Figurines, Fertility, and the Emergence of Complex Society in Prehistoric Cyprus

Diane Bolger
University of Maryland, University College European Division, Gruenewburgweg 81, 60323 Frankfurt, Germany. 9 VIII 95

The interpretation of anthropomorphic figurines, whether from Upper Paleolithic Europe or from later prehistoric periods of the Mediterranean region, remains one of the most elusive and problematical areas in the study of early representational art. Perhaps more than any other type of artifact from the prehistoric past, the female figure has persistently elicited a priori concepts concerning the nature of early religion and gender-biased views concerning the roles of women and men in early societies. For the Abbé Breuil, the “Venusen” were manufactured as erotic paraphernalia, providing “pleasure to Paleolithic man during his meals” [Ucko and Rosenfeld


A recent review of college-level anthropology textbooks has shown that establishment views have not changed substantially over the years, often settling for monolithic concepts of "fertility" or "eroticism" to encompass them all [Nelson 1993]. These conclusions are commonly based on fragmentary evidence, with little regard for details of spatial and temporal context or for the socioeconomic components of the cultures that manufactured and used them. For the later prehistoric periods, figurines assumed to represent pregnant females are known from sites in the Mediterranean region, including a substantial group of ceramic and stone examples from Chalcolithic and Bronze Age Cyprus. Obstacles such as the difficulty of establishing whether the figurines do indeed represent pregnant females and the lack of secure contextual evidence have prevented even those critical of the "Venus" theory from developing more socially based interpretive models [e.g., Vagnetti 1980:33–57; Orphanides 1990]. A recent discovery at the Chalcolithic site of Kissonerga near Paphos has opened the problem again by offering important new evidence for interpreting female figurines within a contextual framework. This in turn makes it possible, for the first time in Cyprus, to begin to understand the changing dynamics of gender relations during the centuries immediately preceding the emergence of state-level society.

The Chalcolithic period in Cyprus, which dates from the early 4th to the mid-3d millennium B.C., was a period of social and economic transformation. While settlement sites [see fig. 1] such as Kissonerga [Peltenburg et al. n.d.], Lemba [Peltenburg et al. 1985], and Erimi [Bolger 1988] attest to continuity with earlier architectural conventions and links to the past can be inferred from artifact types and agricultural practices, there were also marked changes. Copper was used for the first time on the island whose later prosperity and very name were bound up with that precious resource [Gale 1991], and there is evidence for population increase and emerging social stratification [Peltenburg 1991, Bolger 1994]. At this time as well there arose a highly distinctive sculptural tradition for which the Chalcolithic period in Cyprus is perhaps best known, comprising representations of females in pottery and stone (fig. 2). Like their precursors of Upper Paleolithic Europe, these figurines have traditionally been interpreted as "mother goddesses" or "fertility figurines," the latter being a particularly attractive concept in Cyprus, the mythological birthplace and chief cult center of Aphrodite in Classical times. The temptation among scholars to "read back" from the Greco-Roman deity to the period of her supposed origins has thus been seductive and compelling, and many interpretations treat the Chalcolithic figurines precisely in this way, as prototypes of Aphrodite, normally referred to as the "Great Goddess" or "Mother" [e.g., J. Karageorghis 1977; V. Karageorghis 1991:1–3; Maier and Karageorghis 1984:34, 40]. The vague, generic image of a "mother goddess" embodying all aspects of "fertility" from sexuality and fecundity to procreation, motherhood, and life in general may be contested on theoretical grounds as subjective, undifferentiated, ahistorical, and gender-biased, much in the same way as have the Upper Paleolithic "Venus"s [Conkey 1991, Nelson 1993]. The very concept of fertility, in fact, is variable, since its cultural meaning and social impact can only be determined within the socioeconomic frameworks of particular societies [Mukopadhyay and Higgins 1988].

Compounding the theoretical problems cited above has been the lack of securely dated and provenanced material. Until recently, most female figurines of Chalcolithic date were fragmentary and derived from unknown or uncertain contexts. Figurines with swollen bellies and large hips, sometimes seated on stools, were as-

![Diagram of Cyprus, showing locations of sites referred to in text.](image-url)
sumed to be pregnant, although there was no real proof of this. During the 1987 season at Kissonerga, however, important contextual evidence emerged when trial trenches were sunk in order to refine the excavation strategy for the remaining seasons. Near the wall of one of the Middle Chalcolithic (ca. 3000 B.C.) buildings and cut down from an extensive extramural surface immediately below the building was an oblong flat-bottomed pit containing an unusual assemblage of artifacts, fire-cracked stones, pebbles, and organic material embedded in a matrix of soil and ash. Stratigraphy and contextual evidence together confirmed that these were deliberate deposits rather than backfill (Peltenburg et al. 1991: chap. 1).

The centerpiece of the deposit was a painted vessel lying in situ at the bottom of the pit. To judge from its circular plan, rectangular entryway, central hearth, and internal dividers, the vessel replicates a standard Chalcolithic building (Peltenburg et al. 1991: chap. 2). A rectangular model door found leaning against the interior wall of the vessel shows how actual entryways may have been constructed, and the bold painted designs on its interior and exterior walls may imitate actual decorative features, since remains of painted plaster have been found inside several of the excavated structures. Eighteen anthropomorphic figurines, ten of stone and eight of pottery, were positioned in and around the building model. One of the pottery examples, and the most important for the present discussion, clearly depicts a parturient female. Although the figurine is broken off at the bottom, enough remains to indicate that she sits on a birthing stool. Moreover, she is shown in the act of giving birth: an infant, painted in red, emerges between her parted legs (fig. 2, center, left). By association, the other figures in the deposit, as well as similar examples from other contemporary sites on the island, can now be linked to pregnancy and birthing ritual.

A detailed study by Elizabeth Goring has revealed im-

**FIG. 2.** Cypriot anthropomorphic figurines of the Chalcolithic period. Top, picrolite: left, Lemba LL 300; right, Lemba LL 152; center, ceramic: left, Kissonerga KM 1451; right, Kissonerga KM 1475; bottom, stone: left, Kissonerga KM 1471; center, Kissonerga KM 1473; right, Kissonerga KM 1474.
portant stylistic and functional differences between stone and pottery examples from the Kissonerga deposit [Peltenburg et al. 1991:chap. 4]. While all but two of the stone figurines are abstract and unadorned, with no clear indication of sex, all of the pottery figurines are recognizably female and were painted with elaborate designs. None of the stone figurines is self-supporting, but all of the ceramic examples are, and although the postures of the stone examples are unknown in all but one case, the pottery figurines exhibit a variety of stances (standing, seated on stools, squatting) that correspond to various stages of pregnancy and parturition. Finally, wear patterns differ, with broad areas of polish detectable on most of the stone examples and patches of flaked paint observable on the ceramic ones. On the basis of these differences, Goring has proposed that the stone figurines were clutched in the hand, probably during childbirth, while the ceramic figurines very likely served a didactic purpose, perhaps as part of puberty rites. But regardless of their particular forms, styles, and functions, the figurines are related contextually and thereby represent cognate aspects of a single, unified set of concepts pertaining to fertility and birthing ritual. The meaning of those concepts is embedded in the social construction of ritual during the Chalcolithic period, and their significance can be appreciated only by interpreting the figurines within a larger social framework.

The repertoire of birthing figures from sites like Kissonerga can be amplified by the inclusion of another important medium, picrolite, a soft, bluish stone used in Cyprus from the Neolithic onwards for a distinctive assortment of figurines and personal ornaments [Xenophonos 1991]. Many of these figurines are found in graves, either as part of standard single inhumations in sample pits or in multiple burials such as the elaborate shaft graves excavated at Middle Chalcolithic Souskiou [Christou 1989] and the chamber tombs of Late Chalcolithic Kissonerga [Peltenburg 1991:30]. The most common picrolite form during the Chalcolithic period was the cruciform, which occurs both as figurines and as small pendants; the latter were incorporated into Dentailium shell necklaces. The Kissonerga birthing figurine [KMI451, described above] illustrates how the pendants were worn [fig. 2, center, left]; it also establishes an important link between cruciform figurines/pendants and childbirth, since the pendant is worn here by a woman in the act of giving birth. On the basis of this association, as well as contextual evidence for the picrolite cruciforms themselves, the latter can now be regarded as birthing symbols as well [Peltenburg 1992]. They have been found exclusively in graves of women and children at Kissonerga, Lebma, and Souskiou, the three main sites of the period which have yielded picrolites in graves. At Kissonerga, all four tombs containing picrolites were single burials of infants or children, and at Lebma four of the five burials with picrolite pendants were single children's burials; the fifth was disturbed and contained no skeletal remains [Peltenburg et al. 1985:143–44]. At Souskiou, contextual evidence is limited because of looting [Christou 1989], but on the basis of the Kissonerga and Lebma evidence it may not be coincidental that the unlooted tomb richest in picrolites [tomb 3, with 16] contained the bodies of at least three adult females and an eight-year-old child. To date no picrolite has been found at any Chalcolithic site in the burial of an adult male.

The final figurine from the Chalcolithic period, this one in limestone, extends the range of fertility images further still. This is the well-known “Lebma lady,” found in situ in a Middle Chalcolithic building at the settlement of Lebma-Lakkous, several kilometers south of Kissonerga [see Peltenburg et al. 1985:281–82 and fig. 81]. At 36 cm in height, it is considerably larger than the figurines referred to thus far. Its fiddle-shaped form is incised and modeled to emphasize the breasts, hips, and pubic area, and its elongated neck and flat head are stylized conventions traceable to the Neolithic period. The Lebma figurine was found lying on its back directly on top of a long radial groove in the plaster floor of the building. The excavators noted that the groove was filled with loose soil, pebbles, and upright sherds and possibly functioned as the bedding for a light reed screen; alternatively, it may have served as a channel for pouring liquids [Peltenburg et al. 1985:36]. Other unusual features of the building include a storage jar containing animal bones and a coarse-ware tray filled with pebbles, ash, and shell. Given the unusual nature of this building and the uniqueness of the figurine itself, one could argue that the Lebma lady is the best and indeed the only possible candidate for the representation of a deity in pre–Bronze Age Cyprus. This hypothesis, however, remains highly speculative.

In summing up all of the above evidence, attention must be paid to the wide range of symbolic images represented in the Chalcolithic assemblage of figurines and cruciform pendants. They are manufactured in a variety of media, and although figurines made of stone are more schematic than those of clay, virtually no two are identical. The self-supporting types demonstrate a variety of postures from standing cruciforms to squatting or seated examples. Some give no clear evidence of pregnancy at all while others appear to depict a single stage of the birthing process. In addition, they cover a wide range of spatial associations, including both domestic and burial contexts. The range of symbolic imagery collectively portrayed is matched by the degree to which the birthing icon appears to have permeated social life (and death) in Chalcolithic times. String-hole wear on the picrolite cruciform pendants attests to their use in everyday life before they were deposited in graves as part of mortuary rituals. As has already been suggested, the ceramic figures may have played important roles in life-cycle events as teaching aids for transmitting vital knowledge about pregnancy and birth; the stone figurines may have been clutched as fetishes; and the Lebma lady may represent a projection of beliefs and rituals surrounding the birthing process into the realm of the supernatural.

The public nature of the use, display, and disposal of figurines, the association of the Kissonerga set with a replica of a typical domestic structure, and the absence
during the Chalcolithic in general of special religious structures or precincts are widely documented in the ethnographic literature of undeveloped, pre-state societies, in which there exists little or no division between public and private spheres. Accordingly, the system of symbols which the figurines incorporate must have had communitywide significance, profoundly affecting the beliefs and practices of all of its members. The social messages which the figurines transmit emphasize the female role in the biological processes of pregnancy and birth. This is important both because it helps to differentiate the Chalcolithic figurines from similar figurines of the Bronze Age and because it informs us about the nature of reproductive ritual among the island's early pre-state cultures. For Chalcolithic society, the pregnant and parturient female form was a symbol used to convey beliefs deemed fundamental to communal survival [Bolger 1993]. As a product of a relatively egalitarian society, this symbol was unlikely to survive in its original form, since the development of social complexity during the Bronze Age involved a marked shift to hierarchical ranking of sites and the emergence of powerful elites who appropriated and manipulated religious symbolism to their own benefit [Knapp 1986]. It is not surprising, then, that the symbols of reproductive ritual known from Kissonerga and other sites of the late 4th to the early 3rd millennium B.C. were fundamentally transformed during the later 3rd and 2nd millennia B.C. as older egalitarian social structures were gradually supplanted by the forces of the emerging state.

Sometime around 3000 B.C., the contents of the ceremonial pit at Kissonerga were gathered together, deposited in the pit, and covered over with burnt organic material [Peltenburg et al. 1991:chap. 1]. Many of the ceramic examples were broken or mutilated prior to burial. In the succeeding, Late Chalcolithic period (ca. 2500 B.C.), pottery figurines are no longer in evidence, but birthing figurines in the form of picrolite cruciforms continued at Lemba and Kissonerga. For the next phase of reproductive ritual in Cyprus we must turn to the Early and Middle Bronze Age, when a considerable number of female anthropomorphic figurines were included in burials in large communal cemeteries along the north coast.

Unfortunately for our understanding of figurines of the Early and Middle Bronze Age, contextual problems abound. Virtually all of the figurines of known provenance during those periods have been found in tombs, most notably at the large cemetery sites at Vounous and Lapithos [Stewart and Stewart 1950, Gjerstad et al. 1934]. In contrast to the multiple burials in pit or shaft graves of the Middle and Late Chalcolithic periods, the rock-cut chamber tombs of the Bronze Age were substantially larger and could thus accommodate additional burials without the need to exhume earlier ones [Peltenburg 1992:311]. These extensive cemetery sites with their rich array of burial goods made up until very recently all that was known of the material culture of the earlier phases of the Bronze Age. Consequently, interpretations of the figurines have been commonly linked to sanctuar-ies, chthonic cults, or other mortuary rituals. As we have seen at Kissonerga, there are often real, palpable links between the living and the dead, but in the absence of substantial settlement evidence we have not been able to trace these links during the first half of the 2d millennium. An even more pervasive problem regarding context concerns the amount of unprovenanced material from tombs, often as the result of illicit digging. Here and elsewhere in the Mediterranean, figurines have been particularly affected because of their value on the antiquities market [see Gill and Chippendale 1993]. The vast majority of known examples are thus of unknown or uncertain provenance, and interpretations of their function must in most cases be drawn from purely intrinsic evidence such as formal and stylistic attributes.

Most of the figurines of Early to Middle Bronze Age date are of dubious sex, with few anatomical or decorative details. The most common types are the so-called plank idols, which appear in a variety of forms throughout the late Early to Middle Bronze Age [fig. 3; complete corpus described and illustrated in Morris 1985 and V. Karageorghis 1991]. Females when identifiable have been distinguished by the presence of modeled breasts. One of the most common female types, and of particular importance here, is a female holding an infant [fig. 3: top, center and right], these occur as free-standing figures and as attachments to pottery vessels. Compared with the Chalcolithic figurines, they are highly standardized, consisting of flat figures with short arms. The arms are bent, the left holding an infant and the right holding the lower part of the infant's body. The infant is usually contained in an arched cradle held either in the figure's left arm or on her lap. Stylistic features such as details of clothing and anatomy are also rendered in standard fashion. In contrast to the Chalcolithic figurines, which focus on stages of the birthing process, those of the Bronze Age emphasize the postpartum relationship between mother and child. Although the mother-infant icon is not the only type of female figure of the Bronze Age—there are female plank figurines, for example, not holding infants—it is the only one which depicts the relationship between females and their offspring. And in contrast to the Chalcolithic examples, it emphasizes the social role of mother (mater) rather than the biological role of birth-giver (genetrix). This is a significant departure and one that can be explained only by examining the fundamental alteration of gender constructs within the trajectory of social and political change accompanying the emergence of complex society.

To judge from excavations of sites such as Erimi, Kissonerga, and Lemba, Chalcolithic society in the late 4th millennium B.C. was composed of relatively small, egalitarian groups of village-based subsistence-level cultivators [Bolger 1988; Peltenburg et al. 1985, n.d.]. During the 3rd millennium, social and economic factors such as population growth, surplus storage, accelerated exploitation of copper resources, and the acquisition of foreign prestige items contributed to increased social inequality. The unwillingness of village-based tribes to partici-
pate in emerging social hierarchies may account for the widespread abandonment of sites at the end of the Chalcolithic period (Peltenburg 1993). According to this model, settlement discontinuity, which is known to have occurred in Cyprus throughout the Neolithic and Chalcolithic periods, may be attributed to repeated community fission, a social response to advancing complexity and the result of the refusal of subgroups to empower elites. At the end of the Chalcolithic period (ca. 2500 B.C.) and continuing into the Bronze Age, Cyprus began to take part in a larger geographical and economic sphere, a development which can be inferred from changing demographic patterns (including population shifts and lower levels of fission), as well as from an increase in craft specialization, trade in prestige items, and metallurgy (Muhly 1985; Knapp 1993; Manning 1993). The style of the figurines at this juncture attests to outside influence, particularly from mainland Anatolia, and the repertoire of ritual symbols is expanded to include types known throughout the Near East, such as snakes, bulls, and seated male figures.

Evidence for the changing relationships between men, women, and children is to be found in the many scenic compositions in clay from Cypriot tombs of the Early and Middle Bronze periods, which in the absence of extensive settlement evidence furnish particularly important details on the activities of daily life (described and illustrated in Morris 1985:264–90 and V. Karageorghis 1991:chap. 3). The most pertinent in this regard is a clay model from a tomb at the large cemetery site of Vounous near the north coast (fig. 4). Traditionally, because of its burial context, this scene has been interpreted as a sanctuary, a sacred enclosure, or a funerary ritual (Di-kaios 1940; Frankel and Tamkavi 1973; Rutkowski 1979; Mogelonsky 1988:216–22; V. Karageorghis 1991:140). Given its uniqueness, however, and the lack of actual excavated structures with which it might be compared, we may never know its precise function. Peltenburg (1994) has interpreted this scene symbolically and, ignoring the event, drawn attention to the constellation of figures positioned within the bowl. Only one female is present, a woman holding an infant. All but two of the other human figures are clearly male, including the four figures seated against the wall, the six standing in a circle, and the large figure seated on the chair in the center of the scene. On the basis of the clear separation of the sexes in this scene and the sizes and arrangement of the figures, Peltenburg argues compellingly for socio-political interpretation: that the figures are united by a common theme, the idealized “good life.” Prosperity is displayed by penned cattle, and the vitality of the beasts is linked to human fertility by the intentional placement of a woman and child, the smallest figures in the scene, beside them; authority is represented by assemblies of men in solemn discourse or seated along the wall and by a ritual in which a male, the largest figure in the scene, is seated on an elaborate chair above a celebrant who kneels in the performance of some rite beneath bu-
crania, pillars, and snakes. The constellation of figures in the Vounous bowl thus communicates a particular view of a fitting Early Cypriot social and religious order. Hierarchy is depicted spatially by the separation of groups into different graded levels, with female, infant, and animals in the lowest order and a seated male, perhaps a deity, in the highest. The emphasis here is on a social order in which men rather than women are the active agents and in which “proper” male and female behavior is clearly defined and segregated.

During the Late Bronze Age, Cypriot society underwent another profound set of transformations that signaled the emergence of full-fledged social complexity [Knapp 1993:88]. Excavations at a number of large settlement sites along the coast (Enkomi, Kiton, Kalavasos, Hala Sultan Tekke, Maa) have provided clear evidence for increased levels of population, trade, militarism, and craft specialization and the advent of a market economy based on the production and distribution of copper and prestige goods [Knapp 1993:97]. The concentration of surplus wealth in the hands of powerful groups of elites must have been instrumental in the breakdown of corporate kin groups and their gradual fusion under increasingly centralized political authorities. Religious iconography of the period reflects such changes, with the manufacture of new types in metal and the adoption of a new repertoire of figures which, on the basis of style and find context, can more justifiably be considered deities than their predecessors [Knapp 1986]. The new ideology accompanying these profound developments is epitomized by the most famous of the Late Bronze Age figurines, the so-called ingot god from Enkomi, a male figure with horns standing upon the chief symbol of wealth and power during the Late Bronze Age, a copper ingot [Courtois 1971]. Within the realm of reproductive ritual, however, the mother-infant icon remains the only symbol known to us. It occurs in various forms, the most popular of which was the so-called Astarte type, presumably of Syrian influence [fig. 3, bottom].

Recent anthropological and archaeological studies have focused upon the role played by religious ritual in the legitimation of social hierarchy [Paige and Paige 1981, Shanks and Tilley 1982, Brumfield and Earle 1987, Earle 1991]. Ritual symbols not only reflect ideology but promote political agendas when individuals or groups intend on gaining or maintaining power manipulate them to serve their own ends. Even during the Chalcolithic period, within a relatively egalitarian social framework of incipient complexity [Knapp 1993:89], it is unlikely that the prerogative of using and displaying birthig symbols was open to all. The occurrence of picrolite pendants in graves of only a few individuals, for example, clearly suggests the opposite. From the point of view of gender, however, it seems equally clear that prior to the Bronze Age women as well as men took part. With the radical social and economic changes that accompanied the emergence of social complexity during the Bronze Age, women may ultimately have been excluded from important rituals as powerful elites and centralized authorities created structures in which women’s roles were increasingly restricted and social and economic inequalities became institutionalized.

The regulation of female access to the means of production and the control of female reproductive capacities have been linked to the rise of the state by a number of marxist and feminist anthropologists [Coontz and Henderson 1986, Leacock 1986, Lerner 1986, Moore 1988, Ortner 1978, Sacks 1979]. This process involves important changes in gender relations, especially between the social constructs termed “husband” and “wife.” Within the sociopolitical context of the emerging state, the cultural definition of “husband” came to involve the protection, restriction, and control of wives’ economic, reproductive, and sexual activities. Women’s procreative role was transformed from child-bearer, a role linked primarily to female fertility, to mother, a role restricted by the ideology of the patriarchal family. In this way, paternity could be assured and the legitimation of heirs closely controlled, and through the ideology of purity and family honor kinship groups could forge identities and acquire or maintain status [Schneider 1971]. The female reproductive symbol, which had been in existence on the island for over two millennia, thus served as a convenient vehicle for transmitting the new social messages of the emerging state. It was simply a matter of pouring new ideological wine into old spiritual bottles. As a sacred symbol, the mother icon sanctified new gender roles, including a woman’s role as mother and perhaps its frequent corollary, premartial virginity. Moreover, the symbolic presentation of these powerful messages as part of the “natural” world order may have helped to mediate, pacify, or even override many of the social contradictions inherent in the transition to state society, particularly those regarding the relationships between women and men. In a recent study of the entire corpus of plank figurines from Cyprus, it has even been suggested, following Talalay’s (1987) work with Neolithic figurines from Greece, that the Bronze Age figurines may have served as tokens in patrilocal, exogamic marriage contracts [a Campo 1994]. If so, this would further emphasize the difference between the concept of generalized fertility represented by the Chalcolithic cruciforms and its appropriation and transformation within an emerging patriarchal social system during the first half of the 2d millennium.

With the disappearance of birthig figurines during the Middle Chalcolithic and picrolite pendants during the Late Chalcolithic and with the attendant collapse of communal modes of production in the face of the growing dominance of political elites, conditions were ripe at the threshold of the Cypriot Bronze Age for the construction of patriarchy. For women, the emergence of social complexity may ultimately have resulted in an overall loss of social and economic status and a diminution of prerogatives that attended their previously valued roles in procreation and subsistence. At the very least, we can infer an ideological decline of female status in the conceptual shift from genetrix to mater so clearly manifested by the Cypriot anthropomorphic figurines. When viewed in a gendered light, the figurines,
far from representing vague, immutable notions of “fertility,” serve as clear signposts for the emergence of the patriarchal family, and they graphically document some of the profound changes that resulted in the relationships between women and men—changes that remain fundamentally embedded in the fabric of state-level society today.

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STEWARD, J. D. AND E. STEWART. 1950. Vounous 1937–38:
The Vision Thing: Diagnosis of Endogenous Derivation in Abstract Arts

Jeremy Drongfield
Department of Archaeology, University of Cambridge, Downing St., Cambridge CB2 3D2, England. 20 IX 95

Every so often in archaeology, an issue, theory, or methodology is brought forward that takes debate to an extreme polarisation of opinion. Lewis-Williams and Dowson (1988) began one of these processes by claiming that “entoptic phenomena” could be identified in Upper Palaeolithic art. This implied, the argument ran, that the art was produced in connection with “trance” or consciousness-altering practices (cf. Bednarik 1984, 1987). This argument has been a source of controversy ever since. Perceived flaws in the “neuropsychological model”—its ethnographic source, theoretical formulation, and methodology—have led to its being hotly disputed and often utterly rejected.

The essence of the issue can be distilled into a sequence of fundamental questions: Is the induction of “visions” through trance or other means a frequently occurring practice? Where such visions are graphically represented, is there any degree of morphological uniformity? If such uniformity is present, is it distinguishable from the morphological characteristics of images derived from other, nontrance sources? If so, would this make it possible to identify the image source in a prehistoric assemblage of art?

This paper takes the debate a step farther by answering these key questions. It first examines Lewis-Williams and Dowson’s neuropsychological model and identifies the fundamental elements of a new diagnostic approach. Subsequently, it describes the testing of this approach against samples of well-known art. First, however, it is necessary to clarify the terminology employed.

OBJECTIVE VISUAL PHENOMENA

As a consequence of recent debate, the term “entoptic phenomena” has entered the archaeological vocabulary. The division of all “nonreal” vision into “entoptics” (geometric or other abstract shapes) and “iconic hallucinations” (fully formed images derived in part from visual memory) causes problems. Lanteigne (1991a, b, 1992; see also Scott 1991) argues a consensus of usage in neuropsychology in which “entoptic” refers specifically to phenomena generated within the eyeball, separately from other parts of the visual network. Lewis-Williams and Dowson (1988:202; 1992) argue, on etymological grounds, that “entoptic” should be a generic term (Greek ‘within vision’). This confusion stems from Tyler (1978), who argued that entoptic phenomena originate in the retina and the postretinal, subcortical visual system up to and including the lateral geniculate nucleus. The origin of this classification is in the mode of stimulus rather than a strict structural one. Since Tyler was able to induce sensations originating in the postretinal structures by deep pressure on the eyeballs, he classified them as entoptic.

The terminology used here [fig. 1] is based on points of origin in the visual system and relates more securely to current knowledge of how the system is structured. The most basic division is between vision generated by patterns of light stimuli from the “real” exterior world and vision generated spontaneously by the central nervous system. “Subjective visual phenomena” is preferred here as a suitably broad category for the inclusion of all “nonreal” visual experience. Although not an orthodox term, it does have some precedence of usage (e.g., Georgeos 1985, Knoll and Kugler 1959, Young et al. 1975).

There is no coherent and widely accepted neuropsychological theory of how subjective vision arises. Studies of “phosphenes” and hallucinations began in the 19th century (Purkinje 1823) and reached a peak in the late 1960s and early 1970s. Partly because of the decline in acceptability of mind-altering substances (along with simple loss of interest in other techniques), research faded into almost total negligibility in the early 1980s. By contrast, the study of “normal” vision has made most

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2. Some readers may see problems with this use of “subjective.” Since vision exists only as the neural coding and interpretation of sensory signals in the individual brain, all vision is, in this sense, subjective. However, there is a direct causal relationship between the properties of extrasmatic stimuli (shape, colour, movement, etc.) and the activity engendered in the internal neural structure. Subjective vision as defined here thus consists of spontaneous activity in the neural structure which is not directly related to extrasomatic stimulation of photoreceptive cells.

3. However, see Asaad and Shapiro (1986), Horowitz (1975), Meier-Koll (1974), and Slade and Bentall (1988) for attempts to theorise hallucination.