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## Peripersonal social worlds.

### Exploring the nature of the earliest visual cultures of African and Near Eastern *Homo sapiens* and Eurasian Neanderthals\*

Human societies have evolved an extreme reliance on culture,<sup>1</sup> much of which is visual in one way or another, and how and why this occurred is a major preoccupation of palaeoanthropology. Palaeolithic visual culture is usually caricatured as reflecting a dominance of representations of gregarious prey animals, at least on the basis of European Upper Palaeolithic art. It certainly was for the last 30,000 years of the Pleistocene, to which our record of figurative art is currently restricted when viewed critically. It is easy to see why. Even modern, urban visual worlds – at least those of imagination, entertainment, aesthetics, and advertising – are dominated by animals and anthropoid animals, which sell things far better than their human counterparts.<sup>2</sup> Our psychology has presumably been shaped by our evolutionary heritage as hunter-gatherers dependent largely on the procurement of wild animals for survival. The centrality of animals to our visual worlds is apparent as soon as figurative art appeared among Upper Palaeolithic *Homo sapiens* hunter-gather groups by 40,000 years before present (henceforth BP) in Sulawesi, Indonesia,<sup>3</sup> probably by/during the 37<sup>th</sup> millennium BP in Europe, and possibly by 30,000 BP in Africa.<sup>4</sup> In Palaeolithic terms figurative art appeared relatively recently, however. It is now

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1 Henrich 2015.

2 McCutchen 2005; Spears – Germain 2007.

3 Aubert et al. 2014.

4 Rifkin et al. 2016.

evident that this was preceded by a long period of non-figurative visual culture, well documented from ~100,000 BP but evident up to 400,000 years beforehand, revealing a long use of material adjuncts to visual culture among Neanderthal and early *Homo sapiens* groups. Hence while it is understandable that when human groups sought to represent things fairly realistically they chose animals; but when we want to understand how human visual culture emerged we need to look at another set of material entirely.

We can assume that visual culture emerged not as a passive entity, but as a form of social action; communication used to debate, explain, reassure, and persuade<sup>5</sup>. From this perspective I explore current evidence for the earliest, pre-figurative visual culture, probably created on the body, as well as on objects in close and routine contact with it, and used to extend marks of the body onto the external landscape (rock surfaces). As a falsifiable working conclusion I conclude that this began with a long phase of non-shared markings of meaning only to individuals, which I call *babble* (for not unkind reasons I explain below). Subsequently, from at least ~100,000 BP such markings gained group coherence and were gathered into visual traditions by both Neanderthals and *Homo sapiens*. I follow a basic hypothesis that art originated as body decoration, became extended to small, portable objects associated with routine tasks close to the body, and finally to the fixed, external landscape, over the period from >500,000 – <100,000 BP,<sup>6</sup> and I identify both similarities and dissimilarities between the two groups. It should go without saying that, as the two are most likely regional variations of the same highly-encephalised hominin species, these differences are cultural, not cognitive. I make no assumption that all late Pleistocene human groups used tangible visual culture or that it was the same everywhere; I also dispense entirely with the unhelpful term ‘symbolism’, instead trying to nuance the different visual worlds those groups who have left tangible artistic residues may have occupied.

## Evolution of visual culture: from babble to coherence

The act of marking presumably arose out of personal habits and the routine ways that individuals made things and passed time, all of which may be defined as behavioural rituals. Great apes are highly visual and apparently enjoy using signs; we may therefore expect a propensity for signing among hominins, and that signs could be combined spontaneously from an early age and elaborated upon from adulthood

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<sup>5</sup> Gell 1998.

<sup>6</sup> Hodgson – Pettitt 2018.

if social contexts supported this ('innovation'). Chimpanzees exhibit ritualised displays that can even lead to what archaeologists might term 'structured deposition'.<sup>7</sup> Common features of modern behavioural rituals include specially prescribed colours, numbers, and an emphasis on order and symmetry, which promote feelings of wellbeing, and *in extremis* can become obsessive compulsive disorders.<sup>8</sup> If natural colourants were accessible in the landscape, we might expect individuals to experiment with decoration and signing, and incorporate such behaviour into routines that are reassuring, decontaminating and assuaging. This should not be surprising; the watershed comes when such behaviours are synchronised at group level, which can have profoundly beneficial effects on individuals<sup>9</sup> and enhance intra-group cooperation<sup>10</sup> and prosociality.<sup>11</sup> The maintenance of key concepts of lithic technology by Neanderthals over tens of thousands of years<sup>12</sup> may be an indicator of the centrality of shared ritualised actions to social cohesion among their groups, for example, and it is fair to assume that individual ritualised behaviours could be imitated and at some point would come under selection as group signals. As social worlds grew at either intra- or inter-group scale, the importance of such shared individualisms would grow;

[w]hat changed during the Palaeolithic was the character and extent of the social scale [...] materials needed to support extended networks within a social landscape led to the elaboration of culture to carry the novel social representations in symbolic form.<sup>13</sup>

Logically, the prime components of early visual culture would be those natural objects encountered in quotidian life that could be deployed easily for obvious display; "social extension would be impossible without harnessing the environment as part of our cognitive architecture".<sup>14</sup>

From the perspective of communication among animals, it is evident that many arguments about the origins of 'modern behaviour' have followed remarkably simplistic reasoning, however. We find an object in the archaeological record; it functions as part of complex systems in the present (shell jewellery for example); we therefore assume similar complexity was at work in the past, and we therefore conclude that past 'artists' were as symbolically adept as us, a conclusion so general-

7 Kühl et al. 2016.

8 Dulaney – Fiske 1994.

9 Bulbulia – Sosis 2011.

10 Sosis – Alacorta 2003.

11 Fischer et al. 2013.

12 Soressi 2004.

13 Gamble 1998.

14 Gamble 2010.

ised that it has little use. It doesn't help that prehistoric archaeology is largely visual, and hence we potentially over-exaggerate the importance of the 'art' objects we find. From an ethological viewpoint, if we were able to focus on *audial* culture ('speech'), the shared intra-group calls (linguistic dialects), community-specific greeting rituals, and click-greetings learned by imitation in socially stable cetacean groups – "cultures that closely parallel those found in chimpanzees and humans"<sup>15</sup> – would lead us to conclude that several taxa of whales and dolphins were 'behaviourally modern'. So what?

Chimpanzees and bonobos show us that we can justifiably expect a lot from early hominin visual culture, given that they inhabit visual worlds that are fundamentally similar to humans in terms of colour and pattern perception.<sup>16</sup> They are capable of self-recognition, and possess at least a rudimentary concept of self.<sup>17</sup> They make use of visual symbols to communicate their perceptions of the world and to express desires and make requests;<sup>18</sup> they make statements about things,<sup>19</sup> express moral concepts (good and bad) in appropriate social contexts<sup>20</sup> and concepts of possession.<sup>21</sup> Their visual symbols can be combined into two (occasionally three) elements (e.g. numbers, colours, objects);<sup>22</sup> they express basic numeracy (including, cardinals, ordinals and the meaning of zero),<sup>23</sup> and use arbitrary visual signs to indicate goal objects at locations currently observed up to 650m distant.<sup>24</sup> They display delayed imitation ('memory') in their use of signs,<sup>25</sup> populational (cultural) variation in their gestural signals,<sup>26</sup> and, like humans, can generate novel symbol combinations in conversational contexts. Given this, chimpanzees might think the argument that gathering of 'beauty shells' from intertidal beaches reflects 'modern behaviour' and 'symbolic thought'<sup>27</sup> a little quaint.

To primates, the ability to represent something by something else is no big deal.

The capacity of chimpanzees for symbolic thought probably emerged [...] for perceiving the relations between things. We can trace a pathway along which representations

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15 Rendell – Whitehead 2001.

16 Matsuzawa 1996.

17 Gallup 1970.

18 Savage-Rumbaugh – Lewin 1994.

19 Lyn et al. 2011.

20 Lyn et al. 2008.

21 Itakura 1994.

22 Savage-Rumbaugh et al. 1986; Lyn et al. 2008, 2011; Itakura 1994.

23 Biro – Matsuzawa 2001.

24 Menzel et al. 2002.

25 Allen Gardner – Gardner 1969.

26 Tomasello et al. 1989.

27 Jerardino – Marean 2010, 422.

of, for example, a fig become progressively more distant from the fig itself. The value of a fig to a chimpanzee lies in eating it [...] he quickly learn[s] to recognise, as fig, the fruit above his head [...] which he has already learned to know through taste. He [...] learn[s] that a characteristic odour is representative of fig, even though [...] [it] is out of sight. Food calls made by other chimpanzees [...] may also conjure up the concept of fig. Given the chimpanzees' proven learning ability, *there does not seem to be any great cognitive leap from these achievements to understanding that some quite new and different stimulus (a symbol) can also be representative of a fig*. Although chimpanzee calls are, for the most part, dictated by emotions, cognitive abilities are sometimes required to interpret them. And the interpretations themselves may be *precursors of symbolic thought*.<sup>28</sup>

It does not end with figs; “[...] apes can learn to produce symbols [...] to bring about the occurrence of desired effects.”<sup>29</sup>

At some point, in the terminology of developmental psychology, individual ‘babble’ became socially imitated and shared as a ‘coherent’ symbol. Babble is random, unsystematic noise making (e.g. ‘googoo’) a definition which I extend here to *any* individual behaviour that is not necessarily conscious, meaningful or shared with the social group. In terms of visual worlds it could be the conscious sequence an individual uses to knap a core or butcher an animal, or an unconscious sequence the individual uses to engrave a pattern onto a shell for no obvious reason (doodling). Chimpanzees are good doodlers; they enjoy painting with colour<sup>30</sup> and scribble with pens<sup>31</sup>, examples of exactly the sort of material babble that could evolve into coherent visual culture if this were socially advantageous, through the two-way dialogue in which language is socially acquired by chimpanzees, bonobos and human infants.<sup>32</sup> I shall argue below that we can identify this origin of cultural coherency archaeologically.

## Peripersonal babble

Palaeoanthropologists assume that visual culture originated on the body in the absence of any evidence to the contrary.<sup>33</sup> This seems sensible, given that the body is the focus of social negotiation. There is no reason to assume that Neanderthals and early *Homo sapiens* didn't intuitively think of the self as occupying a physical lo-

28 Goodall 1986 my emphasis.

29 Savage-Rumbaugh et al. 1986.

30 Morriss-Kay 2010.

31 Hayes – Hayes 1951, 106 my emphasis.

32 Gillespie-Lynch et al. 2011.

33 E.g. Morriss-Kay 2010, 160.

cation within the body, close to the eyes, as modern children and adults do,<sup>34</sup> and one might assume that the face in particular was under prime selection for visual elaboration.

I interpret as evidence of ‘babble’ the earliest material objects of apparently non-quotidian purpose which are, however, unique to their contexts; they are not repeated either on the same site or in the wider archaeological record, and as such, until we find other examples of similar objects it is parsimonious to assume that they reflect limited or unique acts – the babble of sole individuals using these materials as a social scaffold between themselves and whatever they believe the material represents. These objects are in some cases strongly identified with mechanical actions linked to quotidian tasks such as opening shells with stone tools to obtain the edible animal, and in all cases represent minimal, even ephemeral, modifications. That they are found only sporadically from ~500,000 BP onwards may be significant. Geometric markings engraved on a mollusc shell at Trinil, Java is a rare example from the earliest end of this range, representing the brief activity of an individual in the context of freshwater shellfish consumption.<sup>35</sup> A number of examples of engraved cortex of stone flakes and tools are known between ~380,000 and ~35,000 BP across Europe and Western Eurasia,<sup>36</sup> produced by *Homo heidelbergensis* and *Homo neanderthalensis*, and while a number of supposed engraved pieces of bone and ivory from the European Lower and Middle Palaeolithic have been shown to have taphonomic origins, isolated examples of deliberate marking on these materials also show these taxa similarly marking them.<sup>37</sup> Engraved stones, bones, and ivory often exhibits careful engraving, but such objects are still rare, singular examples standing out among the many unmodified examples of these materials on each site. Two examples of Pierres figures – natural objects whose resemblance to the human body has been emphasised by minimal (if careful) engraving – are perhaps best seen as examples of individual babble. A small pebble from Berekhat Ram (Israel), probably ~280–250,000 BP in age, was modified with a flint point,<sup>38</sup> and a similarly small example from Tan Tan (Morocco), probably ~400,000 BP in age, was grooved and coloured with red pigment, in each case to elucidate the objects’ natural resemblance to the human body. The babble could either have been internal (‘this looks like a human body’) or interactive (‘you look like the human body’); whichever the case there is no reason to see these as examples of shared visual culture.

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34 Starmans – Bloom 2012.

35 Joordens et al. 2015.

36 Majkić et al. 2018.

37 d’Errico – Villa 1997.

38 d’Errico – Nowell 2000.

## Towards concordancy: Neanderthal peripersonal visual culture

Transport and use of colourants, indicative of a concern with display, may be a stronger indicator of shared visual culture. At Maastricht-Belvedere (Limburg, Netherlands) droplets of haematite paint obtained from a source >40km distant was scattered across the site, indicating the use of a wet paint.<sup>39</sup> From ~100,000 BP evidence for pigment use in the Middle Palaeolithic increases significantly. Late Neanderthals used black (manganese dioxide; perhaps charcoal), red and yellow (haematite) pigments widely<sup>40</sup> in at least France<sup>41</sup> and Romania<sup>42</sup> and from which also comes evidence of grinding,<sup>43</sup> and it may be no coincidence that from this time one sees a higher incidence of modified raw materials, composite technology and, for that matter, burials,<sup>44</sup> suggesting that late Neanderthals were accelerating the complexity of their behaviour, and that complexity included the visual world.

Use of bivalve shells to contain and/or process pigment is evident from at least 115,000 BP in Murcia, Spain.<sup>45</sup> At Cueva de los Aviones ~115,000 BP,<sup>46</sup> red and yellow pigment lumps were carried to the site from local sources, along with several taxa of complete mollusc shells, several of which bear natural and artificial perforations used for suspension. Colourful marine shells, presumably suspended about the person, were clearly part of the local Neanderthal visual culture. Among these, one *Glycymeris* shell (**Fig. 1**) among several suspended using natural perforations of their umbo (hinge prominence), bears traces of haematite colourant around its perforation, perhaps picked up from contact with a coloured material (clothing?). One of three *Spondylus* shells contained traces of a “pigmentatious mass”<sup>47</sup> of charcoal, haematite, dolomite and pyrite in an iron oxide-hydroxide mineral base. At Cueva Antón ~50,000 BP, an artificially perforated *Pecten* shell (**Fig. 2**) bears traces of an orange pigment mix of yellow goethite and red haematite on its external discoloured surface, perhaps in an attempt to replicate the preserved natural red colour of its internal surface; perforation and paint strongly suggesting that its function was as a personal ornament, not a palette for pigment production.<sup>48</sup> The mix of two distinct pigments strongly suggests the desire for a specific colour, rather than random

39 Roebroeks et al. 2012.

40 d’Errico 2003.

41 Soressi – d’Errico 2007.

42 Carciumaru et al. 2002.

43 Villa – d’Errico 2001; Carciumaru et al. 2002.

44 Langley et al. 2008.

45 Zilhão et al. 2010.

46 Hoffmann et al. 2018a.

47 Zilhão et al. 2010, 1024.

48 Ibid., 1025.

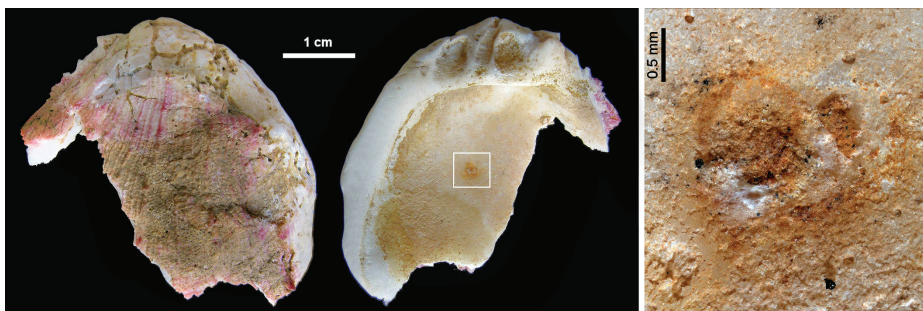


Fig. 1: Shell of *Spondylus gaederopus* (modern break) from Cueva de los Aviones. Note the natural radial red patterning (left). Location (centre) and detail (right) of pigment mass (image courtesy Joao Zilhão).



Fig. 2: Perforated half-shell of *Pecten maximus* from Cueva Antón, showing the natural internal red colour (left) and white external side coloured with pigment (image courtesy Joao Zilhão).



colouring. The excavators of these two sites make a strongly argued case that these represent fortuitous preservation of a widespread late Middle Palaeolithic tradition of personal ornamentation rather than a few odd pieces,<sup>49</sup> and it is of interest to note that the selection of naturally perforated *Glycymeris* shells for suspension can be found from this time down to the Neolithic (Joao Zilhão pers. comm.).

By ~45–41,000 BP at the Grotte du Renne (Arcy-sur-Cure, France) the canines of wolf, fox and hyaena, and incisors of horse, bovid, reindeer, marmot and bear were pierced/grooved for suspension during the Châtelperronian, as were a fossil shell, belemnite and crinoids, a fragment of rhinoceros molar, and pendants of mammoth ivory and a stalactite (in addition to black, red and yellow colourants).<sup>50</sup> A pierced wolf canine and deer relict canine were also recovered from the Châtelperronian of Quincay (France);<sup>51</sup> hare and wolf long bones were modified, probably to use as pendants at Buran-Kaya III (Crimea),<sup>52</sup> and cutmarked claws of powerful diurnal raptors and corvids at several sites in France and Italy also presumably functioned as ornaments<sup>53</sup>. Although it is somewhat exaggerated to see these as assigning “unprecedented cognitive abilities to these hominins”<sup>54</sup> they certainly demonstrate a selective interest in the claws of predatory birds, as does the careful removal of dark coloured wing feathers by Neanderthals at Fumane Cave, Italy >45,000 BP.<sup>55</sup> As with mollusc shells, Neanderthals selected a strict range of natural objects from among a vast set of potential materials for display. Why select only canines from carnivores unless these had specific meaning to their visual world?

From this time, Neanderthal engravings on natural materials include short parallel lines,<sup>56</sup> zigzags<sup>57</sup> and curves<sup>58</sup> including four carefully engraved ‘nested’ semicircles with surrounding lines.<sup>59</sup> Lines deeply engraved onto the bedrock of Gorham’s Cave, Gibraltar<sup>60</sup> may form part of this phenomenon, but as these are unconvincingly dated it is unclear whether they were made by Neanderthals or later occupants of the cave. Markings of the body on cave walls can now be dated to before 65,000 BP in three Spanish caves (**Fig. 3a–c**). These take the form of hand stencils (Maltravieso Cave, Estremadura), colour washes on stalactite draperies (Ardales Cave,

49 Ibid., 1026.

50 d’Errico et al. 1998.

51 Granger – Lévêque 1997.

52 d’Errico – Laroulandie 2000; Caron et al. 2011.

53 Morin – Laroulandie 2012.

54 Finlayson et al. 2012, 1.

55 Peresani et al. 2013.

56 Bednarik 1992; d’Errico – Villa 1997.

57 Marshack 1996, 357; d’Errico – Villa 1997.

58 Fiore et al. 2004.

59 Marshack 1996.

60 Vidal et al. 2014.



Fig. 3a: Spanish non-figurative cave art with minimum ages of 65,000 BP obtained on flowstones sampled at the figured locations: Rectangular 'scalariform sign' created by linked finger dots in La Pasiega cave. Images around this that are not dots were added much later, during the Upper Palaeolithic.

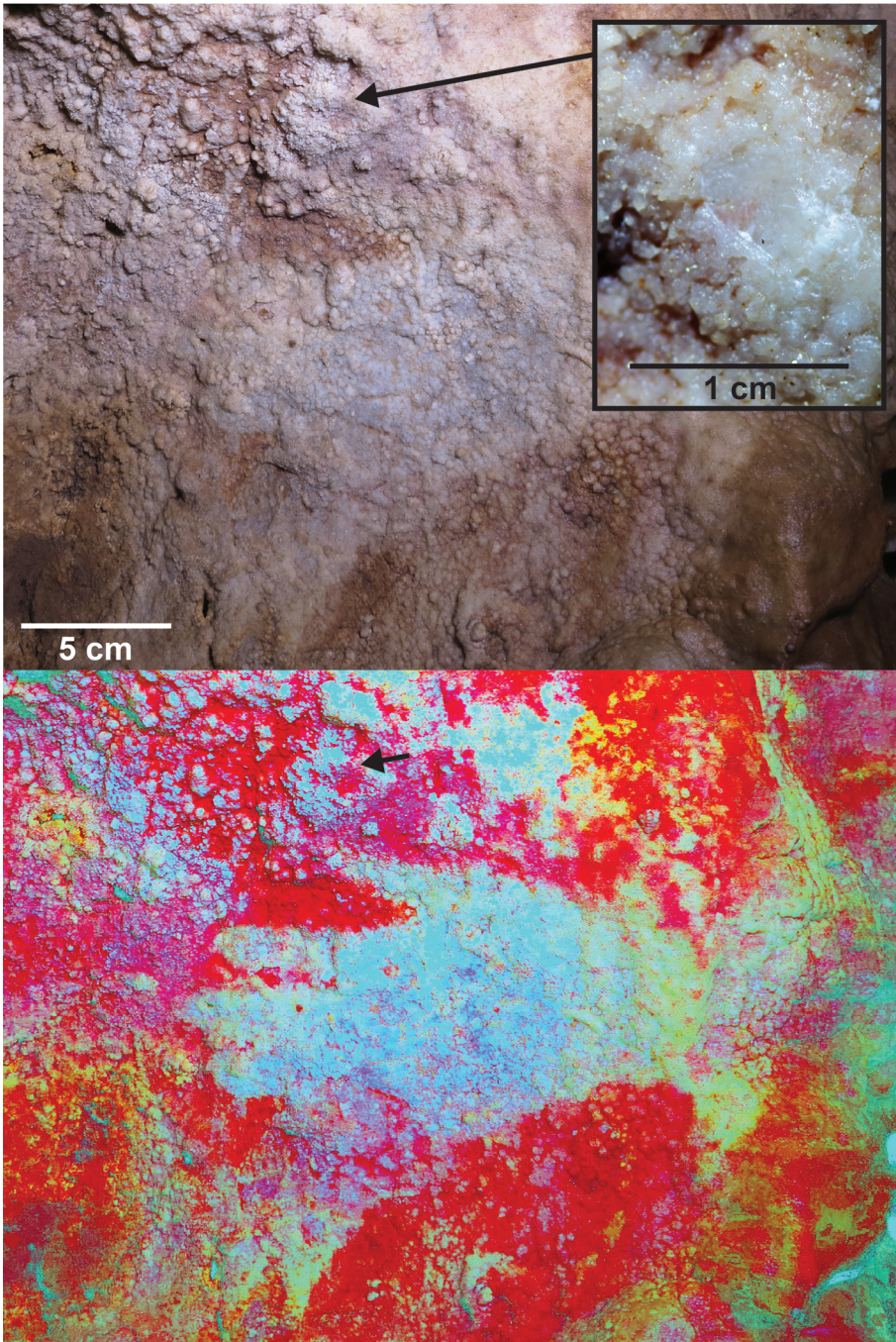


Fig. 3b: Spanish non-figurative cave art with minimum ages of 65,000 BP obtained on flowstones sampled at the figured locations: Hand stencil GS<sub>3b</sub> in Maltravieso cave (image manipulated using D-Stretch programme on right).

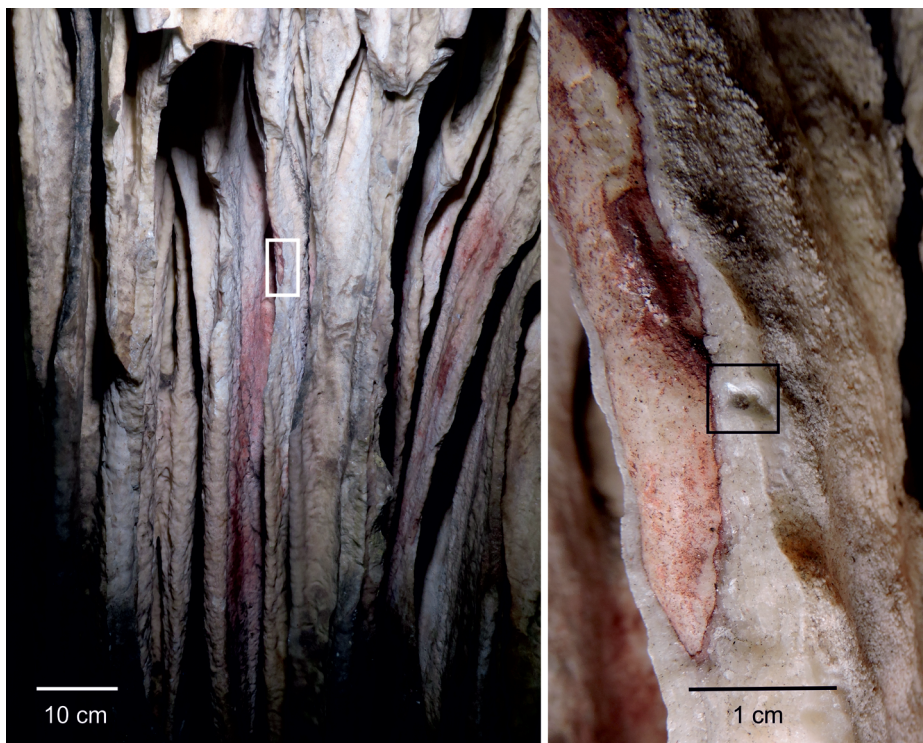


Fig. 3c: Spanish non-figurative cave art with minimum ages of 65,000 BP obtained on flowstones sampled at the figured locations: Red wash within the folds of a flowstone drapery in Ardales cave. (All photos U-Th cave art dating team, Hoffmann et al. 2018).

Malaga), and a rectangle comprised of joined finger dots (La Pasiega Cave, Cantabria), all in red pigment.<sup>61</sup> These are not dated directly but on the basis of dates for the formation of flowstones overlying them which serve as minimum ages, and thus while the authorship of this non-figurative visual culture is a scientifically open question, a parsimonious interpretation based on the associated archaeology of the sites suggests that they were very likely made by Neanderthals rather than earlier archaic hominins. These marks form a direct association of the individual body with the cave wall, and are consistent with a critical review of the dating for hand stencils in European cave art, which date to >40,000 BP and likely disappeared after ~30,000 BP,<sup>62</sup> and it is interesting that it is from ~100,000 years ago that some Neanderthal groups take an interest in the dead body, interring them in shallow graves for the first time.<sup>63</sup>

61 Hoffmann et al. 2018b.

62 Pettitt et al. 2015.

63 Pettitt 2011.

It is noticeable how much body parts dominate Neanderthal visual culture; parsimoniously we can assume that pigments were used to decorate the body, which was otherwise decorated with body parts of other animals (molluscs, terrestrial and avian carnivores and herbivores). Parts of that body were extended to the landscape in the form of non-figurative cave art produced through direct contact and placed in meaningful association with the topography of cave walls, essentially a bridging dialogue between the Neanderthal ‘artist’ and the rock surface.

### Towards concordancy: *Homo sapiens* peripersonal visual culture

Pigments occur on a number of African Middle Stone Age (MSA) sites from > 260,000 BP,<sup>64</sup> often in great number. At the imprecisely dated late MSA sequence of Porc-Epic cave (Ethiopia) grindstone pebbles were used to process ochres of distinct hues repeatedly over the course of ~4000 years.<sup>65</sup> Several dozen ochre lumps, some bearing traces of grinding and scraping were recovered from ~170–150,000 BP levels of Pinnacle Point cave on the Cape Coast of South Africa, again biased towards using the most colour-saturated examples for pigment production.<sup>66</sup> Between 100,000 and 75,000 BP, pigment processing was abundant in Blombos Cave on the Cape coast of South Africa. Production of a red (ochre) paint by early *Homo sapiens* is indicated by ochre-stained shell mortars and pebble pestles from level TK-2 dated to ~100,000 BP.<sup>67</sup> Striations on ochre lumps indicative of powdering through scraping or grinding with stone tools characterise this and younger MSA levels.<sup>68</sup> Of several hundred sizeable fragments of ochre from these levels, 19 from the three main MSA complexes bear incised markings spanning the period 100,000–75,000 BP (most numerous at the older end of this range)<sup>69</sup>. Some of these marks are bi-products of the process of powdering by scraping, but at least eight pieces from eight layers were deliberately incised with marks taking the form of parallel/subparallel lines often with shorter, oblique or perpendicular lines crossing them; cross hatchings where long single lines or paired lines (bands) are crossed with short oblique or perpendicular lines, and dendritic (branched) forms in which several lines diverge obliquely from a point of convergence<sup>70</sup> (Fig. 4a–c). In addition to carefully-incised cross hatchings, one fragment (M3-9) bears a short, deeply incised line which

64 d’Errico et al. 2003.

65 Rosso et al. 2017.

66 Marean et al. 2007.

67 Henshilwood et al. 2011.

68 Henshilwood et al. 2009.

69 Ibid.

70 Ibid., 42.

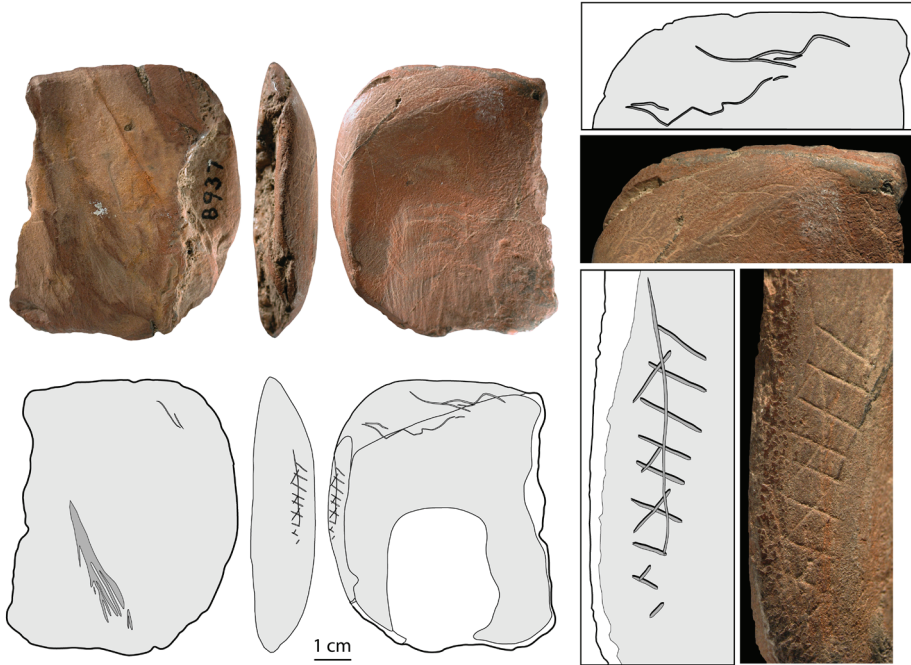


Fig. 4a: Blombos Cave engraved ochres: Piece M1-5 ground slab showing dendritic scraping (left) and cross-hatching (right).



Fig. 4b: Blombos Cave engraved ochres: Piece M1-6 retouched, ground and scraped slab with two sets of engraved, superimposed lines crossed and framed by three horizontal lines.

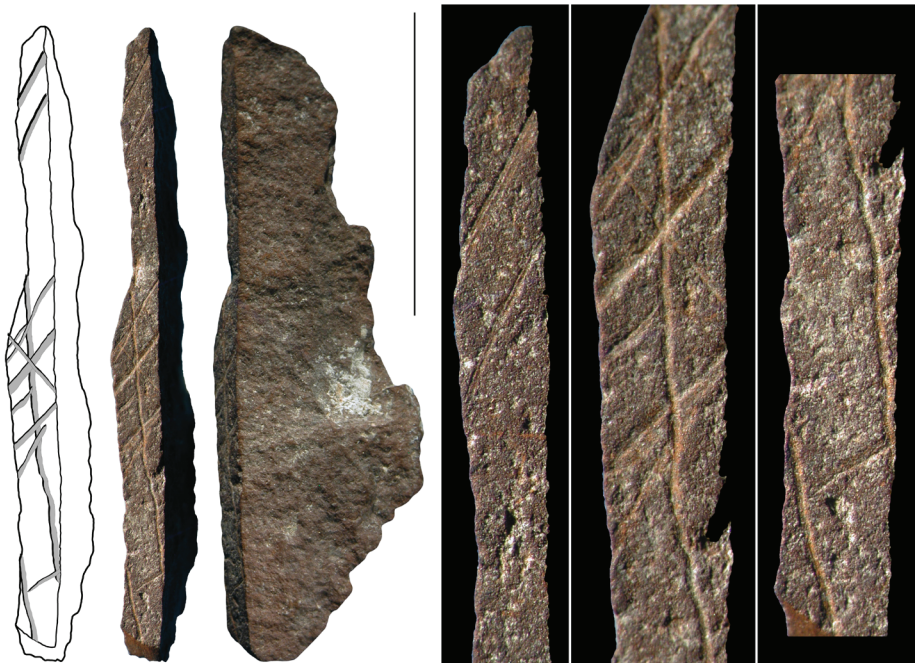


Fig. 4c: Blombos Cave engraved ochres: Piece M3-1, small shard fractured off a larger lump of haematized shale bearing remnants of two long obliquely-crossed lines (images courtesy of Christopher Henshilwood & Francesco d'Errico).

appears to function to emphasise a series of radial scars resulting from the removal of a flake off of one edge of this piece by percussion. As the site's excavators note, the examples of deliberate engravings from Blombos “represent a focussed and not abstracted attempt to produce a pattern”<sup>71</sup> and that

considering that engravings and traces of utilisation for pigment production often occur on the same objects, it is reasonable to speculate that motifs/decorations may represent templates of designs produced on other media, for example human and animal skin, wood, and stone using the extracted ochre powder.<sup>72</sup>

It seems that marks created by the practical task of ochre powder production lead to the deliberate and careful (re)creation of such markings apparently for their own sake, and to represent ideas.<sup>73</sup> As they are generally too small to function as forms of

<sup>71</sup> Ibid., 42.

<sup>72</sup> Ibid., 45.

<sup>73</sup> Mellet et al. 2019.

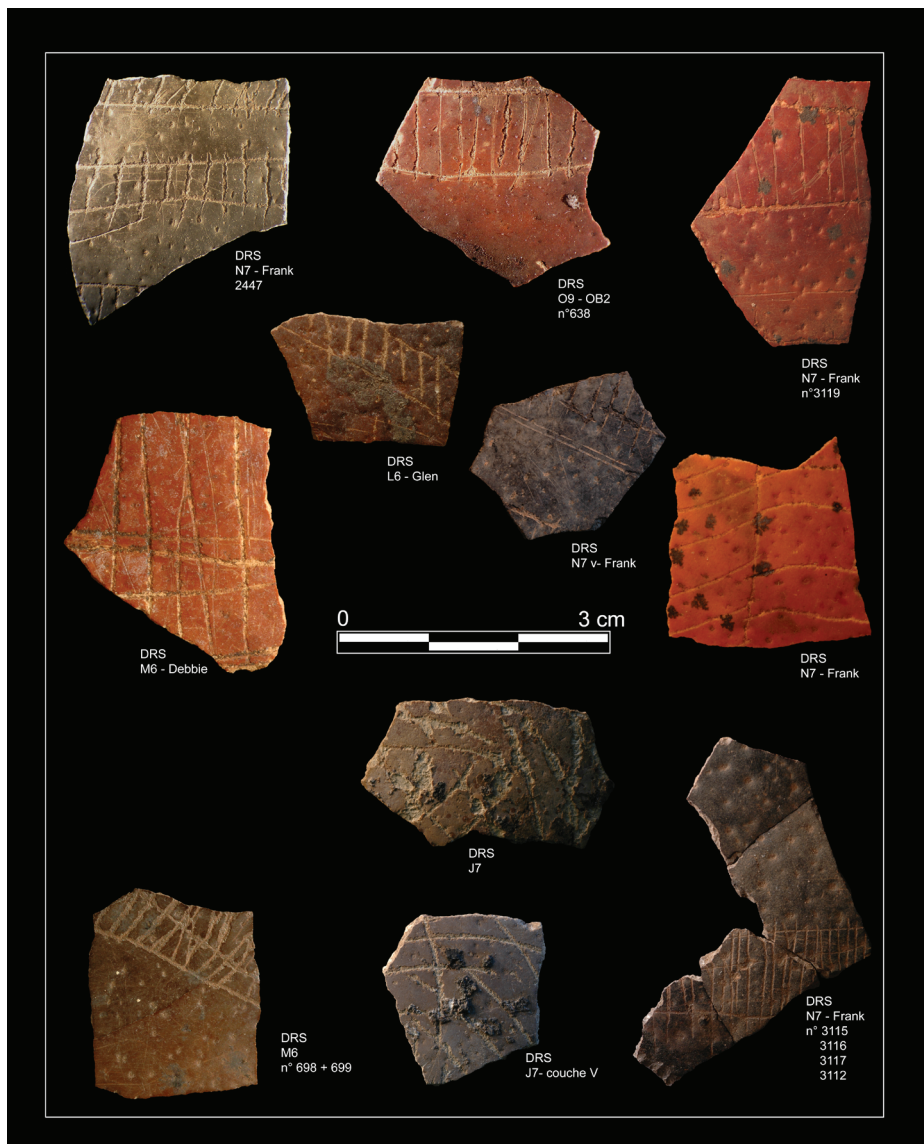


Fig. 5: Diepkloof engraved ostrich eggshell fragments (image courtesy Pierre-Jean Texier).

display,<sup>74</sup> it is possible that they originated as a form of individual babble, although the repetition of motif traditions in differing levels at Blombos suggests that a degree of concordancy had now emerged. That visual ‘rules’ were in place is further suggested by several dozen ~75,000 year old perforated beads of *Nassarius kraussianus*

<sup>74</sup> Henshilwood et al. 2009, 42.



shells from several MSA levels of the site,<sup>75</sup> coloured orange and black, and strung at first in alternate pattern, giving way over time to a pattern in which the dorsal sides of shells were tied together in pairs, in each case according to strict rules.<sup>76</sup>

African evidence for MSA engraved traditions and beads are widespread. At the Diepkloof rockshelter on the Cape coast, engraved eggshell containers were being used by 65,000 BP.<sup>77</sup> Although ostrich eggshell fragments have been recovered throughout the ~130,000 – ~45,000 year old sequence at the site, the engraved fragments are restricted to the 18 sequential layers that can be ascribed culturally to the technologically precocious Howieson's Poort complex ~65,000 – ~55,000 BP (**Fig. 5**). They take the form of four distinct and repeated deeply incised motifs; hatched bands (the most common), parallel/subparallel lines, intersecting lines, and cross-hatching. These were created using standard, repeated techniques<sup>78</sup> and variation in the proportions of the motifs over the entire Howieson's Poort sequence suggests that hatched lines were dominant earlier, and came to be replaced by the parallel lines,<sup>79</sup> a process of cultural change over time intriguingly similar to that observed in Blombos Cave. Circular beads of ostrich eggshell extend back to at least 50,000 BP in the MSA levels of the Magubike rockshelter in Tanzania,<sup>80</sup> and a perforated *Conus* shell bearing traces of ochre was found in the burial pit of an infant ~74,000 BP of Howieson's Poort attribution in Border Cave, KwaZulu-Natal.<sup>81</sup>

At the Grotte des Pigeons (Taforalt, Morocco), perforated shells of *Nassarius gibbosulus*, several bearing ochre traces, were clearly strung ~82,000 BP.<sup>82</sup> Two perforated shells of this taxon also derive from from ~135–100,000 BP levels of Skhul Cave (Israel) and another between the two sites at the open air MSA (Aterian) site of Oed Djebbana (Algeria), probably similar in age to Skhul.<sup>83</sup> Ten perforated *Glycymeris* shells derive from four of the lowermost Middle Palaeolithic levels of Qafzeh Cave (Israel)<sup>84</sup> ~92,000 BP, in addition to >84 ochre lumps of mainly pink-red hue with occasional yellows and browns deriving from several sources local to the cave.<sup>85</sup> Several ochre lumps bear traces of scraping and grinding similar to those from Blombos, suggesting practices of procurement and use over ~10,000 years<sup>86</sup>. Although

75 Henshilwood et al. 2004.

76 Vanhaeren et al. 2013.

77 Texier et al. 2010.

78 Ibid., 6182.

79 Ibid., 6182.

80 Miller – Willoughby 2014.

81 d'Errico – Backwell 2016.

82 Bouzouggar et al. 2007.

83 Vanhaeren et al. 2006.

84 Bar-Yosef Mayer et al. 2009.

85 Hovers et al. 2003.

86 Ibid., 507.

the shells' perforations are natural, wear patterns indicate that they were strung, and as with the Neanderthal examples from Spain clearly functioned as objects of visual culture in their own right, reflecting a deliberate concern with brightly coloured species of several hues; two bear yellow ochre staining, one red ochre, one red ochre and black manganese, and two black manganese. The shells had been brought to the cave from marine sources ~40km distant, presumably as ornaments on the body. Once again, as with Neanderthals, the Qafzeh *Homo sapiens* groups were also taking an interest in the burial of the bodies of the dead apparently for the first time.

Making beads and associated ornaments were repeated activities ~45,000–35,000 BP in the Initial Upper Palaeolithic levels of Üçağizli Cave I (Turkey).<sup>87</sup> A variety of marine and fossil gastropod shells including *Nassarius gibbosulus* were pierced for suspension and found isolated or in small groups, the latter perhaps indicative of suspended 'strings'. The dominance of *Nassarius* over ~10,000 years at Üçağizli, and in Israel, North, and South Africa from at least 35,000 years earlier, demonstrates a "surprising persistence" of this form as an element of visual culture which could indicate a form of selective conservatism in their use.<sup>88</sup> These are of course visually attractive natural objects, and one need invoke no specific societal connection over such vast temporal and geographical spans, but one can certainly conclude that they functioned, if not as the main objects of visual attention *per se*, "but as the most conservative components of a flexible medium for visual signalling"<sup>89</sup>.

Aside from brightly-coloured shells, there seems to have been a distinct lack of interest in other body parts in the visual culture of MSA *Homo sapiens*. As with Neanderthals, a strong interest in the use of pigments of selected colours could be taken to indicate a concern with a body-centred visual culture, and the widespread use of a few taxa of shell jewellery is consistent with this. At this point, however, they diverge from Neanderthals, showing instead an interest in a tradition of geometric markings derived from the processing of ochre and extending onto eggshell containers at Diepkloof, presumably indicating that such concordant themes were replicated on a variety of objects associated with daily life. The concordancy of theme on objects which do not decorate the body *per se*, and which were movable to and from the individual, may suggest that a focus on a group-based message based on practical acts was desired.

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87 Stiner et al. 2013.

88 Ibid., 396.

89 Ibid., 396.

## Early visual worlds: seashell societies and colour cultures

While we cannot be sure as to the specific contribution of language and gesture to the creation of Neanderthal and early *Homo sapiens* social worlds, we can assume that the routine ways of making things, whether handaxes for the former or Still Bay Points for the latter,<sup>90</sup> provided a visually repetitive and reassuring social core. The individual babble that surfaced out of this from time to time became socially concordant by at least 100,000 years ago and out of which a long, non-figurative visual world arose. The visual worlds of both Neanderthals and *Homo sapiens* involved the use of a varied but deliberately restricted range of natural materials from the terrestrial, marine and avian worlds to decorate the body and small objects closely associated with it. Given their antiquity it is reasonable to assume that brightly hued pigments were selected first, and in the absence of information to the contrary were used to elaborate the body. By 100,000 years ago brightly coloured shells strung about the body accessorised colour signalling in both groups (possibly earliest among Neanderthals)<sup>91</sup>, and Neanderthals replicated the natural colours of these with pigments where necessary, replicated natural perforations on shells, and selected specific parts of carnivores (canines, claws, feathers), and herbivores (incisors) as well as more complex carved pendants. It seems that they were developing their visual worlds through reference to their animal conspecifics, or in individual discourse with them. By contrast, African *Homo sapiens* groups took inspiration from the markings produced by flaking, scraping and grinding pigments, turning them into a reference-based system of markings on small objects held in the hands, or in a group discourse with their ritualised actions. In both cases one might say that the visual world imitated – or drew inspiration from – the natural world.

I have argued that systems of concordant signalling evolved by ~100,000 years ago, alongside other behavioural markers of the awareness of the social body such as burial. As yet, it seems that only Neanderthals extended their body marks to the wider landscape, in the form of ‘cave art’. This does not necessarily indicate that their rock art was an attempt to extend the active state of signalling beyond the ‘here and now’; the visual message could still have had brief effectiveness. But it does suggest that a meaningful relationship was being drawn between the individual and the wider world beyond the quotidian. This may suggest that Neanderthals were concerned with an elaboration of the individual body and projection of parts of it onto the fixed external world such as ‘cave art’, whereas African *Homo sapiens* were more concerned with the expression of group abstract identities on portable (and per-

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90 Högberg – Lombard 2016.

91 Hoffmann et al. 2018a.

haps exchangeable) items. Although within artistic traditions that emphasise shared norms style can be used to emphasise individual skills and identities,<sup>92</sup> perhaps, in Polly Wiessner's terminology,<sup>93</sup> Neanderthal visual worlds were more concerned with assertive signalling (about the individual to the group) whereas those of *Homo sapiens* were with emblematic (about the group to the group).

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