

## A new hypothesis on the creation of the Hohle Fels “Venus” figurine

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Female figurines, or “Venuses”, are well known from the Gravettian culture (Cohen 2003; Conard & Wolf 2010, and references therein). Their geographical spread extends from western France to Siberia, and their age from 24-29,000 years ago (kya). They are typically characterised by enlarged breasts and belly. If the face is depicted at all, it is purely stylised; in some examples, the head is not represented, or appears to have been broken off. The legs are usually fused in the midline and the feet absent. It seems likely that they are symbolically related to fertility and/or pregnancy, perhaps as amulets to protect against the dangers of childbirth; fingerprints on clay examples from Pavlovian sites indicate that they were made by women (Caldwell 2010, and references therein). They are commonly around 10cm in height.

In 2008 a female figurine was excavated from Hohle Fels Cave in the Swabian Jura, Southwest Germany (Conard 2009). Excavations in this cave had already yielded three non-human figurative carvings (Conard 2003) and the oldest known musical instruments, bone and ivory flutes (Conard *et al.* 2009). Calibrated radiocarbon dating of the charcoal-rich material around the figurine yielded dates ranging from 36 to 40 kya. Given its position at the base of the Aurignacian deposit (28-40 kya), the older end of the range is thought to be more likely. This figurine is therefore the oldest known piece of figurative art, predating the Gravettian Venus figurines by around ten thousand years. It is also smaller (just under 6cm tall) and quite different anatomically, which suggests that it does not represent an early stage in the same tradition and did not have the same purpose or symbolism.

### Description

The Hohle Fels figurine (Fig. 1) has large, prominent breasts situated very high on the chest, quite unlike the enlarged but naturally-situated breasts of the Gravettian Venuses. There are horizontal striations on the abdomen, and an enlarged vulva; the legs (thighs only) are widely separated. The well-worn loop carved in place of a head suggests that the figurine was strung. There are incisions on the right arm (the left is missing); the back is smooth except for lines incised at the waist and a vertical groove indicating the cleft between the buttocks.

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**Fig. 1.** Three views of the Hohle Fels figurine. (*Photography by Hilde Jensen; images supplied by Nicholas Conard and Sibylle Wolf.*)

## Interpretations

Nicholas Conard (2009), in his original description, wrote: “There can be no doubt that the depiction of oversized breasts, accentuated buttocks and genitalia results from the deliberate exaggeration of the sexual features of the figurine”. Paul Mellars (2009), in the accompanying *News and Views* commentary, wrote: “...the figure is explicitly – and blatantly – that of a woman, with an exaggeration of sexual characteristics (large projecting breasts, a greatly enlarged and explicit vulva, and bloated belly and thighs) that by twenty-first-century standards could be seen as bordering on the pornographic.” He also refers to “its explicitly, almost aggressively, sexual nature.” Such reactions are understandable as a male perspective, given that this depiction of a female form is unlike any others previously discovered. However, the descriptions not only betray a sense of disgust, which is inappropriate, but imply that the grossly enlarged vulva and breasts are overtly erotic.

Since these original interpretations, Conard and Wolf (2010) have acknowledged that the figurine may also be related to birth and reproduction. They consider that it does not represent a realistic living woman, but represents “superwoman”, a goddess, or auxiliary spirit, the essence of femininity and fertility rather than a specific individual.

I would like to propose a new hypothesis on the origin of this carving. I see it as the somatosensory self-portrait of a woman who has recently given birth. The changes that a mother's body undergoes at birth are fundamentally different from any of the other experiences related to female reproduction, since they are not only radical, but sudden, in contrast to the gradual and incremental changes that one experiences during puberty and pregnancy. From the viewpoint of this interpretation,

the portrait of the carver's body is not based primarily on what she sees; instead, the perceptions interpreted by her somatosensory cortex have contributed more than those of her visual cortex to the form she has carved, and there is also a significant emotional input. Her breasts are engorged with milk: their gradual enlargement during pregnancy has not prepared her for the sudden shock and discomfort of lactiferous engorgement. They feel unfamiliarly tight and enormous, hence their exaggerated size and raised position. Her belly, having enlarged gradually during pregnancy and having contained an active child, is suddenly empty. She is aware of the loss from it of the child she was carrying. Although her belly is still somewhat swollen, the skin is now far too big, and wrinkled, hence the transverse striations firmly engraved into the ivory. The size and gash-like form of the vulva (which she has not herself seen) suggests considerable discomfort, probably arising from a perineal tear. Even taking into account the possibility of a torn perineum, the size of the vulva is visually unrealistic, but it makes complete sense when interpreted as the externalised expression of somatosensory information-processing. This is in contrast to the enlarged vulva of some Gravettian figurines, e.g. the Monpazier Venus, which, together with a heavily pregnant belly, suggests a symbolic acknowledgement of the approaching birth (Clottes 2008). The wide separation of the thighs, so different from the joined legs of the Gravettian figurines, is entirely consistent with this interpretation: the perception of an increased distance between them as portrayed in the sculpture suggests considerable discomfort here.

This explanation is also consistent with the absence of a head. If the portrait is based on postpartum sensations from the body, the head is irrelevant. The creation of a loop where the head would have been, and the fact that it has been polished by wear, suggests to me that the woman who carved this sensory portrait made it for herself. She may have worn it as a pendant on a thong around her own neck for a long time afterwards, perhaps as a way of regaining possession of her body, or as a way of coming to terms with a stillbirth.

## **An obstetric context**

Childbirth remains today, as it has always been, dangerous for both mother and child. Tears of the perineal membrane, always painful and potentially functionally damaging, are the most common complication of natural childbirth, especially for a first delivery (Cunningham *et al.* 2009). More serious perineal trauma leads to long-term functional problems if left untreated, as happens even today in poorly-resourced societies, with serious social as well as biological consequences (Storeng *et al.* 2010). It is also surprisingly common in the West, where a sense of shame can inhibit reporting of sexual dysfunction (Gina Hadley, personal communication). Current rates of maternal morbidity and mortality, as well as stillbirth and neonatal death, are surprisingly high, especially in poor countries: the maternal mortality rate in Burkino Faso is 7 per thousand births (WHO 2009), and the number of stillbirths and neonatal deaths is two million per annum worldwide, more than the deaths from malaria (Lawn *et al.* 2009).

These statistics give some insight into the context of pregnancy and childbirth in prehistoric societies, or indeed in those few remaining societies that survive today untouched by Western culture. Support from successful mothers, some of whom may have acted as birth attendant or midwife at several births, would have been of fundamental importance. The dangers of childbirth to the health and life of both mother and child would have been a recognised part of the pattern of life in the

community; this knowledge must surely underlie the social and symbolic function of the Gravettian figurines. The most famous example of a prehistoric death in childbirth is the grave discovered at Abri Pataud, Les Eyzies, Dordogne, in which a 16-year-old mother who lived about 20,500 years ago was buried together with her stillborn infant (Delluc & Delluc 1998). The skeleton of a stillbirth or neonatal death has recently been discovered at a late Magdalenian site in Wilczyce, Poland (Irish *et al.* 2008). Since the infant was buried alone, it can be assumed that in this case the mother survived. Interestingly, one of the objects found in the grave was a simple ivory Venus-type figurine (Tomasz Boron, personal communication). Perhaps it was buried with the dead baby because it had been associated with a pregnancy that had failed to produce a live child, and/or was put there by the mother as a way of representing herself within the grave of her child.

The mother depicted in the Hohle Fels figurine has given birth and survived, but there are clues suggesting that her baby may not have done. The postpartum bodily changes are the same after a stillbirth as after a live birth, including lactiferous engorgement of the breasts a few days after the birth. The circumferential lines carved around the prominent breasts suggest a sensation of tightness unrelieved by suckling, as does the absence of clearly depicted nipples. The hormonally-induced bodily changes of pregnancy and the presence of a living child in her womb prepare the pregnant mother for the emotional bond of caring for a living child - if this were not so, babies would not survive after birth. The loss of a child through stillbirth is an emotional trauma that is hard to come to terms with. One can easily imagine how a bereaved mother who has already gained some skill in carving would be motivated to create a sensory image of her bereaved postpartum body as a way of expressing her profound sense of loss. Furthermore, the absence of the demands of maternal care and the need to recuperate physically would provide the necessary time for the many hours of carving required for creating this piece.

## **Other parts of the body**

The back of the figurine is almost featureless: it is of no interest, being unaffected by parturition and its aftermath. It is completely smooth except for a double line demarcating the waist. Incised lines on the back in the position of the waist are present in some later figurines, such as the marl figurine from Kostenki I illustrated in Fig. 8 of Soffer *et al.* (2000). In the Hohle Fels figurine there is no other suggestion of clothing, but these lines suggest that a skirt-like item would normally be tied around the waist, and/or there may already have been an established convention of marking the waist of carved figurines in this way. Similarly, the legs below the knees are irrelevant so are not represented (though a more prosaic explanation is possible - that their length was constrained by the size of the piece of ivory supplied to the sculptor).

Although the left arm is missing, it is clear from the mirror-image position of the left and right hands that it was similar to the right one. The depiction of well-defined fingers is significant, since these will have explored the unfamiliar body. The incised patterns on the right arm are notable in that they cannot plausibly be interpreted either as clothing or as a somatosensory description. They are organised as a pattern of two mirror-imaged pairs of chevrons with three simple lines between them, plus two above and two below. There are several possible reasons for carving these lines: (1) they are simply for decoration of the figurine; (2) they have a specific symbolic meaning; (3) they are replications of an actual decoration on the woman's

arms. (1) seems unlikely, and (2) and (3) are not mutually exclusive. Arm decorations are common in traditional African societies. Ebin (1979) illustrates an Asante woman with painted line designs on her arms, made using a mixture of leaves and white clay; their symbolic purpose is described as providing mystical protection for herself and her infant. Scarring is another possibility: Gröning (1997) describes a Tawa (Zaire) woman with scarring of the arms that is symbolic of fertility. Arm scarring or tattooing may have been a feature of the Aurignacian culture of the Swabian Jura: deep parallel incisions are present on the arms of the "Löwenmensch" (lion-man), a male human figurine with a lion's head that was excavated from Hohlenstein-Stadel cave from a level dated to 32 kya (Schmid 1989; Conard & Bolus 2003). Incised lines are also a frequent feature of bone, antler and ivory objects excavated in this region. The parallel pattern is most common, but criss-cross patterns (on bones and on ivory carvings of mammoth and horse) are characteristic of Vogelherd cave, from a level that has been dated to between 31 and 36 kya (Conard & Bolard 2003 and references therein). It may be that the pattern of chevrons and simple lines on the arms of the Hohle Fels figurine is the traditional pattern of her community and/or symbolic of her pregnancy.

## The Hohle Fels figurine and the origin of art

The importance of this figurine for our thinking about the origin of the human instinct to create representative art cannot be over-estimated. It is the earliest known example of figurative art anywhere in the world that was not made by modification of a suggestive shape (see Morriss-Kay 2010, for discussion of the Tan Tan and Berekhat Ram figurines in this context). The discovery of musical instruments from the same excavation levels as the figurine (Conard *et al.* 2009) indicates that this was a prosperous community with a sufficiently plentiful supply of the necessities of life (food, clothing, shelter) to have the leisure to enjoy a rich cultural life - presumably including singing and dancing as well as music and art. The artist who created the Hohle Fels figurine must have already been an experienced sculptor: it is clear that this is not a first piece, both because of the skill involved in working this hard material with stone tools, and because ivory was too precious a material (Soffer *et al.* 2000) to use for a first attempt. The creation of this piece must have involved first rough then finer carving, then smoothing of the surface, and finally incision of the lines.

The skill of carving, like the much better recorded skill of stone knapping, depends on social transmission. The origin of carved human representations in Africa predates contact with Westerners (Kolloos 2002), so it can be assumed that the cognitive ability to create 3-D figurative art, if not the creation itself, predates the emigration of anatomically modern humans from Africa to Europe (Morriss-Kay 2010). Many carvings in wood that later degraded must have been made in both Later Stone Age Africa and Aurignacian Europe, both before and after 40 kya. The Hohle Fels figurine has survived thanks to the use of a durable material. We can only hope that other examples of very early figurines carved in ivory, bone or antler from Europe, or African stone relief carvings earlier than the 15-16 kya engravings from the Upper Nile Valley described by Huyge and Claes (2008), will be found in the future. A greater corpus of early Aurignacian art will provide further insight into the cognitive underpinning of the creative impulse associated with the origin of art.

The possibility that this figurine is a somatosensory self-portrait raises interesting questions about the origin of three-dimensional portable art. The interpretation

presented here suggests that the origin of 3-D figurative art may not have been driven exclusively by a desire to portray visual experiences of the world. Only further finds from the early Aurignacian will confirm whether this is indeed an example of perception-derived art, and whether it is unique for its time. We already have some clues that it is not unique: therianthropic figures such as the lion-man similarly suggest that early human portraits incorporated inner as well as visual perceptions of the self. These, too, may have been self-portraits insofar as they depict the artist's sense of embodiment as animal-spirit-human.

The concept of embodiment is fundamental to the self-portrait hypothesis presented here. Coward and Gamble (2010) emphasise the shared nature of the subjective interpretation of bodily experience, and point out that cognitive representations are inherently metaphorical in nature. Human communication depends on metaphors, since they provide the basis for an interpretative understanding of the world (Tilley 1999). In my view, the Hohle Fels venus expresses "This is how I feel" more eloquently than would be possible in a verbal description. However, art is a visual medium, and communication depends on the viewer as well as the creator. The repulsion experienced by Mellers (2009) is thus a valid reaction from a man, who cannot have first-hand experience of birth or its immediate aftermath; he saw and reacted to a depiction of grossly exaggerated anatomical features, not the metaphorical description of a state of body and mind. The aesthetic experience of looking at a work of art is more than just a visual experience. Di Dio and Gallese (2009) define an aesthetic experience as one that allows the beholder to "perceive-feel-sense" an artwork, and which "implies the activation of sensorimotor, emotional and cognitive mechanisms". This broad definition of aesthetics describes my own reaction to the Hohle Fels figurine, but may equally well be applied to the act of its creation. If my interpretation is broadly correct, this act of creation has enabled the experience of an individual human being to be communicated to us after some 40,000 years. We owe a debt of gratitude not only to the figurine's creator but to the team of archaeologists who brought it to light.

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