

CARDINAL AND LUNISOLAR ALIGNMENTS AS ALIGNMENTS OF GENDER AND OF POWER

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Abstract

Gender terms have been used to interpret some aspects of the archaeology of Neolithic and Early Bronze Age monuments. Frequently male and female inhumations are aligned cardinally and standing stones may be ‘male’ pillar and ‘female’ lozenges. However, the astronomical alignments at monuments are frequently on lunar standstills and solstices which bisect the cardinal alignments. The anthropology of gender suggests that the concept of a ‘gender of power’ is useful in explaining how ritual power is realised through the scrambling of sexual identities. Proficiency in aligning monuments on lunar-solar cycles may well have been a device to appropriate ritual power.

Key words: Avebury, West Kennet Avenue, gender, Dark Moon, gender of power, cardinal alignment, lunar alignment, lunar standstill.

Introducing the Stones

Avebury circle is the largest megalithic circle in Europe. It was built in the late Neolithic/Early Bronze Age, about the same time as Stonehenge which lies about 20 miles to the south. Joining the south-south-east corner of Avebury circle is the West Kennet Avenue. This once comprised a double row of 99 pairs of megalithic stones and stretched for some 2.5 km, linking the vast circle to the small wood and stone circle known as The Sanctuary. All that is visible of the West Kennet Avenue today is a short section at the north-western end leading up to Avebury circle. This largely reconstructed section is marked by some remaining stones and a number of concrete plinths erected in those positions which have been identified by archaeology as having once held stones. In all just 72 positions are marked.

North’s Alignments

John North (1996) has identified a number of lunar and cardinal alignments along the entire length of this section of the avenue. By drawing sight lines across the avenue between paired stones standing directly opposite each other, and between stones standing diagonally across from each other, North has made the following cautious suggestions: at the *north western* end of the avenue sight lines drawn between opposite stones lie in the approximate direction of the southern major standstill moonset, while the diagonally paired stones at this end lie cardinally on an east/west axis. At the *south eastern* end of the avenue sight lines drawn between opposite paired stones lie in the approximate

direction of the minor standstill southern moonset and the minor standstill northern moonrise. In this same south eastern stretch the diagonally paired stones are approximately aligned on the minor standstill southern moonrise on one diagonal and cardinally on a north/south axis on the other diagonal. North recognises that we cannot deem such approximate arrangements of stones as intentional moon alignments, suggesting that the builders may not have been trying to create precise alignments but may have been merely ‘aspiring to an ideal’. But even given this qualification, there are reasons why it may be problematic to view such a low level of precision as intentional positioning of any kind: First, given the proliferation of potentially *accurately* lunar and solar aligned monuments as Stonehenge and Avebury circle (Burl 2002; North 1996; Sims 2006), there seems no good reason for taking into consideration (as evidence) such *inaccurate* alignments in the contemporary West Kennet Avenue. Second, without a convincing explanation of why these more ‘approximate’ alignments would have held any importance for the society in question any research will be indefensible against charges of over-interpretation. Third, this paper proposes that more accurate alignments do exist along the West Kennet Avenue which is reason in itself for rejecting the less accurate ones identified by North.

The aim of this paper is to propose an alternative way to determine whether there are intentional moon alignments along the avenue which warrant further investigation and testing. By working from theory to alignment, rather than from alignment to interpretation, as North does, we can follow higher standards of proof. If any of these or other alignments can be

VI

VI. LANDSCAPE
ARCHAEOLOGY
AND ARCHAEO-
ASTRONOMY

deemed to be intentional with a degree of certainty then this will provide an important source of evidence which can be used to discover the purpose of the avenue, the Avebury monument itself, and something of the culture which built them.

The Need for Theory

Avebury circle has been studied to a greater degree than the avenue. Burl (Burl 2002) and North (North 1996) have shown that amongst its alignments is one on the southern major standstill moonset and the winter solstice sunset. This double alignment of standstill moon and solstice, which has been shown to occur at over 300 other stone monuments (Burl 1981; North 1996; Ruggles 1999), has the curious but invariant property of guaranteeing a dark moon¹ at the time of the solstices. Although Ruggles (Ruggles 1999) deems this property 'anomalous', Sims (2006) has interpreted Stonehenge, 20 miles to the south of Avebury, in terms of its dark moon alignment. Dark moon is usually of no interest to astronomers or archaeologists, but to anthropologists, an alignment on dark moon is not surprising. Current matrilineal-matrilocal coalition models of human origins predict that dark moon would have been particularly significant for Mesolithic and Palaeolithic foragers. A coherent and well-documented anthropological model can provide a way into the minds of the monument builders which would be impossible using archaeology alone. However, for such a model to gain any purchase in this particular archaeological site, it must be able to be used to make testable predictions.

The Coalition Model of Human Origins and the 'Gender of Power'

This model predicts that in Palaeolithic times, in order to become ritually powerful, men and women would access what has been called by Power, Watts and Aiello (Power and Aiello 1997; Power and Watts 1997), the 'gender of power'. By scrambling their biological sexual identity, in other words, by 'playing at being the other', matrilineal-matrilocal coalitions of women would reverse the normal signals of mate recognition at the ritually important time of dark moon. By scrambling their gender, women signalled 'wrong sex' to potential mates, reversing the normal signals of animal courtship in order to motivate men into preparing for monthly big game hunting parties. Timing the hunt to lead up to and finish at the time of full moon would

¹ I use the term 'dark moon' rather than 'new moon' to overcome any possible confusion with first waxing moon. By 'dark moon' I simply mean the time when there is no visible moon in the sky.

mean the most possible light was available by which to hunt. At the culmination of the hunt, signalled by full moon, men would return with meat, ritual power would be turned off, men and women would relax the gender-scrambling, return to their biological sex (weak gender) and everyday life would return. Thus it is argued: while there are two biological *sexes* (male and female), which are fixed by biological fact, *gender* is a movable feast and the two genders (powerful and weak) can be appropriated by either sex. With the splitting of the lunar month into two, the notion of binary opposites was born: sacred/profane, wet/dry, left/right etc. Hence society, ritual and time itself had an essentially binary character for these early humans and the clock which governed the binary nature of time was the moon (Knight, 1991; Power and Aiello 1997; Power and Watts 1997).

Ritual gender-scrambling can still be seen today in many African hunter-gatherer and hunter-herder rituals. For example, new Ndembu chiefs undergo symbolic feminisation and during their coronations are considered to be neither male nor female (Turner 1969). For the Hadza, the ritual focus occurs at dark moon and examination of the Hadza *epeme* ritual reveals systematic sex reversal (Power and Watts 1997). The mixing of gender is also apparent in initiation ceremonies where adolescent girls and boys take on the characteristics of the opposite sex. Ju/'hoan initiated girls are treated as hunters while boys are secluded as if menstruating. Both are considered to be sexually ambivalent, neither male nor female (Lewis-Williams 1981; Turner 1967) and to be extremely ritually powerful (Turner 1969). The ritually potent 'liminal' state is likened to death and is linked to darkness, bisexuality and eclipses (Turner 1969). These African rituals can be viewed as reminiscent of ancient practices. With striking similarity to the model of human origins the resumption of sexual relations is usually a ceremonial mark of the return to normal society (Turner 1969). Power and Watts suggest that when gender was first constructed by early humans, it was constrained by binary structure, mapping onto a nature/culture divide, but did not embody a sexual hierarchy (Power and Watts 1997, p.103-4). This early social dynamic would have started to become unsustainable with the extinction of megafauna and by the time of the British Neolithic this egalitarianism had been subverted as elite men had begun to appropriate the gender of power, monopolising ritual power. However, the religion and cosmology would linger on for thousands of years identifiable as a 'time-resistant syntax' (Sims 2006).

This model provides one way to interpret the possible dark moon alignment at the Avebury circle; it must now

be tested further by checking whether other aspects of the model can be found in evidence in this monument.

Gender of Power in the West Kennet Avenue

North has suggested that diagonally paired stones across the avenue are cardinally aligned along a north/south axis at the southern end and east/west close to the circle. Acknowledging that this constitutes no more than a possible alignment, North asks: Can we find anything to support the idea that the stones are placed in a meaningful way? At the very least we should be looking for other evidence that things have been placed with the cardinal directions in mind. One likely place to expect cardinal alignment is the archaeological burial record. Many, if not most Neolithic and Early Bronze Age societies across Europe tended to align their dead with a cardinal direction in mind and often there is a gender difference in direction (Parker Pearson 1999). In Britain the clearest evidence for cardinal alignment of the dead comes from Yorkshire where societies contemporary with the West Kennet builders aligned their bodies very clearly with women laid out with their heads to the west and men to the east (Clarke 1970; Tuckwell 1975). In the Avebury region the situation is more complicated. My initial survey of burial data indicates a marked tendency for Late Neolithic/Early Bronze age bodies to be cardinally aligned; this time with heads to the north. However, over 88% of all skeletons found in the Avebury area are male. The few female remains that have been found, point to the south. We could deduce that in Avebury too, bodies were cardinally aligned according to gender but the fact that so few women are buried at all in the Avebury region must be significant. Women are, at the very least being buried in a different manner, if they are buried at all. This is in marked contrast to the early Neolithic when men, women and children were buried communally in near-equal numbers. This change in the treatment of the dead indicates a time of great social change (Parker Pearson 1999).

The gender of power thesis gives an explanation for the emergence of the separation between the sacred and the profane, the defining characteristic of religious thought (Durkheim 1915). While I have not completed my work on burial evidence in the Avebury area, first indications are that human sacrifices and other burials found within monuments, in other words ritually significant or sacred burials, show a tendency to be buried cross-cardinally. At least five bodies in the West Kennet Avenue alone show evidence of human sacrifice

and all are buried cross-cardinally (Smith 1965). It is possible that a distinction is being made between sacred and profane death. Intriguingly, Parker Pearson has suggested that intentionally sexually ambiguous Early Bronze Age burial might indicate the powerful and/or dangerous (Parker Pearson 1999). While they appear to have aligned stones in the avenue with cardinal directions in mind, the builders ensured that procession along the avenue never involved movement along the 'male' north or 'female' south axes. The bisection of the gendered cardinal directions in burials, the cross cardinal route of the West Kennet Avenue and the alignment on the southern major standstill moonset (which lies on a near-perfect cross-cardinal axis) can be viewed as an attempt to access the sacred 'power direction'. This would add enormous potency to the rituals carried out. If the correlation between cross-cardinal burial and sacred death turns out to be more widespread then this will provide strong support for the model.

Lunar Symbolism in the West Kennet Avenue

It is likely that West Kennet Avenue was originally made up of 99 pairs of stones. There are also 99 pairs of stones in Avebury outer circle. 99 is a lunar-solar number, being the smallest number of moon cycles which will coincide with solar cycles. The remaining stones of the avenue are numbered in pairs. Pair 1 is those two stones closest to the circle while pair 37 is those stones furthest away to the southeast. Those stones on the east side of the avenue are 1a, 2a, 3a and so on, while on the west side the numbering follows a pattern of 1b, 2b, 3b etc. There is one exception to the rule of having paired stones along the avenue. At position 30b a stone was never placed. In other words stone 30a never had a companion stone across the avenue. The non-existent stone becomes all the more significant when we realise that this position is $29\frac{1}{2}$ pairs of stones away from Avebury circle: $29\frac{1}{2}$ is the average length in days of the lunar month. Bearing in mind that there are also $29\frac{1}{2}$ sarsen uprights in the outer ring of Stonehenge, with its multiple lunar-solar alignments (North 1996; Sims 2006), this odd building feature cannot be ignored. Given that a) Avebury circle is aligned on the 'missing moon', and b) that we have a missing stone at this otherwise rather insignificant position of 30b, $29\frac{1}{2}$ pairs away from the circle, it can reasonably be assumed that the pairs of stones represent moon phases.

VI

VI. LANDSCAPE
ARCHAEOLOGY
AND ARCHAEO-
ASTRONOMY

Using the Coalition Model to Predict Alignments

The model can now be used to predict which phenomena should occur at which places and at which times. By testing the model in this way, at the same time a reason is offered for the existence of any alignments. There are 4 key aspects: the celestial body in question, whether the body in question should be setting or a rising, exactly where each phenomenon should occur, and when. If all these predictions can be confirmed as correct then the move can be made from the mere possibility of an alignment to some degree of certainty.

According to the model, position 30b where no stone was ever placed should represent that night when no moon shows in the sky. As the ethnographic record confirms, dark moon signifies the onset of ritual power mode, so we would expect the signal for this to be the *last glint* of sunset on the night of the dark moon. By deduction from the dark moon alignment at position 30b, there should be a full moon alignment around pair 15. As full moon signifies the switch to everyday mode, this is likely to be marked by the *first glint* of the rising *full* moon. From the date of the solstice, and the fact that we have stones representing moon phases, we can be very specific about which day these alignments should be seen: sunset on the night of the dark moon one month away from the solstice and the night of full moonrise closest to the solstice. If we can find an alignment on these very particular phenomena then it is reasonable to conclude that it was intentional.

Testing the Model

Let us pick a likely year to perform the test: for example, the major standstill of 1997 BC. It is sunset at the night of the dark moon, exactly one lunar month away from the winter solstice. Using stone 30a as a back sight, calculations show that the last glint of the sun would have been seen setting into the horizon at 235° directly above position 30b. An exactly similar phenomenon occurs at Stonehenge (North 1996; Sims 2006). According to the model and the ethnographic examples given, this signalled to the ancient participants the precise moment of the onset of dark moon and the time of ritual power, just as predicted. Now let us move forward half a lunar cycle to the night of the full moon, counting the stones as we go, each pair representing one night. At full moon we arrive at pair 15. Stone 15a is a very odd looking stone. It stands in its own ditch, has a flat top and when viewed from its paired stone at the average height of a Neolithic man,

its top is exactly level with the background horizon. These engineered details have set the height of the stone at an exact place and suggest the potential for a precise viewing point. On this particular night, 26th December 1998 BC, using stone 15b as a back sight, calculations show that the first glint of full moon could have been seen rising at 39.8° out of stone 15a. This may be interpreted as signalling the switching off of ritual power, as predicted by the model.

Conclusion

Rather than starting from alignments and then attempting an interpretation, a coherent and well-documented anthropological model was used to predict the astronomical phenomena in the West Kennet Avenue. The existence of these very particular alignments, found to occur at the right time and position, would have been impossible to predict and may well have gone undiscovered had this model not been used as a starting point. The combined use of archaeoastronomy and anthropology has generated the following conclusion: while North appears to have over-interpreted the number of moon alignments along the West Kennet Avenue, it is likely that the cardinal alignments he has identified are intentional.

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SAULĖS IR MĖNULIO ORIENTACIJOS KAIP LYTIES IR GALIOS RODIKLIAI

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Santrauka

Avebury (Viltšyras, Anglija) akmenų ratas, didžiausias megalitinis ratas Europoje, buvo pastatytas vėlyvuoju neolito – ankstyvuoju bronzos amžių laikotarpiu. Jame, kaip ir daugelyje kitų megalitinių paminklų, išskiriamos dvejopos pagrindinės akmenų orientavimo kryptys: Mėnulio laidos kryptis pietinės didžiosios lunisticijos metu ir žiemos saulėgrįžos saulėlydžio kryptis.

Siekiant paaiškinti šio ir kai kurių kitų neolito bei ankstyvojo bronzos amžiaus laikotarpių megalitinių paminklų reikšmingas astronomines orientacijas, pasitelkiamas vadinamasis matrilinijinis-matrilokalinis žmogaus kilmės modelis (iškeliantis ritualinio lyčių (gender) sukeitimo svarbą pirmykštėse bendruomenėse) ir remiamasi prielaida, kad paleolito ir mezolito bendruomenėms ritualiniais tikslais galėjo būti svarbus jaunaties (vadinamojo „juodojo Mėnulio“) laiko nustatymas.

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VI

VI. LANDSCAPE
ARCHAEOLOGY
AND ARCHAEO-
ASTRONOMY