

**STONEHENGE AND ITS PEOPLE: THOUGHTS FROM MEDICINE**

**By**

**Anthony M. Perks**

**Department of Obstetrics and Gynaecology**

**University of British Columbia**

**Children's and Women's Hospital**

**Room 2H30-4500 Oak Street**

**Vancouver, BC. V6H 3N1 Canada**

**Keywords:** Stonehenge, Medicine, Earth Mother

Correspondence to Professor Anthony M. Perks

## SUMMARY

This paper considers the nature of Stonehenge and other Neolithic sites from an unusual perspective, that of medicine. At Stonehenge, the finish and pattern of the stones suggest that the trilithons represent the parents of the past, while the overall layout symbolizes Earth Mother, the Mother Goddess. Concern for this deity probably reflects the enormous infant mortality of the time; she represented birth, and the continuance of life. For this reason the circle came to represent her, since, unlike rows of stones, a circle goes on forever; there is circumstantial evidence to support this view. Therefore, the other widespread circles may also symbolize this goddess, while different sites may show her in different roles. The plan of Stonehenge suggests her in the role of Goddess of Conception and Birth, that of Avebury as Goddess of Motherhood and Nurture, and the "T-plan" of West Kennett shows her ready to give rebirth to her people. The underlying principle may be that the circle represents the goddess, the female, and hope for the continuance of life. As so much at Stonehenge, these suggestions cannot be proven; however, they are based on direct observations on the stones, as seen today, and are worth consideration.

Stonehenge is only one of many stone circles left by Neolithic peoples, but it is certainly the most famous (Balfour, 1979; Chippindale, 1994; Cleal, Walker & Montague, 1995). Its massive arches, the trilithons, have raised awe for generations, and to many, it is the symbol of Britain and its heritage. Its fascination comes partly from the huge size of the trilithons, and the strange aura which surrounds them, but also from the mysteries the henge conceals; there are no records, no original inscriptions, and we know little of its use or of the people who started building it almost 5000 years ago (Chippindale, 1994; Cleal et al, 1995). Despite this, recent considerations from the field of medicine have suggested that it symbolizes the family, the ancestors, and most directly, Earth Mother, (Perks & Bailey, 2003); Earth Mother is one aspect of the great creator goddess of the Neolithic Age (Campbell, 1988). Here we extend these ideas to find out whether they can help us understand the culture, and other ancient sites.

### **Stonehenge, Histories and Medicine**

It would seem unlikely that this enormous pile of stones would have much to do with medicine. However, medicine and physicians have touched the henge in many ways. Ancients believed that water dripping from the stones could cure disease (Chippindale, 1994), and as late as 1707 the Revd. James Brome still considered that water thrown on scrapings of the stones would heal sores and “green wounds” (Burl, 1987). This could even have been true. The apparently stark stones are covered by a thin film of micro-organisms, so that ancient Stonehenge might have heralded the antibiotics of today. Unfortunately, physicians were slow to follow up these possibilities, and spent their time trying to map and understand the henge. The most famous was William Harvey. Around 1620, when James I, his architect Inigo Jones, and the Duke of Buckingham were mapping and digging in the henge, Harvey was not only breaking

new ground with his studies of the circulation, but also taking an interest in the monument. Sadly, little was accomplished, except deep holes, damage, and probably collapse of one of its greatest stones (Burl, 1987; Cleal *et al.*, 1995). However, it is unlikely that any human remains were found, since Harvey would have recognized them. Forty years later, Dr. Walter Charlton's ideas that the henge was a royal Danish court were soon rejected, but by introducing John Aubrey to Charles II he instigated Aubrey's remarkable investigations (Balfour, 1979). However, in the next century two physicians had notable success, and both came to investigate the henge for unusual reasons. Dr. William Stukeley, an able general practitioner, became obsessed by John Aubrey's opinion that Stonehenge was a Druid temple (Balfour, 1979; Burl, 1987; Chippindale, 1994). This resulted in his careful surveys and in a more accurate placement of the trilithons in a horseshoe setting (Chippindale, 1994). Dr. John Smith confirmed these findings. He began studies of the henge because he was an early advocate of smallpox vaccination; this raised hostility in the local population ("malevolent villains: NOYSEY WRETCHES"-the Luddites of 18<sup>th</sup> Century medicine), so he fled to Stonehenge to carry out solitary work (Burl, 1987). Between the two, Smith and Stukeley laid down ideas that Stonehenge was related to movements of the sun, concepts which have dominated the 20<sup>th</sup> Century (Burl, 1987; Chippindale, 1994). These caught the imagination of the public, but recent work has added extra explanations; this work came from the unlikely direction of gynaecology (Perks & Bailey, 2003).

### **Stonehenge and Gynaecology**

Our earlier study pointed out that there was no clear explanation for the uprights of the trilithons being placed in pairs, with one of smoother finish than the other (Whittle, 1997; Perks & Bailey, 2003). A possible explanation came from gynaecology. Oestrogens are known to

hydrate the skin and make it smoother and softer in the female (Guyton, 1981). This suggested that the stones symbolized the male and female, united together, with the small but precious bluestones at their feet, possibly the children. When this concept of family and birth was extended to the rest of Stonehenge, it became clear that there was a notable similarity between the layout of the henge and the anatomy of the vulva (Perks & Bailey, 2003). Figure 1 shows the comparison of the vulva to the basic plan of Stonehenge, and to the geometrical analysis made by Alexander Thom: the anatomy is particularly close to the geometric study. This unusual parallel made sense when related to the Neolithic concept of the great creator goddess, Earth Mother (the Mother, or Great Goddess), who the henge seemed to represent (see Campbell, 1988).

Prehistoric peoples would have had little difficulty in constructing a large, symbolic vulva; the plan was simple, and they were capable of producing enormous and detailed carvings of a giant in Dorset, and of a White Horse on the Berkshire Downs; in South America, early populations made designs so large that they were only visible from the air. Nor would the presentation of the vulva been strange to them. Prehistoric figures of the maiden-goddess show this area clearly, and it has already been suggested that small cups excavated with phallic objects represent female organs (Burl, 1987). However, this open attitude is seen most clearly in the phallic objects. This is shown graphically in the Cerne Abbas Giant, carved on a hillside in nearby Dorset (Cohen, 1977), and older phallic carvings are widespread, found in at least 6 Neolithic sites (e.g. Maumbury Rings). Most significantly, one was found in Stonehenge, close to the trilithon which bears the symbol of the Goddess (Atkinson, 1956; Burl, 1987; Cleal *et al.*, 1995). Whole pillars can have this meaning, as in Tara, Ireland, and figurines with both breasts and erect penises have been found in Somerset (Burl, 1987). Accordingly, suggestions of

fertility cults have been made before (e.g. Cleal et al., 1995). Clearly, the Neolithic people were free from the puritanical influences imposed by later religions.

The concept of a creator goddess was also easily acceptable to Neolithic people. She probably arose in the Paleolithic, and persisted until destroyed by the Babylonians and Judeo-Christianity (Campbell, 1988). There is evidence for her from hundreds of figurines found all over Europe, and there are realistic carvings in France and Malta (Burl, 1987; Campbell, 1988). In Malta, there is a magnificent reclining “Venus”, which suggests that this goddess came to Europe over the early landbridge from Africa, many centuries before Stonehenge ever existed. Her importance is entirely reasonable. The closest Neolithic people came to creation was the birth of their children, their animals, and the rebirth of summer. The mother had special importance: she could still deliver even if the father was far away, or even dead; she was the better symbol of the future. Is there any evidence for this Great or Mother Goddess at Stonehenge, apart from our recent suggestions (Perks & Bailey, 2003)? Two observations suggest there is such evidence. Firstly, three symbols thought to represent her are found in the innermost sanctum of the henge. Two, one large, are carved on Stone 57, significantly the smooth upright of a trilithon, by our definition “female”; a third is on a fallen lintel (Atkinson, 1956; Burl, 1987). Secondly, support may come from the recent remarkable discovery of the “Amesbury Archer”. This king or chief was found only 5 kilometers from Stonehenge, but analysis of oxygen isotopes in his tooth enamel showed that he had come to Wessex from the Alps-and the Great Goddess was important to Germanic tribes (Perks & Bailey, 2003).

If the circles of Stonehenge represent this Great Goddess, it is reasonable to suggest that other smaller circles, built all over the British Isles, perhaps by smaller populations, also represent this deity. Stonehenge, raised in the last years of the Neolithic, is only the most exact

symbol of the Goddess, but one which points the way to understanding other ancient sites. But why should the circle have come to have this meaning? We will never know for sure, but the answer may lie in paediatrics.

### **Stonehenge and Paediatrics**

The Mother Goddess represented birth and continuance of life. In the harsh world of the Neolithic, this was far from certain. Estimates from earlier sites (Stonehenge has few inhumations) show that infant mortality was unbelievable, and there is little to suggest that this would have changed by the time of the building of the henge (Burl, 1987); even as late as the seventeenth century (AD), between a quarter and one-third of children died in the first year of life, and only half reached the age of fifteen (Williams 2004). In times before Stonehenge, things were worse. In the Orkney's, about 50% of children died within a year, and 20% before three months. At Hambledon Hill, about 20 miles from Stonehenge, 60% of the skeletons were infants or children. Closer still, at Fussell's Lodge, 7 ½ miles from Stonehenge, remains of children outnumbered adults 2 to 1, and few survived age 7. Estimates for Salisbury Plain suggest that most people died in infancy or childhood, and less than 50% reached age 15 (Burl, 1987). For those few women who reached maturity, life was short; at Fussell's Lodge women died around age 31, and estimates for Wessex before the building of the henge suggest a lifespan of only 20 years. In Scotland, at the time of Stonehenge, 85% of women died by age 25. Unlike today, this was earlier than the age for men, since, despite warfare, 50% of Neolithic men lived to the later age of 36 (Burl, 1987); this probably reflects the problems of pregnancy and birth. In addition, many diseases known today afflicted Neolithic people (Burl, 1987). The major problem of malnutrition was probably hard on children. In adults, osteoarthritis was widespread; fractures were common, and badly treated, and there is evidence for brutal warfare. Skulls were

trephined with stone implements (70 examples in Beaker times); surprisingly, some recipients survived. To these problems can be added spina bifida, spinal rheumatoid disease, and even poliomyelitis. There can be no doubt that birth and survival were uppermost in the Neolithic mind.

If we accept this incredible infant mortality, and the short lifespan of the mothers, we can understand the importance of the creator Mother Goddess, which Stonehenge seems to represent. We can also *suggest* the meaning of other Neolithic sites – although, as in most aspects of Stonehenge and related monuments, so little is left today that we can do little more than make reasonable suggestions. Near Carnac, in Brittany, a kindred people, with close trading ties to Wessex, built multiple rows of stones which sometimes go for over a half a mile, and can include over 1000 stones (Le Méneac) (Cohen, 1977; Burl, 1987). We know little of their use, although they were probably processional. Such avenues, which often lead to circles, might well have represented the male counterpart of the female circle. However, there is a second possibility, not exclusive of the first. They may also symbolize the long continuation of the people; processions could represent progress into the future. Such rows exist in Britain (Cohen, 1977; Burl, 1987). They are found on Dartmoor and in Scotland: those at Stall Moor in Devon go on for over two miles, and end in a great stone circle (Burl, 1987). However, such rows are less impressive than those in France, and rare compared to the many hundreds of stone circles which dot the British Isles. Perhaps some Neolithic thinker realized that rows of stones, however long, come to an end, but circles go on forever. This is the symbolism of the wedding ring today: a contract without end. Since the Mother Goddess represented birth and the continuation of the people, the circle came to be her symbol, and the symbol of the female. There is circumstantial evidence for this. Burl (1987) has pointed out that it was almost invariably women's bones which were

deposited at the entrances or special parts of ritual circles. Remains of a young girl have been found near the southern entrance of the great circle of Avebury; a female dwarf, of 30 years of age or more, surrounded by a circle of stones, is buried in the Palisades, and perhaps the most significant is the body of a sacrificial 3 ½ year old girl found in the center of Woodhenge – by our analysis, in the symbolic birth canal (Burl, 1987; Dames, 1996, Perks & Bailey, 2003). It has been suggested that these girls were personifications or surrogates for the Goddess, perhaps there to sanctify the ground (Burl, 1987). This would agree with a feminine aspect to the circles, and support the ideas given here. Possible sacrifices of young men are known, but usually associated with rows of stones, not circles (West Kennett Avenue) (Dames, 1996).

It must be pointed out that there are other representations of the Goddess. In the south of France, there are remarkably detailed figures, but the difficulty of carving such detail on one hard stone with another led to simpler and more abstract symbols, as found in Brittany – forms such as rectangles with hints of heads and arms, the “*mère-déesse*” carvings of Prajou-Menhir (Figure 2) (Burl, 1987). Some of these are found in Stonehenge. However, there is no clear evidence for these in any other part of Britain (Burl, 1987). We suggest that in the British Isles the circle itself came to represent the Goddess, with Stonehenge as its greatest triumph. If this is true, the circle of the Neolithic is strangely close to the symbol of the female used today in medicine and genetics (Figure 2). However, it would be more than unwise to suggest any direct connection.

### **Stonehenge and Obstetrics**

Our earlier study suggested that the empty center of Stonehenge represented the birth canal, the symbolic passage by which Earth Mother delivered the animals and plants so vital to the Wessex people (Perks & Bailey, 2003). There may be support for this from ancient burial

mounds, many of which are found on Salisbury Plain. Some consist of a long tunnel leading to a central chamber, and it has already been suggested that these represent the nurturing womb (Chippindale, 1994; Dames, 1996). This is also supported by the treatment of the dead. In the 19<sup>th</sup> century, Dr. John Thurnam, Superintendent of the County Asylum at Devizes, pointed out that although secondary interments often showed extended skeletons, no skeleton in any primary burial had been found in any but a “crouched” position, usually head to north (Balfour, 1979). Although customs changed, and early skeletons were dismembered, while some later burials were face down (Heytesbury) or on the back (Bush Barrow), this flexed position on the side was the usual form of burial (Figure 3) (Burl, 1987). As Balfour recognized, this was the foetal position, ready for return to the “bosom of Earth Mother” (Balfour, 1979). However, we would suggest that it was more likely to be a return to the womb of Earth Mother, so that she could give rebirth to her people, just as she gave rebirth to the summer (Perks & Bailey, 2003). A clue to the truth may come from the long barrow of West Kennett.

The long barrow of West Kennett is a remarkable structure (Balfour, 1979). It is large, and of unusual shape (Figure 4). The long body of the mound ends in a series of stone chambers, which opened to the east, the rising sun, as in many early barrows (Burl, 1987). Again, there is some resemblance to the womb and vulva, this time seen from the ventral aspect (Figure 4, upper diagram). The chambers contained at least 45 skeletons from many generations, useful to a Dr. Toope of Marlborough who, around 1685, removed bones to make his “noble medicine” (Balfour, 1979). The chambers were probably in use for about 1000 years, but they were eventually closed by great stones, not unlike those at Stonehenge to the south. However, these stones did not stop at the sides of the doorway, but continued out for a considerable distance on both sides, to give the plan a strange T-shape (Figure 4, lower diagram) (Balfour, 1979). The

reason is unknown. However, Dames has suggested that such barrows represent the Great Goddess in a squatting position (Balfour, 1979; Chippindale, 1994; Dames, 1996). We would suggest that, in the light of all these considerations, West Kennett represents the Mother Goddess, legs apart, ready to give rebirth to her people (Figure 4).

### **Final Considerations**

The Great Goddess goes by many names – Earth Mother, Mother Goddess, Winter Goddess, Nerthus, Terra Mater – and she performed many functions. At times she was a fertility goddess, at others, the bringer of the harvest and earthly needs – all variants of a similar theme. She could also take the guise of an old hag (Balfour, 1978; Campbell, 1988; Dames, 1996). However, her dominant role was creator or Mother Goddess. In Stonehenge she seems to have the role of Goddess of Conception and Birth, where Sun Father, recalled at the winter solstice, could give the warmth and light to allow her to give rebirth to the summer (Perks & Bailey, 2003). At Avebury, the largest circle in the Neolithic world, the twin circles within the great outer circle of the Goddess could represent breasts (Figure 5), and the Goddess in the role of Motherhood and Nurture. At West Kennett, she may be Guardian of the Dead (Burl, 1987), but also ready to return her people to the world, as Goddess of Rebirth; perhaps the entrance faced the rising sun so that Sun Father could act again, as he did to raise the summer (Perks & Bailey, 2003). There have been other suggestions that the Wessex people believed in “Another World”(Burl, 1987); perhaps they believed in reincarnation, eventual rebirth into this world, as suggested by West Kennett.

Stonehenge suggests many possibilities. However, it should not be strange to us that the trilithons symbolize the ancestors, the parents of the past, while the overall structure is a temple built to honour the Great Goddess: the cathedrals of our age have many memorials to our

ancestors, but the buildings are there to glorify our God. Perhaps we should look on Stonehenge as a Neolithic Cathedral, but this time sacred to a goddess, while the widespread smaller circles are the churches. However, the underlying concept may be that the circle symbolized the goddess, and the female. Nevertheless, these can only be reasonable suggestions, based on the little left to us today. Until some dedicated archeologist unearths new evidence, we must be satisfied with this – and better evidence may never come. Stonehenge will probably keep its mysteries. I think we will all be glad of that.

### **ACKNOWLEDGEMENTS**

I wish to thank the many authors listed in the references for their invaluable information, and particularly Aubrey Burl for his excellent study; Roshni Nair for help in the preparation of the manuscript; Darlene Bailey and all the members of the Department of Obstetrics and Gynaecology for many forms of help and kindness.

## REFERENCES

1. Atkinson R.J.C. 1956. Stonehenge. London: Hamish Hamilton.
2. Balfour M. 1979. Stonehenge and its Mysteries. London: MacDonald & James.
3. Burl A. 1987. The Stonehenge People. London: Dent & Sons.
4. Campbell J. 1988. The Power of Myth. New York: Doubleday.
5. Chippindale C. 1994. Stonehenge Complete. Revised edn. London: Thames & Hudson.
6. Cleal R.M.J, K.E. Walker & R. Montague. 1995. Stonehenge in its landscape: twentieth century excavations. London: English Heritage. Archaeological Report 10.
7. Cohen I.L. 1977. The Secret of Stonehenge. Greenvale, New York. New Research Publications.
8. Dames M. 1996. The Avebury Cycle. London: Thames and Hudson.
9. Guyton, A.C. 1981. Textbook of Medical Physiology, 6<sup>th</sup> edn. Philadelphia: W.B. Saunders Co.
10. Perks A.M & Bailey D.M. 2003. Stonehenge: a view from medicine. Journal of the Royal Society of Medicine 96:94-98.
11. Whittle A. 1997. Remembered and imagined beginnings: Stonehenge in its traditions and structures of meaning. Proceedings of the British Academy 92:145-66.
12. Williams A.N. 2004. Child adoption in the seventeenth century: vignettes from Defoe and Pepys. Journal of the Royal Society of Medicine 97:37-38.

## LEGENDS

- Figure 1. Comparisons of the plan of Stonehenge (A), Alexander Thom's geometric analysis of Stonehenge (B), and the anatomy of the human vulva (C). In (A) standing stones are shown as dark circles; fallen or missing stones as large, open circles; bluestones as small dots (adapted from Chippindale, 1994). (B); based on Chippindale, 1994. (C); adapted from Snell, R.S. Clinical Anatomy for Medical Students, 5<sup>th</sup> edition, Little Brown, 1995. Diagrams (A) and (C) adapted from Perks & Bailey, 2003.
- Figure 2. Symbols of the Mother Goddess. Symbols from France based on Burl, 1987.
- Figure 3. A Beaker Burial, in the flexed, foetal position, from Roundway Down, Wiltshire; from Burl (1987); reproduced with permission from J.M. Dent & Sons Ltd.,
- Figure 4. The West Kennett Long Barrow (upper photograph); a plan of the eastern end of the barrow (after Piggot) (lower diagram). Both taken from Balfour (1979); reproduced with permission from MacDonald & James.
- Figure 5. The Circles at Avebury, as they may have appeared on completion (from The Celtic Druids by Godfrey Higgins, 1829). Taken from Balfour (1979); reproduced with permission from MacDonald & James.

Figure 1 Perks  
(revised)

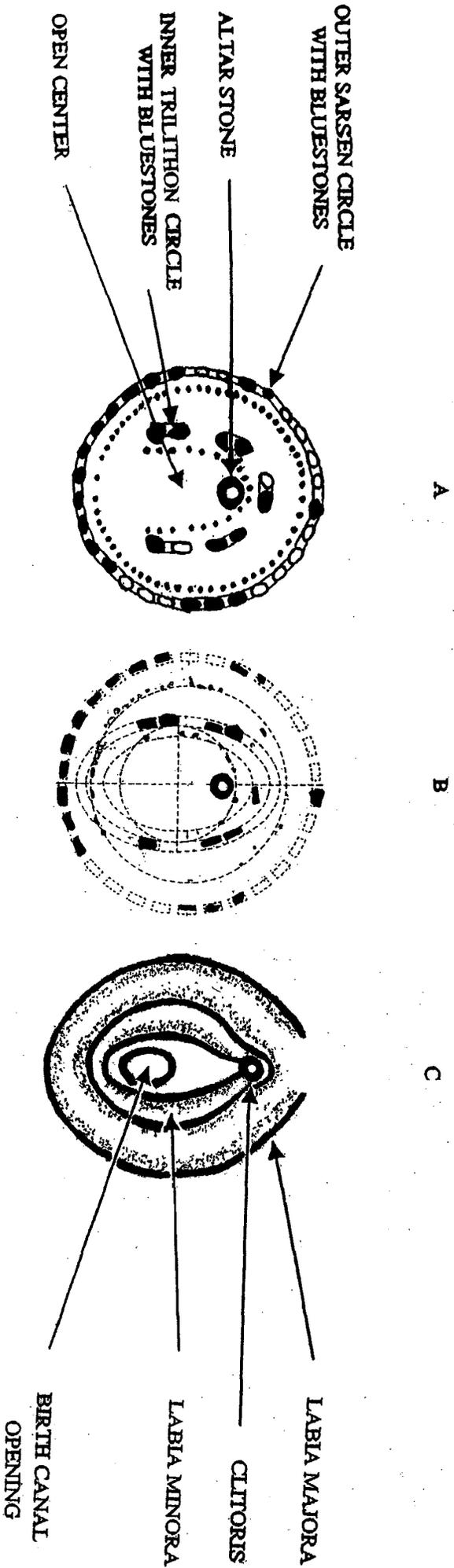
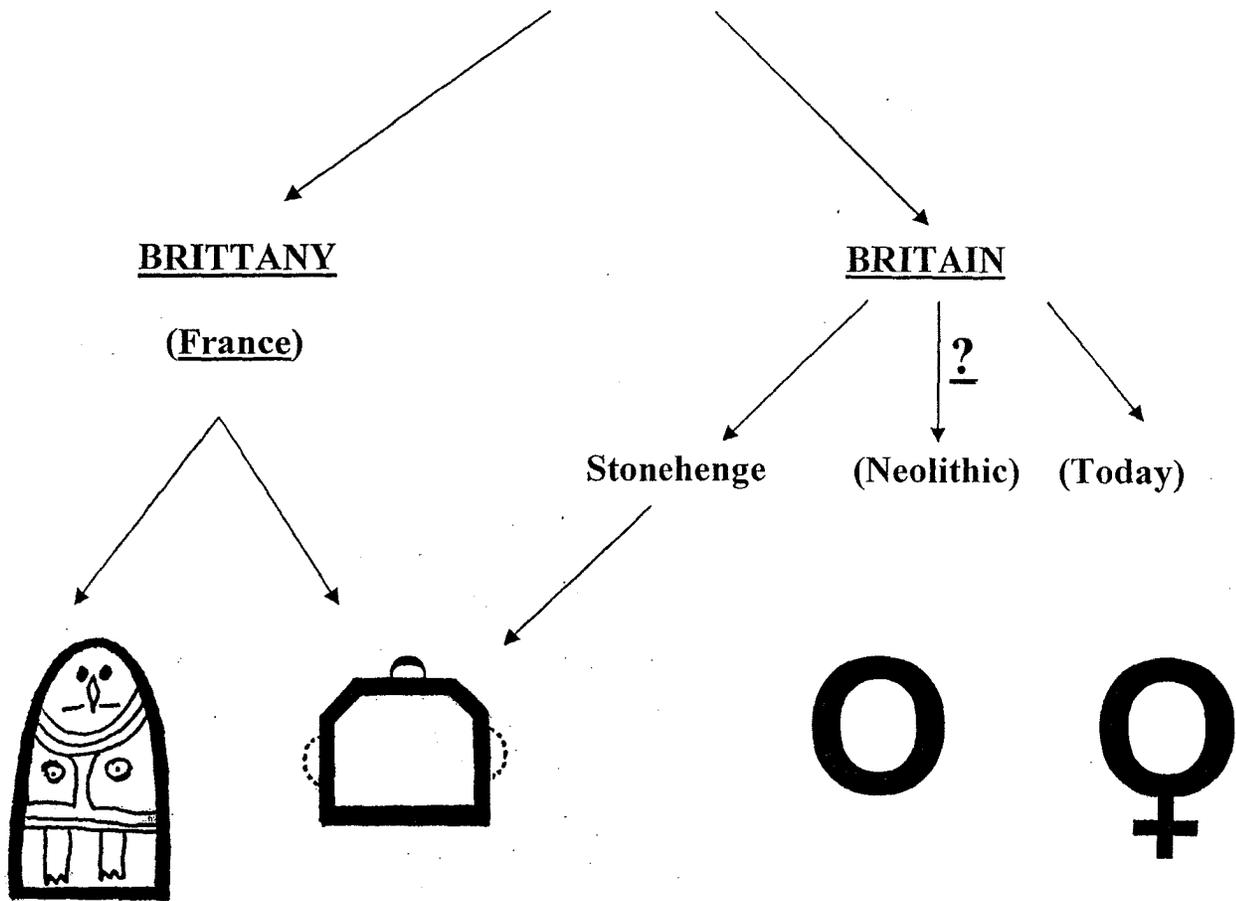


Figure 2 Perks

**SYMBOLS FOR THE MOTHER GODDESS (OR FEMALE?)**



**Figure 3 Perks**

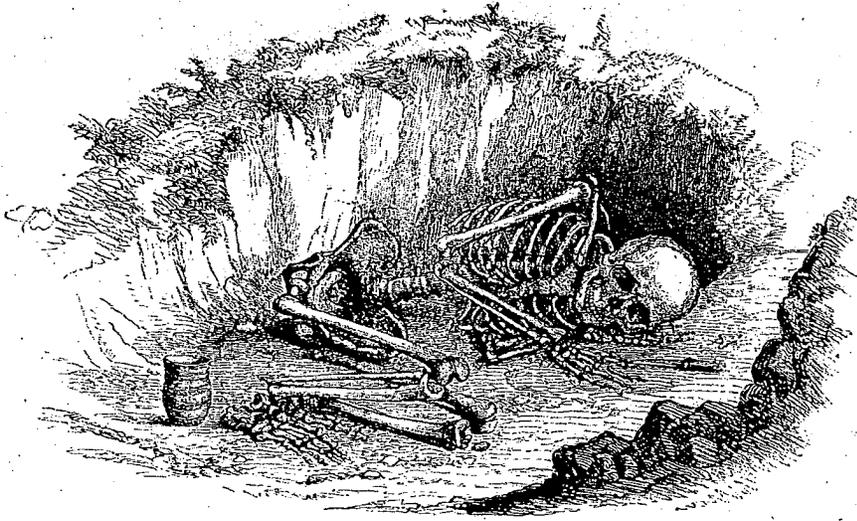
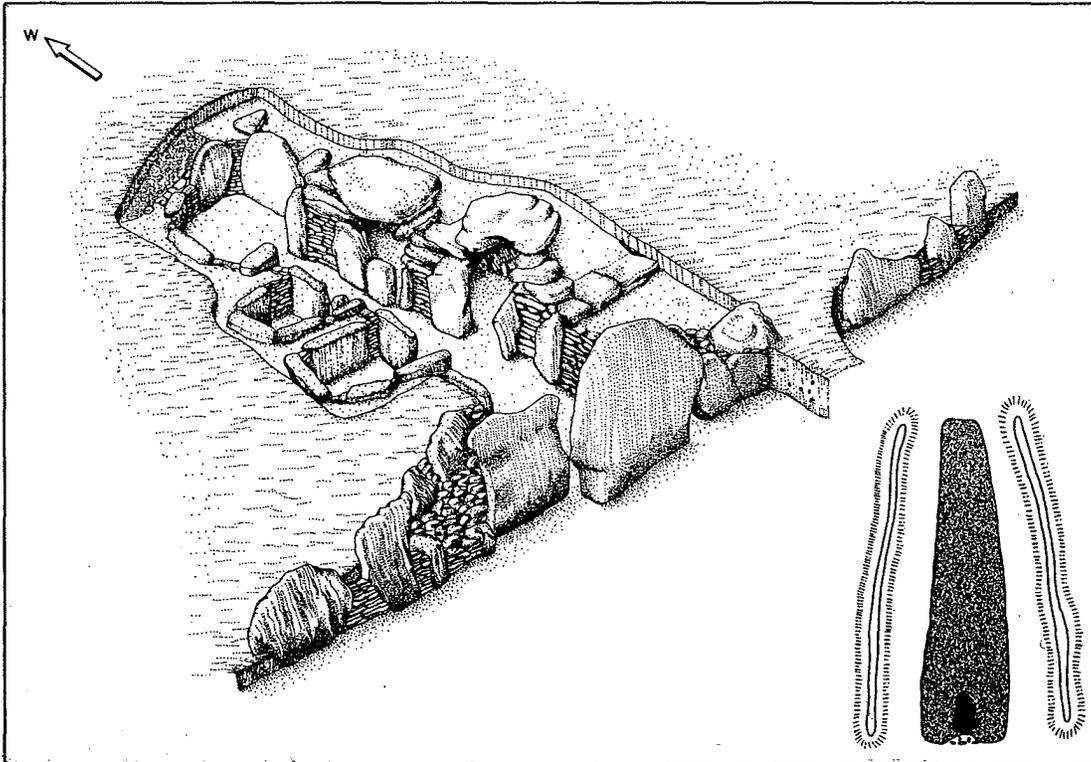
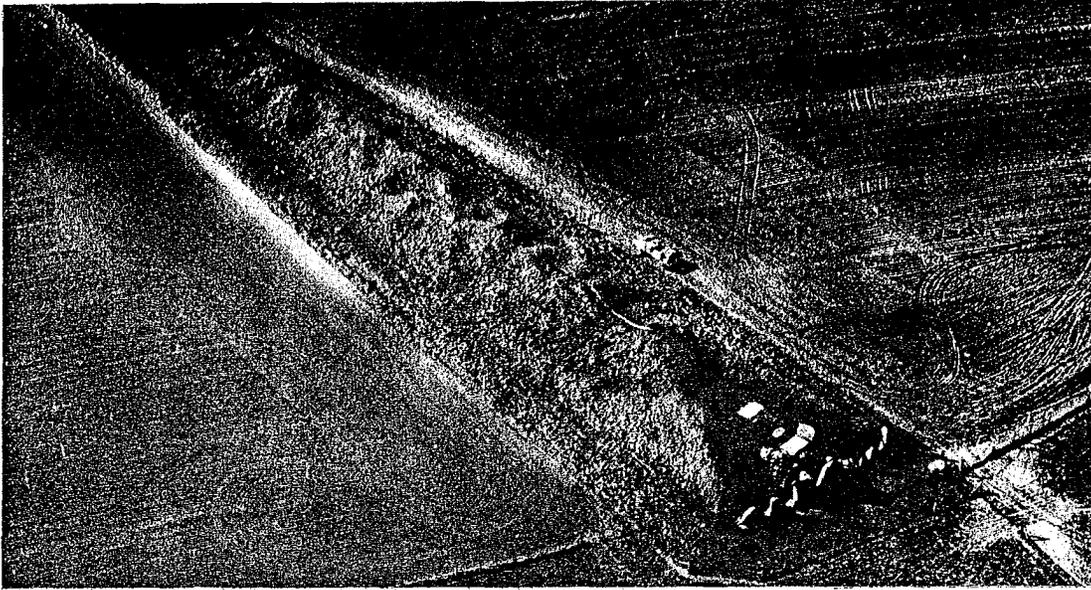


Figure 4 Perks



West Kennett Long Barrow

Figure 5 Perks

