judith C. Sealy, Helene Valladas, Ian Watts, and Ann G. Wintle. "Emergence of Modern Human Behavior: Middle Stone Age Engravings from South Africa." *Science* 295 (February 15 2002): 1278–1280.
32. See Hilary J. Deacon. "Two Late Pleistocene-Holocene Archaeological Depositories from the Southern Cape, South Africa." *South African Archaeological Bulletin* 50 (1995): 128; J. Desmond Clark. "The Middle Stone Age of East Africa and the Beginnings of Regional Identity." *Journal of World Prehistory* 2:3 (1988): 299; Barham, this volume.
33. See Wilhelm H. I. Bleek and Lucy C. Lloyd. *Specimens of Bushman Folklore*. London: Allen, 1911: 377–379; and J. David Lewis-Williams and Megan Biesele. "Eland Hunting Rituals Among the Northern and Southern San Groups: Striking Similarities." *Africa* 48 (1978): 117–134.
34. Watts. "The Origin of Symbolic Culture," p. 133, and see references.
35. Ibid.
36. Ibid., p. 134, and see references.
37. Megan Biesele. *Women Like Meat*. Johannesburg: Witwatersrand University Press, 1993: 163, 196.
38. Watts. "The Origin of Symbolic Culture," p. 134.
39. Roger L. Hewitt. *Structure, Meaning and Ritual in the Narratives of the Southern San* Hamburg: Buske, 1986: 281.
40. J. David Lewis-Williams. *Believing and Seeing. Symbolic Meanings in Southern San Rock Paintings*. London: Academic Press, 1981: 51.
41. Camilla Power and Ian Watts. "The Woman with the Zebra's Penis: Gender, Mutability and Performance." *Journal of the Royal Anthropological Institute (N. S.)* 3:3 (September 1997): 546.
42. Eugen Fischer. *Die Rehobother Bastards*. Jena: Fischer, 1913: 259.
43. J. H. Wilhelm. "Die !Kung Buschleute." *Jahrbuch des Museums für Völkerkunde zu Leipzig* 12 (1954): 118.
44. See Lewis-Williams. *Believing and Seeing*, pp. 41–53; and Anne Solomon. "Rock Art in Southern Africa." *Scientific American*, November 1996: 89.
45. Lewis-Williams. *Believing and Seeing*, p. 62.
46. Nicholas M. England. *Music Among the Zu/'wā-si and Related Peoples of Namibia, Angola and Botswana*. New York and London: Garland, 1995: 274.
47. Hans-Joachim Heinz. *The Social Organisation of the !Kō Bushmen*. M.A. Thesis, University of South Africa, 1966: 123.
48. England. *Music Among the Zu/'wā-si*, p. 266.



49. Alan Barnard. "Sex Roles Among the Nharo Bushmen of Botswana." *Africa* 50 (1980): 117–118.
50. Lewis-Williams. *Believing and Seeing*, p. 45.
51. Heinz. *The Social Organisation of the !Kō Bushmen*, p. 124.
52. Carlos Valiente-Noailles. *The Kúa: Life and Soul of the Central Kalahari Bushman*. Rotterdam and Brookfield: Balkema, 1993: 95–96.
53. Lewis-Williams. *Believing and Seeing*, p. 48.
54. Power and Watts. "The Woman with the Zebra's Penis," p. 543, and see references.
55. Hewitt. *Structure, Meaning and Ritual*, p. 285.
56. Lewis-Williams. *Believing and Seeing*, p. 50.
57. Valiente-Noailles. *The Kúa*, p. 96.
58. Lewis-Williams. *Believing and Seeing*, pp. 46–47.
59. Anne Solomon. "Gender, Representation and Power in San Ethnography and Rock Art." *Journal of Anthropological Archaeology* 11 (1992): 313–312.
60. Lewis-Williams. *Believing and Seeing*, p. 46.
61. Solomon. "Gender, Representation and Power," pp. 291–329; Anne Solomon: "Mythic Women': A Study in Variability in San Rock Art and Narrative." In *Contested Images: Diversity in Southern African Rock Art Research*, ed. Thomas Dowson and J. David Lewis-Williams. Johannesburg: Witwatersrand University Press, 1994: 331–371; Anne Solomon. "Mythic Women': A Response to Humphreys." *South African Archaeological Bulletin* 51 (1996): 33–35.
62. Power and Watts. "The Woman with the Zebra's Penis," p. 542.
63. Lewis-Williams. *Believing and Seeing*, p. 52.
64. Thomas Dowson, cited in J. David Lewis-Williams. *Discovering Southern African Rock Art*. Cape Town: Philip, 1990: 80.
65. Lewis-Williams. *Believing and Seeing*, p. 51.
66. Heinz. *The Social Organisation of the !Kō Bushmen*, p. 122.
67. Solomon. "Gender, Representation and Power," pp. 313–314.
68. Valiente-Noailles. *The Kúa*, p. 97; and Heinz. *The Social Organisation of the !Kō Bushmen*, p. 124.
69. Valiente-Noailles. *The Kúa*, p. 97.
70. Hewitt. *Structure, Meaning and Ritual*, p. 285.
71. Power and Watts. "The Woman with the Zebra's Penis," pp. 545–546.
72. Hewitt. *Structure, Meaning and Ritual*, p. 284.
73. J. David Lewis-Williams and Thomas Dowson. *Images of Power: Understanding Bushman Rock Art*. Johannesburg: Southern Book Publishers, 1989: 173.
74. Bieseke. *Women Like Meat*, p. 202.
75. Lewis-Williams. *Believing and Seeing*, p. 91.
76. Power and Watts. "The Woman with the Zebra's Penis," p. 547.
77. Aron Mazel. "Rock Art and Natal Drakensberg Hunter-gatherer History: A Reply to Dowson." *Antiquity* 67 (1993): 889–892.
78. Peter Garlake. *The Painted Caves: An Introduction to the Prehistoric Rock Art of Zimbabwe*. Harare: Modus Publications, 1987: 5.
79. Peter Garlake. *The Hunter's Vision: The Prehistoric Art of Zimbabwe*. London: British Museum Press, 1995: 87.
80. Garlake. *The Hunter's Vision*, pp. 85–89.

81. Peter Garlake. *Rock Art in Zimbabwe*. Ph.D. Thesis, University of London, 1993.
82. Garlake. *The Hunter's Vision*, p. 86.
83. Power and Watts. "The Woman with the Zebra's Penis," pp. 544-545.
84. Garlake. *The Hunter's Vision*, p. 85.
85. Garlake. *Rock Art in Zimbabwe*, p. 262.
86. Garlake. *The Hunter's Vision*, p. 130, fig. 155.
87. Richard Katz. *Boiling Energy. Community Healing Among the Kalahari Kung*. Cambridge, MA: Harvard University Press, 1982: 46.
88. See, for example, Garlake. *The Hunter's Vision*, p. 90, fig. 101.
89. They are called hare-headed beings in Leo Frobenius: *Madsimu Dsangara*. Berlin: Atlantis, 1931: 21.
90. Power and Watts. "The Woman with the Zebra's Penis," pp. 542, 544.
91. Thomas N. Huffman "The Trance Hypothesis and the Rock Art of Zimbabwe." *South African Archaeological Society Goodwin Series* 4 (1983): 49-53.
92. Mathias Guenther. *Tricksters and Trancer: Bushman Religion and Society*. Bloomington, IN: Indiana University Press, 1999: 112-113.
93. Jean Clottes and J. David Lewis-Williams. *The Shamans of Prehistory: Trance and Magic in the Painted Caves*. New York: Abrams, 1998: 45, figs. 41-42.
94. Gerhard Bosinski. *Homo Sapiens*. Paris: Éditions Errance, 1990: 73, 76.
95. Olga Soffer, James Adovasio, and D. C. Hyland. "The 'Venus' Figurines: Textiles, Basketry, Gender, and Status in the Upper Palaeolithic." *Current Anthropology* 41:4 (August-October 2000): 517.
96. Soffer, Adovasio, and Hyland. "The 'Venus' Figurines," p. 524.
97. Alexander Marshack. *The Roots of Civilisation*. London: Weidenfeld and Nicolson, 1972: 290.
98. Marshack. *The Roots of Civilisation*, p. 335, n. 17.
99. André Leroi-Gourhan. *L'Art pariétal: Langage de la préhistoire*. Grenoble: Milon, 1992: 158.
100. Bosinski. *Homo Sapiens*, p. 141.
101. Marshack. *The Roots of Civilisation*, p. 309.
102. Marshack. *The Roots of Civilisation*, p. 327.
103. Bosinski. *Homo Sapiens*, p. 232-234.
104. Alexander Marshack. "An Innovative Analytical Technology: A Discussion of Its Present and Potential Use." *Rock Art Research* (1991): 37-59; and "The Female Image: A 'Time-factored' Symbol. A Study in Style and Aspect of Image Use in the Upper Palaeolithic." *Proceedings of the Prehistoric Society* 57:1 (1991): 17-31.
105. Chris Knight. *Blood Relations. Menstruation and the Origins of Culture*. New Haven and London: Yale University Press, 1991: 327-416.
106. *Ibid.*, pp. 449-479.
107. *Ibid.*, p. 479.



C Power 2004 'Women in Prehistoric Rock Art'  
In G Berghaus (ed.) *New Perspectives on Prehistoric Art*. Praeger: Westport, CT/London, pp. 75-103