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Rethinking symbols and images, art and artefacts from history and prehistory

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The Neolithic Monument of Newgrange in Ireland: A Cosmic Womb?

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Abstract: This paper argues that the Neolithic monument of Newgrange, in common with comparable monuments known as passage-graves, functioned to facilitate womb-like ritual experiences and birth-based cosmological beliefs. It explores the evidence for the design, material deposits, astronomy, rock art and associated myth at Newgrange to suggest the myriad ways that birth-based ritual and cosmology are invoked at the site, and it locates this evidence in the context of the transition to agriculture with which such monuments were associated.

Key words: Neolithic, Newgrange, monument, womb, womb-like, ritual, astronomy, winter solstice, re-birth, ancestors.

Introduction

The passage-grave (or passage-mound) of Newgrange (Fig.1), along with its neighbouring passage-graves Knowth and Dowth, are among the most outstanding Neolithic monuments to survive in Britain and Ireland. Situated by the Boyne River in County Meath in eastern Ireland, each monument contains a long passage and chamber constructed from stone and covered by a large circular earth and stone cairn (Knowth and Dowth each have two passages and chambers). The excavations and reconstruction of Newgrange and Knowth have revealed many extraordinary things about these monuments (O’Kelly 1982; Eogan 1986). These include dating their construction and use to the later Neolithic (c3200-2500 BC), documenting the extensive and highly accomplished rock art inscribed on the megaliths at the sites, and establishing that at Newgrange there is a precise astronomical alignment built into the monument. Further work has demonstrated there are astronomical alignments at Knowth and Dowth and persuasively linked the rock art and astronomy to suggest the myriad ways that the sites may have functioned as cultural and ritual centres (see for example, Brennan 1983, Moroney 1999, Cooney 2000).

It is now fully accepted that the Boyne valley sites represent the culmination of the Irish passage-grave tradition. In areas such as Brittany, passage-graves had existed since at least 4500 BC (Sheridan 1986). It is possible that Breton monumental styles influenced the development of passage-graves in Ireland, which began to be constructed around 3800 BC and reached their largest and most elaborate form at the Boyne sites c.3200 BC (Berg 1995). Moreover, it has been argued that these large prominent sites had a seminal influence on the emergence of open-air ritual centres such as henges and stone circles in the far north and west of Britain and eastern Ireland around 3000 BC (Bradley 1998). In other words, the monumental and ritual tradition associated with passage-graves in Ireland was in existence for over a millennium and as its zenith, the Boyne sites were clearly places of real power, and embodied key cultural and ritual concerns of the people who built and used them.

This paper argues that one of the primary sources of power embodied in monuments such as Newgrange was the way in which they functioned in a ritual sense like a womb, and that rituals related to beliefs about birth were key for prehistoric peoples in making sense of their world while engaged in a long-term transition from hunting and gathering to domesticated food production.

In order to present detailed evidence for the ways in which developed passage-graves may have been constructed and used to facilitate ‘womb-like’ ritual experiences, this paper focuses on the Newgrange monument. It explores the evidence for architectural design, astronomical alignment, rock art and associated mythology at Newgrange to suggest how—and perhaps why—such ritual experiences may have been so important in the Neolithic.

The design of Newgrange

Like Knowth and Dowth, the circular mound or cairn covering the passage and chamber at Newgrange is over an acre of ground in size and approximately 10m in height (Eogan 1986:44-5). It covers a long passage and a chamber built from orthostats and lintels and topped with a cap-stone. The cairn has a kerb constructed of massive contiguous slabs surrounding the external base of the mound. The kerbstones, and the passage and chamber orthostats and lintels are all decorated with rock-art. The inscribed motifs include spirals, wavy lines, concentric circles, dots, zigzags and chevrons. The entrance at Newgrange is demarcated
by a huge decorated kerbstone, divided by a vertical line that also marks the centre of the passage entrance. Directly above the entrance is a further rectangular opening into the passage—known as a ‘roof-box’. Quartz features prominently in the covering of the mound at Newgrange, which gleams when it catches the light of the sun, and the remains of a circle of large standing stones surrounds the monument.

It is the architectural properties of the passage and chamber that closely resemble a womb-like space. At Newgrange, the passage runs SE-NW. It is 24m long and leads to a cruciform chamber with three recesses. The path of the passage follows a fairly steep incline: the chamber is up to two metres higher than the passage entrance. The low narrow passage bends slightly. The combined effect of these features means that no natural light penetrates the chamber, except on the dawn of the winter solstice – a highly significant astronomical alignment built into the construction (see below). The only way it is possible to see the entrance from the chamber is to lie down by the back recess, where the merest chink of light from the entrance is just visible at floor level.

The chamber therefore was designed to be in total darkness, except for about 17 minutes once a year. The corbelling of the chamber roof is so well-finished that the chamber is completely dry. No light, water or sound penetrates this inner sanctum, buried deep in a huge earthen mound at the end of a long and narrow passage. It would be difficult to think of a space more womb-like in its construction, and it is almost certain to be deliberate.

**Astronomy at Newgrange: the winter solstice rising sun**

The fact that Newgrange was designed according to highly specific principles, in order to produce particular effects, is nowhere more apparent than in its astronomical alignment. Traditional local stories had long suggested that the sun entered the passage and chamber at Newgrange, while the south-easterly orientation of the passage indicated an alignment with the rising sun around the winter solstice. During the early stages of excavations by Prof. Michael O’Kelly, it was decided to investigate this scientifically. In 1969, the excavators, crouched in the passage at dawn on winter solstice, reported that:

At exactly 8.54 hours GMT the top edge of the ball of the sun appeared above the local horizon and at 8.58 hours, the
first pencil of direct sunlight shone through the roof-box and along the passage to reach across the tomb chamber floor as far as the front edge of the basin stone in the end recess. As the thin line of light widened to a 17cm-band and swung across the chamber floor, the tomb was dramatically illuminated and various details of the side and end recesses could be clearly seen in the light reflected from the floor. At 9.09 hours, the 17-cm band of light began to narrow again and at exactly 9.15 hours, the direct beam was cut off from the tomb. For 17 minutes therefore, at sunrise on the shortest day of the year, direct sunlight can enter Newgrange, not through the doorway, but through the specially contrived slit which lies under the roof-box at the outer end of the passage roof (O’ Kelly 1982: 124; Fig.2).

Further research has demonstrated just how precise this alignment is. Patrick (1974) has proved that the winter solstice orientation was operative when Newgrange was constructed, and therefore is an original, central and permanent feature of the monument. O’Brien (1988) has shown that the chamber and passage are sophisticated and complex constructions, designed to maximize the accuracy and length of the beam of light coming into the chamber. His research indicates that at the time of construction, the
was one activity among many practiced at the sites. If this used in complex ways, and the deposition of human remains classified as 'graves'. But it is more likely that they were passage-graves is what has led such monuments to be held burial deposits. The presence of human remains in recesses, leading some to speculate that the carved basins associated with the circular granite basins found in the recesses (O'Kelly 1982: 102-7). They were closely discovered in Newgrange in the SW and NE chamber cremated and un-burnt human bone deposits were chambers of the monument.

We consider the deposition of human remains in the winter solstice at Newgrange on the winter solstice is strengthened when the sense that a 'birth' occurs both ritually and cosmically. At a crucial moment to record in terms of seasonal change. At a ritual level, it could also be interpreted and experienced in terms of death and birth, because it is, quite simply, the astronomical moment when the earth 'dies' and is 'born'.

Moreover, this event happens at a very significant time in the seasonal and celestial cycle. Mid-winter is at the heart of the season of death and decay. It heralds the shortest day and longest night, and the slow turn of the earth towards spring—towards new light, warmth and life. As such, it is a crucial moment to record in terms of seasonal change. At a ritual level, it could also be interpreted and experienced in terms of death and birth, because it is, quite simply, the astronomical moment when the earth ‘dies’ and is ‘born’.

Death and rebirth

The sense that a ‘birth’ occurs both ritually and cosmically at Newgrange on the winter solstice is strengthened when we consider the deposition of human remains in the chambers of the monument.

Cremated and un-burnt human bone deposits were discovered in Newgrange in the SW and NE chamber recesses (O’Kelly 1982: 102-7). They were closely associated with the circular granite basins found in the recesses, leading some to speculate that the carved basins held burial deposits. The presence of human remains in passage-graves is what has led such monuments to be classified as ‘graves’. But it is more likely that they were used in complex ways, and the deposition of human remains was one activity among many practiced at the sites. If this is the case, it suggests such rituals, and associated beliefs, involved the living and the dead.

Alongside the invocation of birth, perhaps in an initiatory context, this evidence allows us to consider the possibility of the invocation of the more complex idea of ‘re-birth’. It may be that the builders and users of Newgrange believed that, along with a ritual birth experienced by the living, and the cosmic birth that happens on the winter solstice, the dead—or the ancestors—also experienced a re-birth at this time. If this was the case, it brings together the living community, the dead and the natural world in a powerful set of inter-related beliefs.

Rock art

The rock art at the Boyne valley sites is highly accomplished, profuse—together it represents the largest collection of megalithic rock art in Europe—and emphasises particular abstract designs, presented singly or in combination: spirals, circles, crescents, zigzags and wavy lines.

Martin Brennan has perhaps done the most to explore the meanings embodied in this art and to make connections between the art and astronomy at all three sites (1983:127-205). Several stones suggest a very strong connection between the rock art and astronomy. Stone SW22—a kerbstone at Knowth—Is one: Brennan has convincingly argued it depicts the monthly cycle of the moon—and possibly even more complex lunar cycles such as the Metonic cycle (1983:144).

This paper focuses on the prominent and recurring image of the triple spiral at Newgrange. The triple spiral is the central image at Newgrange. It appears on the entrance kerbstone (Fig.3). It appears again about halfway up the passage on stone L19 (Fig.4). It found again on the right-hand wall of the back recess in the inner chamber (Fig.5).

The simple fact that the triple spiral has been placed so centrally at Newgrange would suggest a connection with the winter solstice alignment. This would appear to be confirmed by the fact that each image has been located to directly receive the light of the rising sun as it enters the monument at winter solstice (Brennan 1983:80-1).

A spiral is a natural symbol for the movement of the sun. The movement of the sun in the sky over a year can be depicted by a spiral and the curvature of shadows of the sun over a year form a double spiral. In summer the spiral is clockwise, in winter, anti-clockwise. The three sets of triple spirals, especially those on the kerbstone and in the back recess wall, display an interest in the relationship between three and six (Brennan 1983: 193-194). Three and six are basic counting units and have an integral relationship to astronomy, because they are the number of months between the cross-quarter days and solstices/equinoxes and between the solstices and equinoxes respectively. Moreover, some of these individual spirals are ‘double’, i.e. each one has
Fig. 3. A stone carved with triple spirals

Fig. 4. A side stone of the gallery carved with triple spirals.

Fig. 5. The triple spiral carved into the end chamber of Newgrange

two sets of spirals or counts, and where they meet in the middle could be seen to be a representation of alpha and omega—the beginning and end point of each journey that the spiral represents.

As such, they may represent the interplay between counts of three, six, nine and twelve. Such interplays include the number of months in a season (three), the number of months in a solar year (twelve), and the number of months in a human gestation period (nine). Three sets of three spirals would add weight to the importance of the number nine. Could these images have been used to enable women to calculate the timing of pregnancy and birth according to the lunar and solar cycles? (Refer to Meaden (1997: 134-144) and to Fig. 6 for sexual associations in the way the phallic shadow of the standing stone at Newgrange is near to ‘penetrating’ the passage entrance at sunrise on the winter solstice—as it certainly does at Stonehenge and Avebury at the summer solstice).

The basic unit underpinning such measurements is three. We see three reproduced in the number of spirals in each set of triple spirals, the number of triple spiral images, the number of recesses in the chamber and the number of large passage-graves at the site. Three is also the number that underpins the Trinity. Pagan conceptions of the Trinity have a female aspect: the maiden, mother and crone (Matthews 1989). These three ages relate directly to birth, since they are the basic way we calculate a life, and they interconnect with reproduction – the fertile age of the mother when women have children. In male aspects of the Trinity, more emphasis is placed on the new-born child as one of its elements, but in either case, fertility and birth is a central part of the concept.

The triple spiral or Triskele became a prominent symbol in Celtic Christian art, notably in the Book of Kells held at the nearby Abbey of Kells. It was used to represent the Christian Trinity, but this raises the intriguing possibility
that the early Christian monks were directly drawing on older pagan conceptions and depictions of the Trinity. The fact that the Celtic pagan gods were connected to the Boyne valley sites is documented in the myths and stories captured in the Irish Mythological Cycle, first written down in the early Middle Ages (O’Kelly 1982:43). Remarkably, such stories also invoke the birth of the gods. In so doing, by association, they bring the human, natural and metaphysical elements invoked and orchestrated at Newgrange to new levels of interconnection and integration.

Myth

The Mythological Cycle in part concerns the Tuatha Dé Danann, god-like ancestors of the Irish. The Tuatha Dé Danann were descended from the goddess Danu and came down from the sky disguised as a supernatural race of wizards and magicians. The Bru Na Boinne—the ‘houses’ on the Boyne—are invoked in the literature as the residence of these gods, and as a magical place where no-one dies, where there are always festivities, and where magic fruit-trees and inexhaustible cauldrons ensure that no company ever went away unsatisfied. Such a place echoes the widespread descriptions of the ‘otherworld’, both in Dark Age and medieval oral Celtic traditions and in more recent oral traditions, recorded in Ireland as recently as the early twentieth century (Evans-Wentz 1911). In such descriptions, the ‘otherworld’ has a liminal status in much the same way as that suggested by the interior of Newgrange. It is a place that people can disappear to, often through ‘doors’ located in natural features of the landscape like hills and stones. It is not uncommon to have to spend a year in the otherworld, but it is equally uncommon not to return from it. In this sense, it truly is a place where ‘no-one dies’, since it is a place where beings go to and return from—in the same way that death may lead to re-birth at Newgrange.

In the myths, Newgrange is associated first with Elcmair who was married to Boand, the divinised personification of the Boyne river. Newgrange is sometimes known as ‘Bru mna Eelmair’, or the ‘House of the woman of Elcmair’. They are then associated with ‘Dagda’, among the most prominent of the old Irish Gods. His name has been translated as ‘good god’, and he is also called ‘Ruad Ro-fhessa’, ‘The Lord of Great Knowledge’ (Brennan 1983:10-11).
Dagda gains possession of the Bru Na Boinne and achieves carnal union with Boand by utilising his mastery over time. He sends Eclmair on an errand which lasts for nine months, during which time Oengus, or ‘Mac ind Oc’—‘the Youthful Son’—is conceived and born. Board describes Oengus as the son who was begotten at break of day and born betwixt it and evening. His birth is associated with a magical lengthening of the day at Newgrange. Newgrange is most widely known in the ancient literature as ‘Bru Mac ind Oc’, or the ‘Bru of Oengus’, as Oengus takes over habitation of the mound from Dagda, by utilising his own power over time.

The imagery surrounding Oengus in these accounts would appear to confirm that in Irish oral traditions of the early Middle Ages, Newgrange was associated with birth at winter solstice—a place where a god was conceived and born. In these myths, the entry of the sun into the passage and chamber at dawn is the moment of conception (i.e. the marriage of the gods), and the subsequent day the product or offspring of this union (the birth of the cosmos). This reiterates both the evidence for a ritual birth (initiation) at the site and the logic of the Trinity suggested in the triple spiral, in which divinity procreates and adds to itself through a sacred birth. It is notable in this context that in Rome in the fourth century AD, Jesus’ birth was synchronised with the winter solstice—a direct echo in the Christian Trinity of earlier pagan and prehistoric beliefs and practices revealed at Newgrange (Miller 1993:10-11).

Conclusion

This paper has explored evidence for the ways in which the Neolithic monument of Newgrange may have functioned to facilitate beliefs and rituals around an inter-connected set of motifs related to birth. These include a withdrawal into a womb-like interior that is echoed by stories of withdrawal into the otherworld, and a ‘birth’ or return down the passage to the world outside. The presence of the dead in the chamber recesses may indicate further beliefs in re-birth. Moreover, such events occur alongside the birth or re-birth of the cosmos on the shortest day of the year. Oral traditions indicate a direct relationship between pagan Celtic gods and the site, and these and the imagery of the triple spiral further invoke the idea of a pagan Trinity centred on the motif of a sacred birth. The triple spiral may also be a depiction of astronomical measurement and counting, and may include specific counts of the human gestation period. The triple spiral is later reclaimed by early Christians to represent the Trinity in Christian form, whose male god is also born out of divine union on the winter solstice.

Such a powerful set of associations raises some interesting questions. The first is the extent to which Neolithic beliefs and practices at such sites had a female—or more specifically a mother—focus. The second is why such beliefs continued to be echoed in later descriptions of the sites and indeed in later religious imagery, which in some cases appears to have directly drawn on earlier pagan associations between the Trinity, the winter solstice and divine birth.

It has been recognised for some time that passage-graves were an indigenous hunter-gatherer response to the encroaching influence of farming as it spread across northern and western Europe during the fifth millennium BC (e.g. Bradley 1998). While the onset of the monumental tradition in north-west Europe appears to have reproduced southern European Neolithic conceptions of the house in the long mound, passage-graves were a radical departure from this tradition inasmuch as they opened up the monument with the insertion of a passage and chamber. Unlike long mounds which were closed burial sites, passage-graves could also be used by the living, and in particular they facilitated a relationship between the living and the dead. Archaeologists such as Barrett have argued that this reflects indigenous views of the ancestors—of collective ideas of ancestry focused on a place in the landscape—in contrast to the closed conceptions of the house (and by implication lineage) associated with agricultural traditions (Barrett 1994). From the evidence explored in this paper, it would seem possible that the place where the ancestors could be accessed was also conceived as a collective womb—even perhaps as a representation of a common female ancestor: a hunter-gatherer ‘Eve’.

Neolithic groups in southern Europe and the Near East also drew on explicit images of female fertility and reproduction. Maria Gimbutas and others have documented the extensive use of images of mother figures among such groups; images that themselves drew on hunter-gatherer representations of female figures, which were ubiquitous across ice age Europe (Gimbutas 2007). However, it is also clear the development of agriculture introduced gender-based tensions and conflicts with the move to permanent settlement, the production of food surpluses and the emergence of incipient notions of control and ownership (Hodder 1990).

Indigenous hunter-gatherer groups in north and west Europe were forced to take on the conflicts as well as opportunities inherent in domesticated food production as they began to adopt it from around 4500 BC. One response to such tensions was to build monuments that enabled them to look back to their origins as well as forwards to memorialise hunter-gatherer conceptions of the community and landscape (Tilley 1994). The passage-grave became a dominant monumental type as agriculture took hold, and this may have been because it functioned very effectively as a place where such groups could negotiate such a transition between ancient traditions and a rapidly changing world.

A ritual cosmology based on the winter solstice enabled Neolithic groups in Britain and Ireland to look backwards as well as forwards, because it represented a critical moment in the seasonal calendar regardless of whether people were practicing hunting and gathering or agriculture, or a combination of the two (Prendergast 2009). The same
could be said of birth-based ritual cosmologies. A focus on maternal birth and possibly collective or ancestral rebirth, like a focus on the winter solstice, represented a ‘fixed point’, a place of origin to refer back and return to.

In the pagan Celtic mythologies of Britain and Ireland, the goddess—or the female aspect of the divine—still had a powerful role. The female Trinity of maiden, mother and crone, well-known in such pantheons, reveals the ongoing need for a divine mother figure as a timeless archetype. It is only in the era of the world religions that the female embodiment of the divine became almost entirely absent. Even so, there is evidence in Christianity for comparable ritual logic—as if the need for a ritual cosmology with a sacred birth at its heart itself has to return as a cultural—and possibly existential trope.

If this is the case, it suggests that the power of ‘returning’ to some point of ending and beginning is culturally very important. The continued invocation of the image of birth, at Newgrange and in subsequent religious belief, indicates its conservatism—its call to a perceived origin. Birth is perhaps the key motif for representing a return, since it in turn facilitates the very possibility of return itself. It therefore functions as a still point and a point of movement, a moment that both stops time and creates time, that makes death inevitable but also triumphs over it. The mother, the female ancestor, lies behind all cosmologies that elaborate the image of birth. This was especially the case with the great Neolithic monument of Newgrange, which appears to have been designed as the great mother—from whom we are born and to whom we all return—with striking power and elegance.

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