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Shimmerings of the Rainbow Serpent: Towards the interpretation of crosshatching motifs in Palaeolithic art

Comparative mythological and archaeoastronomical explorations inspired by
the incised Blombos red ochre block, South Africa, 70 ka BP, and Nkoya
female puberty rites, 20th c. CE.

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draft version

ABSTRACT. On the basis of my Aggregative Diachronic Model of Global Mythology theory, and further inspired by other prehistoric attestations of crosshatching and by my own ethnographic fieldwork into female puberty rites among the Nkoya people of present-day Zambia (1972-1995), I will propose a very specific meteorological reading of the Blombos pattern – as a representation of the Rainbow (- Serpent), probably in an initiatory ritual context.

Of course, crosshatching is ubiquitous, one of the most obvious ways of graphically treating a surface, and my argument does not in the least pretend that all crosshatching, in prehistory or later, is to be understood in this manner. Various alternatives from a number of continents will be considered in my argument; some of these (in terms of the Lightning Bird / Rain, and of the Milky Way) will turn out to be remarkably related to the Rainbow Serpent pattern – as systematic counterparts, or as systematic transformations, still with a meteorological or cosmic reference.

More important than the apparent, and no doubt ephemeral, result in terms of such specific interpretations, my argument aims to contribute to the development of methodology in the highly problematic but rapidly expanding field of symbolic archaeology.

1. Introduction and summary¹

One of the great challenges in prehistoric / archaeoanthropological research is to reconstruct ‘Ancient Modes of Thought’.

¹ Originally written March 2006; greatly revised and expanded January 2011. I dedicate this draft argument to Jim Harrod, whose fascinating pioneering explorations into ‘Ancient modes of thought’ I have followed from the late 1990s on, and whom I salute as a far more experienced fellow traveller on the hardy road to methodological, intersubjective interpretation of Palaeolithic iconography

The main problems attending such studies are not in terms of data, but in terms of theory and method.

One of the principal methodological problems attending this kind of research is that we have no contemporary metatext (subtitle, commentary) to help us ascertain the original, conscious intentions of ancient actors leaving iconographic testimonies in art, on rock faces, on mobile artefacts, etc.

After pioneering work in the course of the 20th century (e.g. Baudouin, Leroi-Gourhan, Marshack, Anati, Lewis-Williams, Harrod), there is now a growing consensus among specialists that the ancient actors' original, conscious meanings are not *totally* beyond our grasp,

And considerable advances have been made in the development of methodologies against which such reconstructed meanings can be more than individual researcher's intuitions, but can be described by intersubjective grammars of symbols

What is needed for such methodologies is

- (a) intersubjective, empirically underpinned, theoretical frameworks that are to guide our methodological steps
- (b) explicit and intersubjective operationalisation of the concepts constituting the theoretical frameworks, to the concrete empirical data at hand
- (c) against the background of, ideally, all available data and all available literature

Against the background of an extensive and growing international literature, I have given much thought to these questions over the years²

I propose that my 'Aggregative Diachronic Model of Global Mythology', however provisional and defective in details, is a suitable theoretical framework in this connection.³

As I already argued elsewhere before⁴ my theory may be claimed to contain specific and

² See: http://shikanda.net/ancient_models/index.htm .

³ van Binsbergen, Wim M.J., 2006, 'Mythological archaeology: Situating sub-Saharan African cosmogonic myths within a long-range intercontinental comparative perspective', in: Osada, Toshiki, with the assistance of Hase, Noriko, eds., Proceedings of the Pre-symposium of RIHN and 7th ESCA Harvard-Kyoto Roundtable, Kyoto: Research Institute for Humanity and Nature (RIHN), pp. 319-349; also at: http://shikanda.net/ancient_models/kyoto_as_published_2006_EDIT2.pdf ; van Binsbergen, Wim M.J., 2006, 'Further steps towards an aggregative diachronic approach to world mythology, starting from the African continent', paper read at the International Conference on Comparative Mythology, organized by Peking University (Research Institute of Sanskrit Manuscripts & Buddhist Literature) and the Mythology Project, Asia Center, Harvard University (Department of Sanskrit and Indian Studies), May 10-14, 2006, at Peking University, Beijing, China; in press in: Duan Qing & Gu Zhenkun, eds., Proceedings of the International Conference on Comparative Mythology, Beijing; preprint at: http://www.shikanda.net/ancient_models/Further%20steps%20def.pdf .

⁴ van Binsbergen, Wim M.J., 2005, 'Mythological archaeology and the visual arts', short presentation, 16 December 2005, participation in the International Conference on Creation myths and the visual arts (M. Schipper & Daniela Merolla, convenors), Leiden: National Museum of Ethnology; at: http://shikanda.net/ancient_models/myth_and_visual_arts/mythical_archaeology_&_visual_arts_December_2005_Leiden_2005.htm ; and the above-cited paper 'Further steps'

systematic hints for the interpretation of prehistoric iconographies in terms of the historic actors conscious meaning and symbolism

The purpose of the present paper is to try and substantiate this claim by reference to one very specific set of iconographic representations: cases in crosshatching in prehistoric art

Here our point of departure will be the famous red ochre block found by Henshilwood at the Blombos Cave, South Africa, in the 1990s, dating from c. 70 ka BP, and adorned with what has been recognised as one of the very oldest geometric patterns left by Anatomically Modern Humans: a horizontal pattern of crosses marked above, in the middle, and below by a horizontal line



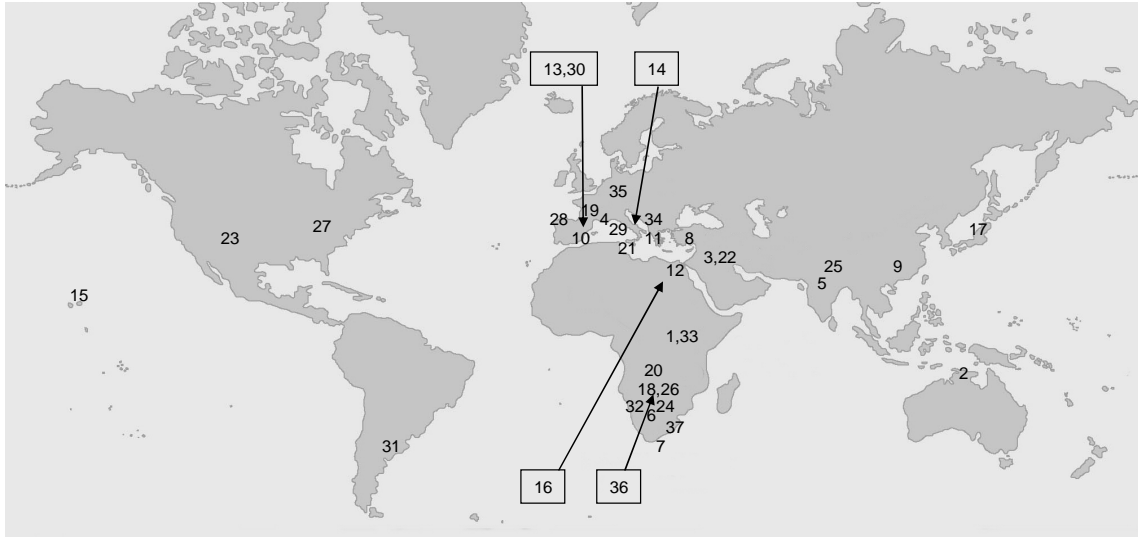
Fig. 1. The red ochre incised Blombos block, South Africa, 70 ka BP.⁵

On the basis of my Aggregative Diachronic Model of Global Mythology theory, and further inspired by other prehistoric attestations of crosshatching and by my own ethnographic fieldwork into female puberty rites among the Nkoya people of present-day Zambia (1972-1995), I will propose a very specific meteorological reading of the Blombos pattern – as a representation of the Rainbow (- Serpent), probably in an initiatory ritual context.

Of course, crosshatching is ubiquitous, one of the most obvious ways of graphically treating a surface, and my argument does not in the least pretend that all crosshatching, in prehistory or later, is to be understood in this manner. Various alternatives from a number of continents will be considered in my argument; some of these (in terms of the Lightning Bird / Rain, and of the Milky Way) will turn out to be remarkably related to the Rainbow Serpent pattern – as systematic counterparts, or as systematic transformations, still with a meteorological or cosmic reference.

⁵ Image: <http://cogweb.ucla.edu/ep/Art/BlombosOchre.jpg> .

More important than the apparent, and no doubt ephemeral, result in terms of such specific interpretations, my argument aims to contribute to the development of methodology in the highly problematic but rapidly expanding field of symbolic archaeology.



- | | | |
|---|---|--|
| 1. Acholi people, Uganda | 16. Helwan, Egypt | 27. Ohio, USA |
| 2. Arnhem Land | 17. Japan | 28. Pindel, Asturias, Spain |
| 3. Assyria | 18. Kaoma, Zambia | 29. Polesini cave, Ponte Lucano di Tivoli, Italy |
| 4. Barma Grande, Grimaldi, Mentone, Italy | 19. Laugerie Haute (Les Eyzies, Dordogne, France) | 30. Rouffignac Cave |
| 5. Bhopal, Madhya Pradesh, India | 20. Luba people, Congo / Zambia | 31. Toba people, N. Argentina |
| 6. Bloemfontein | 21. Mediterranean | 32. Tsodilo Cave, Botswana |
| 7. Blombos | 22. Mesopotamia | 33. Uganda |
| 8. Çatal Hüyük, Turkey | 23. Navaho people, USA | 34. Vinča (West Central Balkan) |
| 9. China | 24. Ndebele people, Southern Africa | 35. Vogelherd, Germany |
| 10. Cueva de la Araña (Valencia, Spain) | 25. Nepal | 36. Zimbabwe |
| 11. Delphi, Greece | 26. Nkoya people, Zambia | 37. Zulu people, South Africa |
| 12. Egypt | | continents not separately marked; the small scale of the world map makes for imprecision |
| 13. Franco-Cantabrian region | | |
| 14. Graeco-Roman world | | |
| 15. Hawaii | | |

Fig. 2. Locations and peoples referred to in this study

The scientific interpretation of apparently meaningful patterns without a local and contemporary, ‘emic’ explanatory metatext at our disposal constitutes a well-known problem in anthropology. We encounter this hermeneutical problem all the time when making knowledge claims about ulterior implied meanings (not explicitly stated by the local actors, and perhaps even not consciously known to them) in cultural patterns not our

own. The positivistic position, popular in anthropology in the middle of the 20th century CE, was to reject all such scientific claims if they were not emically supported, i.e. by the local actors' explicit conscious verbal statements; however, this position has now been recognised as too narrow – thanks to the influence of structuralism, psychoanalysis and more recently, cognitive science. If we wish to interpret the crosshatching pattern whether from the Blombos Cave block or from Nkoya puberty rites or any other iconographic context lacking textual clues, the problem includes in the following dilemma:

1. On the one hand we know that the capability of the human mind at creative invention of motifs and interpretations is endless, so that we can never be sure that a particular meaning is distributed widely across space and time
2. patterns that suggest to us that these may have a tendency to constancy and continuity

The comparative evidence from the fields of long-range myth analysis, language, social institutions, games and other formal systems, suggests that our best strategy in this dilemma is

- not to despair (because of (1)) of finding any continuity and persistence,
- nor to jump (because of (2)) to conclusions as to the ubiquitous constant meaning of a particular pattern,
- but to strike a balance between both positions

Our methodological challenge then is to find intersubjective procedures that will allow us to claim identity and continuity in certain cases (a minority), and to gain specialist peer support for such claims

This has been the underlying problem of my work on cupmarks, games, leopard-skin symbolism, and mythological archaeology.⁶

2. The Aggregative Diachronic Model of Global Mythology

My 'Aggregative Diachronic Model of Global Mythology' argues a method to reconstruct an outline of the world history of mythology on the basis of the gradual diffusion and transformation of the original 'Out-of-Africa' cultural (including mythological) package, 'Pandora's Box'

The original papers cited above were repeatedly summarised and updated in my later

⁶ See http://shikanda.net/ancient_models/index.htm for my principal texts in these fields. The more recent texts are at: <http://www.shikanda.net/topicalities/topicali.htm>.

publications⁷

The following overview derives from these updated summaries.

The model is based on recent genetic insights into the emergence and spread of Anatomically Modern Humans, combined with long-range linguistics, archaeology and comparative ethnography. In terms of this model:

1. A handful of identifiable initial mythological traits in Pandora's Box in sub-Saharan Africa
2. Were taken to Asia – and beyond, even ultimately back into Africa – on the wings of the demic diffusion known as the “Out-of-Africa” migration,
3. And on their way underwent very substantial (and to a certain extent, reconstructible) transformations and innovations,
4. Proliferating into a few dozen Narrative Complexes, “NarComs”, i.e. widely defined yet coherent (hence: “aggregative”) complexes of mythemes such as we may analytically impose on the confusion and abundance of the data of comparative mythology, and place them in a hypothetical historical sequence (hence: “diachronic”) in the light of recent molecular genetics and long-range linguistics. Initially, I distinguished twenty NarComs on the basis of a corpus of African cosmogonic myths attested in historical times – which I then projected onto Eurasian mythologies and their distribution maps, so as to try and identify pre-Out of Africa NarComs if any, and to suggest how, from that handful of NarComs in Pandora's Box, the others may have emerged as transformation and innovations, in the course of an extended world history of mythology which largely coincided with the world history of the spread and diversification of Anatomically Modern Humans, and of linguistic macrophyla. Later, when concentrating on the analysis of a global sample of flood myths (Isaac 2006), I had occasion to define some twenty additional NarComs, that had not been conspicuous in the earlier, African sample.⁸
5. The proliferation of NarComs especially took place in the context of less than a

⁷ E.g. van Binsbergen, Wim M.J., 2010, ‘The continuity of African and Eurasian mythologies: General theoretical models, and detailed comparative discussion of the case of Nkoya mythology from Zambia, South Central Africa’, in: Wim M.J. van Binsbergen & Eric Venbrux, eds., *New Perspectives on Myth: Proceedings of the Second Annual Conference of the International Association for Comparative Mythology, Ravenstein (the Netherlands), 19-21 August, 2008*, Leiden / Haarlem: Papers in Intercultural Philosophy and Transcontinental Comparative Studies, pp. 143-225, also at: http://www.quest-journal.net/PIP/New_Perspectives_On_Myth_2010/New_Perspectives_on_Myth_Chapter9.pdf; van Binsbergen, Wim M.J., with the collaboration of Mark Isaak, 2008, ‘Transcontinental mythological patterns in prehistory: A multivariate contents analysis of flood myths worldwide challenges Oppenheimer's claim that the core mythologies of the Ancient Near East and the Bible originate from early Holocene South East Asia’, *Cosmos: The Journal of the Traditional Cosmology Society*, 23 (2007): 29-80, full text at: http://shikanda.net/ancient_models/Binsbergen_Edinburgh_2007_%20for_Cosmos.pdf.

⁸ Isaak, Mark, 2006, *Flood Stories from Around the World*, at: <http://home.earthlink.net/~misaak/floods.htm>; van Binsbergen with Isaak, 2008, o.c.

dozen Contexts of Intensified Transformation and Innovation – CITIs – that are in principle identified in time and space (see Fig. 2) (although much further linguistic and archaeological work needs to be done on this point), and that largely coincide with the contexts in which new modes of production and new (macro)-linguistic families can be argued to have emerged. It is the segmented nature of this process that allows us to propose dating for its phases. Traits that tend to universality in the cultures of Anatomically Modern Humans may be surmised to have been part of the original “Out-of-Africa” package, which I propose to call “Pandora’s Box”. Two main routes out of Africa have been reconstructed by geneticists, of which the Southern one reached Australia along the Indian Ocean coast, but was further largely abortive; while the Northern one largely populated Asia, Europe, the Americas, and Oceania. Hence traits that are found in Africa, the Andaman Islands, New Guinea and Australia, but nowhere else, could be argued to date from the Southern Route and possibly from Pandora’s Box. The latter’s further contents may be argued on the basis of calibration against sub-Saharan African traits in historical times – which must be a combination of (evolved) Pandora-Box materials and Asia-evolved materials brought to Africa in the context of the Back-into-Africa movement from Asia from c. 15 ka BP on.⁹ This feedback movement’s importance for comparative mythology cannot be overestimated: bringing back to Africa (and, as a side-effect, to Europe) the complex mythologies that had meanwhile evolved in Asia, the result was an amazing (but little appreciated) continuity among mythologies of the three continents of the Old World from the Neolithic onward: emphasis on the separation of Heaven and Earth, the devices to effect their re-connection (demurge, king, shaman, sacrifice, any vertical natural or man-made object) etc.

This model sets the theoretical and empirical background to the rest of the present argument. Meanwhile I can only stress its provisional and over-ambitious nature, the huge empirical and methodological difficulties entailed, and its dependence on interdisciplinary borrowing, which almost inevitably lags decades behind.

⁹ References on the Back-into-Africa movement include: Hammer, M.F., T. Karafet, A. Rasanayagam, E.T. Wood, T.K. Altheide, T. Jenkins, R.C. Griffiths, A.R. Templeton & S.L. Zegura, 1998, ‘Out of Africa and back again: Nested cladistic analysis of human Y chromosome variation’, *Molecular Biology and Evolution*, 15, 4: 427-441; uciani, F., Santolamazza, P., Shen, P., Macaulay, V., Moral, P., Olckers, A., Modiano, D., Holmes, S., Destro-Bisol, G., Coia, V., Wallace, D.C., Oefner, P.J., Torroni, A., Cavalli-Sforza, L.L., Scozzari, R., Underhill, P.A., 2002, ‘A back migration from Asia to sub-Saharan Africa is supported by high-resolution analysis of human Y-chromosome haplotypes’, *American Journal of Human Genetics*, 70: 1197-1214; ia, Valentina; Giovanni Destro-Bisol; Fabio Verginelli; Cinzia Battaglia; Ilaria Boschi; Fulvio Cruciani; Gabriella Spedini; David Comas; Francesc Calafell, 2005, ‘Brief communication: mtDNA variation in North Cameroon: Lack of Asian lineages and implications for back /migration from Asia to sub-Saharan Africa’, *American Journal of Physical Anthropology*, 128, 3: 678-681.

Table 2. NarComs identified in African cosmogonies

1 Separation of heaven and earth	11 Primal waters and the flood
2 Reconnection of heaven earth	12 From the tree
3 What is in heaven (on further analysis turned out to combine 4 (cf. Rain), 13, and 19)	13 Cosmic rainbow snake
4 Lightning bird and World egg	14 Duality Two children Twins
5 Mantis	15 Spider and feminine arts
6 Rescue from ogre	16 Shamanism /hones
7 From the mouth	17 Spottedness / leopard
8 The stones	18 Honey bees (honey-)beer
9 The moon	19 Cosmogonic virgin et her lover son
10 The earth	20 Contradictory messengers bring death

Table 3. Contexts of Intensified Transformation and Innovation (CITIs) in the history of world mythology among Anatomically Modern Humans

CITI		proposed Narrative Complex (no. and description)	mtDNA type	remarks	linguistic context
in time	in				
I. Pre-Out-of-Africa Middle Palaeolithic c 80 ka P and earlier	Sub-Saharan Africa	‘Pandora’s Box’: the original mythical package, perhaps containing: 4. The Lightning Bird (and the World Egg) 8. The stones (as earth; under CITI VI revised as the stones as connection between heaven and earth) 9. The Moon 10. The Earth as primary (10 was subsequently revised towards cattle, in the Neolithic) 12. From the Tree (in subsequent CITIs diversified into 12a ‘The world and humanity from the tree’, and 12c ‘the leg-child’) 13. The Cosmic / Rainbow Snake 15. The Spider (subsequent transformed into ‘the feminine arts’ in CITI VI)	L (L1, L2, L3)	<ul style="list-style-type: none"> The emergence of Anatomically Modern Humans as a biological mutation? Africa’s soil carrying capacity, even for hunting and collecting, is the lowest in the world, mainly due to geological conditions that predate the appearance of humans by hundreds of millions of years, so it is possible that there was a push out of Africa The emergence of myth as constitutive of a new type of human community: self-reflective, coherent, communicating, engaging in hunting and collecting, and creating coherence, through the narrative and ritual management of symbols, leading to articulate language <p>If this last point is plausible, then the earliest phase in the overall process is in itself myth-driven</p>	Proto-Human
II. Middle Palaeolithic, c. 80 ka BP	West Asia, and from there to Australia and New Guinea	5. The Mantis	N and/or M	leaving Africa and venturing into West Asia is likely to have produced new challenges and to have given access to new opportunities; possibly Neanderthaloid influence;	

III. Middle Palaeolithic, c. 35 ka BP	West Asia	6. Escape from the Ogre	A and B (out of N)	Neanderthaloid influence?	
IV. Upper Palaeolithic, c. 20 ka BP	Central Asia	11. The Primal Waters and the Flood	B (out of N)	installation of the cosmogony of the Mother / Mistress of the Primal Waters, and the Land	Borean ¹
V. Upper Palaeolithic, c. 15 ka BP	Central Asia	1. The separation of Heaven and Earth 16. Shamanism, bones	N (H, A, B)	The separation of Heaven and Earth as central cosmogonic theme; shamanism associated with naked-eye astronomy (for hunters, later agriculturalists). The shaman's (belief of) travelling along the celestial axis to underworld and upper world, created (the idea of) a politico-religious social hierarchy on which more	Borean
VI. proto-Neolithic c. 12 ka BP	Extended Fertile Crescent	2. The Re-Connection of Heaven and Earth (after separation) 19. The Cosmogonic Virgin and her Son/ lover 14. Twins	R and M1	Neolithic food production through agriculture and animal husbandry; Neolithic arts and crafts such as pottery, spinning, weaving; male ascendance; complex society, the emergence of writing, the state, organised religion, and science; incipient metallurgy	Eurasiatic, Afro-Asiatic, Sino-Tibetan, Austric, Amerind, Nilo-Saharan, Niger-Congo
VII. Neolithic or Bronze Age c. 5 ka BP	Extended Fertile Crescent	7. From the Mouth	too recent and too limited in scope to be interpreted in terms of mtDNA type	Masculinisation and mythical 'hysterical displacement' of procreative functions, from groin to mouth and head – transcendentalism as triggered by writing, the state, organised priesthood, and science	
VIII. Neolithic to Iron Age c. 3 ka BP	Extended Fertile Crescent	14a. Twins, Two Children, Duality		further reflection needed	

¹ *Borean (named after the semi-mythological and hardly localisable Hyperboreans as recognised in Graeco-Roman Antiquity) is the highest, i.e. oldest level of historical reconstruction that long-range specialist historical linguists such as Fleming and Starostin have recently proposed. It reconstructs a hypothetical parent language spoken in the Upper Palaeolithic, c. 20 ka BP, in Central Asia. Borean is supposed to have left traces in all linguistic macrophyla spoken today, and that is the basis for its reconstruction. In Central Asia the Mal'ta culture of Lake Baikal, although somewhat later, gives us an indication of the life-world and material culture of *Borean speakers. Cf. Bengtson & Ruhlen 1994; Tower of Babel 2005.

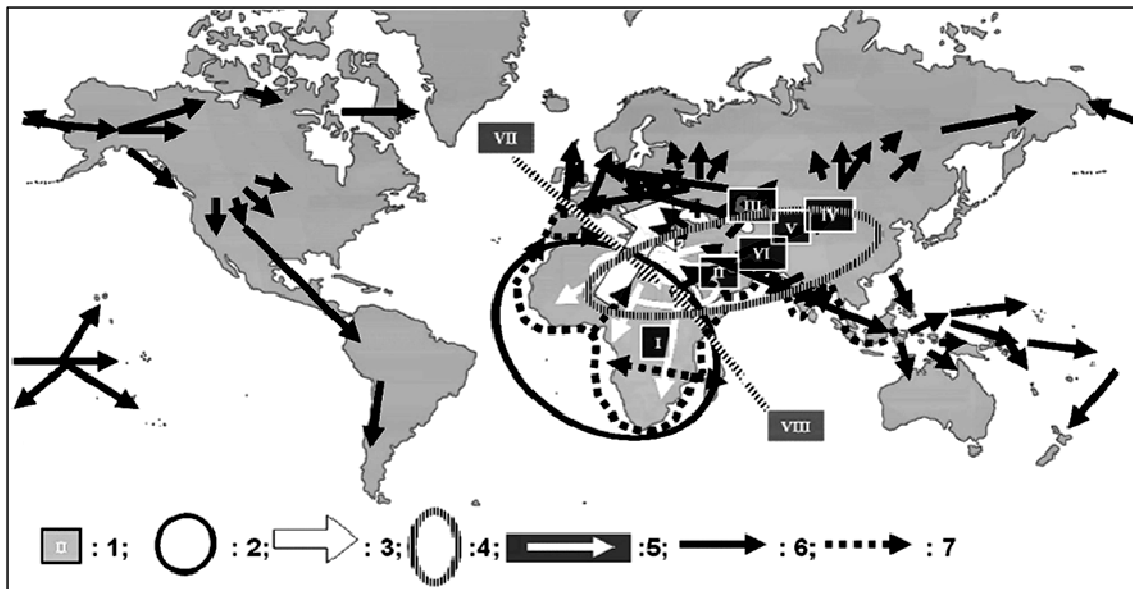


Fig. 2. Contexts of Intensified Transformation and Innovation (CITIs) in Anatomically Modern Humans' global history of mythology.

1: CITI (VII and VIII could not be drawn in location, hence the broken connecting lines); 2: Pandora's Box, 200-80 ka BP; 3: Extended Fertile Crescent, proto-Neolithic; 4: Back-into-Africa movement, 15 ka BP; 5: spread of Anatomically Modern Humans (Forster 2004); 7: Extended General Sunda Thesis (Oppenheimer 1998 and van Binsbergen, in preparation).

3. Reviewing rival interpretations of crosshatching on the Blombos Block

3.1. Introduction

Before we set out to try and interpret the Blombos pattern, let us establish that its contemporary significance, at the time it was made, can hardly be doubted. At Blombos other chunks of ochre have been found, likewise red, and with crosshatching (see pictures to the right) – which suggests that the crosshatching motif was of considerable importance to the archaeological culture in question

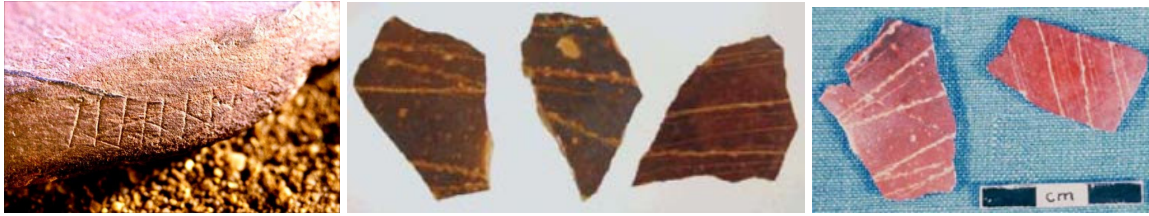


Fig. 4. Further examples of crosshatching at Blombos Cave, 70 ka BP

The same pattern as on the Blombos block turns up in string figures as used in puberty rites in South Central Africa, e.g. among the Nkoya of Western Zambia, among whom I have done ethnographic and ethnohistorical research 1972-1995.

Top illustration: one of two or three of sacred string figures managed and transmitted in the Nkoya female puberty rites, Nkeyema, Kaoma district, Zambia, 1978. However, so far I have not been given any specific local interpretation of the Nkoya string pattern.

Probably, puberty rites serve as depositories for cultural materials of very great antiquity. They are (apart from the risky suggestion of an innate nature, which however has been seriously made for language) one of the few answers to the question as to how cultural meanings (like those we aim to attribute to the Blombos pattern) could be claimed to be preserved across millennia, even dozens of millennia without total loss of format and content

These rites are strictly controlled by senior women. The figures are secret, and only by making extensive payments could I, as a male researcher, gain access to this and other information on the rites in 1978. Incidentally, this is the accepted way for secret and sacred knowledge to pass hands in South Central Africa, also between Africans

The same pattern displayed by an Aboriginal Australian girl

In the extensive literature on string figures, this figure is known as ‘Jacob’s Ladder’



Fig. 5. A string figure (a) in the context of Nkoya female puberty rites; (b) in an Aboriginal context, present-day Australia

3.2. Rival systematic interpretative possibilities of Crosshatching on the red ochre block Blombos Cave, South Africa, c. 70 ka BP

According to the Aggregative Diachronic Model of Global Mythology through its various versions, the following Narrative Complexes may be claimed to have belonged to the original pre-Out-of-Africa mythological package ('Pandora's Box')

- NarCom 4. The Lightning Bird (and the World Egg);
- NarCom 8. The stones (as earth; under CITI VI revised as the stones as connection between heaven and earth);
- NarCom 9. The Moon;
- NarCom 10. The Earth as primary (10 was subsequently revised towards cattle, in the Neolithic);
- NarCom 12. From the Tree (in subsequent CITIs diversified into 12a 'The world and humanity from the tree', and 12b 'the leg-child');
- NarCom 13. The Cosmic / Rainbow Snake
- NarCom 15. The Spider (subsequently transformed into 'the feminine arts' in CITI VI).

We may try to connect either one of these seven Narrative Complexes with the Blombos pattern

But how to decide which is the more probable one? I will discuss the merits of each NarCom for the case at hand separately, beginning with the less promising cases, then turning to NarCom 4 which I initially thought to provide the answer, then to NarCom13 with arguments why, after all, I think that this mytheme (the Cosmic / Rainbow Snake) offers – albeit provisionally – the systematic explanation we are looking for.

3.3. The discovery of Heaven and the history of logic

Before we discuss these various alternatives, a general point must be made. The major methodological difficulties attending the study of prehistoric symbolism, include :

1. We must assume that the concepts employed by prehistoric human actors had a history, but historical linguistics, archaeology and comparative mythology only rarely allow us to reconstruct the history of such concepts in any detail
2. In such reconstructions we assume that Anatomically Modern Humans had mental including logical faculties comparable to our own, yet it is highly likely (in fact, it is a truism of the pre- and protohistory of thought) that these faculties, too, had a history, and that they evolved only gradually (and as the very result of symbolic behaviour: speech, writing, socio-political organisation) in the course of the 200 ka of the history of Anatomically Modern Humans

Unless these two problems are explicitly recognised, anachronistic projection of our present-day self-evidences remains a major danger – a form of ethnocentrism into which

the present-day researcher is more likely to fall than when studying present-day global peripheries (for which a rich anthropological methodology and theory exists)

Sometimes our data allow us glimpses of the trajectory which the history of prehistoric concepts, and of prehistoric logical faculties, has taken. For instance, on the basis of linguistic analysis I was able to argue (van Binsbergen, Wim M.J., & Woudhuizen, Fred C., in press, *Ethnicity in Mediterranean proto-history*, Cambridge: British Archaeology Reports (BAR) International Series; and my other most recent work) that the faculty to make clear and absolute distinctions and to apply the Aristotelian rule of the excluded middle (a faculty we very much take for granted in our intellectual tradition) yet did not quite obtain in the time associated with *Borean as Fleming's and Starostin's remotest possible language reconstruction, supposed to be spoken in Central Asia in the Upper Palaeolithic and to have left traces in all major linguistic macrophyla spoken today.

Similarly, I have argued that the Separation of Heaven and Earth as a fundamental concept underlying much of world mythology in historic times is only a Late Palaeolithic invention. The reconstructed *Borean vocabulary has many lexical items with terrestrial connotations, but hardly any for 'sky, heaven'. Shamanism, predicated on the idea of travelling between Heaven, Earth and Underworld along the celestial pole; the very idea of the celestial pole as an astronomical concept (based on naked-eye observation of the diurnal apparent motion of circumpolar stars); and naked-eye astronomy in general with its first naming of constellations – all this can be argued to be inventions of the outgoing Upper Palaeolithic.

Somewhat greater antiquity, but still within the Upper Palaeolithic, can be claimed for an alternative cosmogonic mytheme, that of the Separation of Land and Water – implying a horizontal worldview in which the Water Above, Aside and Below remain essentially undistinguished, birds are the fishes of above, etc. Here a central cosmogonic role is attributed to a mythical concept that I have analytically (re-)defined as 'the Mother of the Waters', necessarily a virgin, having Land as her first son, and subsequently lover. However much later mythology has been dominated by the Heaven-Earth cosmogony, many traces of the Land-Water cosmogony have persisted right until modern times.

Now, when considering the interpretation of a pattern that is 70 ka old, we must remember that we are dealing with a human world whose logical faculties and basic concepts we can only dimly gauge, but that in all probability did not have invented Heaven yet; that was horizontalist rather than engaging in the vertical gaze of naked-eye astronomy; and that had no access to the concept of transcendence (e.g. a transcendent Heaven) even though in principle the (essentially transcendent) possibility of thinking beyond the here and now is given in any articulate language use – probably already developing at that time (and in that case admittedly based on speakers' complex phonological and syntactic distinctions in itself).

3.4. The stones (as earth; under CITI VI revised as the stones as connection between heaven and earth)

This interpretation is not convincing. There is little in the Blombos pattern that reminds us of stones – or it should be that regular, rhombic stones could be piled up efficiently in

such a pattern (but such near-industrial shapes were only to emerge in the Neolithic)

However, when after CITI VI stones (meteorites; stone altars) emerged as conceived connections between Heaven and Earth, this mytheme may have obtained a new applicability.

In this connection it may be of interest that South Khoisan (Taa group) Proto-Taa : *ŋ̥ |ū̄ (stems : *ŋ̥ |ū̄-le; *ŋ̥ |ū̄-n) means both: ‘stone’; ‘mountain’; and (?) ‘lightning’ (Bleek¹⁰ pp. 352, 354, 624; Traill¹¹ p. 69).

Many linguists, geneticists and anthropologists have considered the San some peripheral, primordial form of Anatomically Modern Humans, essentially preserving pre-Out of Africa traits. However, I believe there is more to say for the view of the Nestor geneticist Cavalli-Sforza, who claims that part of their ancestors lived in West Asia only 10 ka BP. Also there is a marked affinity between Khoisan and North Caucasian, as well as continuities in the religious and mythological field.

However, here we already find ourselves in the realm where a transcendent Heaven can be thought – an anachronism when applied to 70 ka BP

3.5. The Moon

This interpretation is not convincing. There is little in the Blombos pattern that reminds us of the moon

Or it should be that the pattern could be an evocation of the spots on the moon – after all, the Moon is an object open to direct human observation, regardless of the concept of a transcendent Heaven; and its spots feature in many mythologies, but not in ways clearly related to the Blombos pattern. Harley¹² devotes one quarter of his book to moon-spots lore globally; he cites a Khoi (South African) myth in which moon spots are explained by reference to the hare who failed to correctly bring the message of death and immortality to humans – variant of a widespread African story which mythologists like Berezkin propose belongs to Pandora’s Box)

One might also surmise that the Blombos pattern describes not the Moon’s surface but the perceptibly irregular, staggering movement of the Moon across the heavens – but to establish that trajectory in detail sophisticated naked-eye astronomy would be needed which most probably was not yet available at the time

¹⁰ Bleek, Dorothea F[rances]. 1956. A Bushman dictionary. Edited by Zellig S. Harris. American Oriental series, vol 41. New Haven (Connecticut): American Oriental Society. Pp xii, 773.

¹¹ Traill, Anthony. 1994. A !Xóǒ dictionary. Quellen zur Khoisan-Forschung/Research in Khoisan studies, Bd 9. Köln: Rüdiger Köppe Verlag.

¹² Harley, T., 1885, Moon Lore. London: Sonnenschein.

3.6. The Earth as primary (this NarCom was subsequently revised towards cattle, in the Neolithic);

This interpretation is not convincing. There is little in the Blombos pattern that reminds us of the earth

Below however we shall see that there is a distinct possibility of re-interpreting the pattern in terms of the connection between Heaven and Earth. In that light the three horizontal lines in the pattern might be re-interpreted as Heaven, Earth and Underworld – the three layers of the shamanic worldview, which however, according to my Aggregative Diachronic Model would have emerged in the Upper Palaeolithic (much later than the Middle Palaeolithic times of the Blombos pattern)

However, this can hardly be the original meaning 70 ka BP, when the juxtaposition of Heaven and Earth probably had not yet been invented



Fig. 6. Left: the Omphalos at Delphi, Greece: generally considered an Earth symbol, and with a relief representing knotted cords reminiscent of the Blombos pattern – and of the Trees of Life representations to be shown below; right: a Lapp shamanic drum (c. 1800 CE; Muenchen Museum fuer Voelkerkunde; cf. Lommel 1976: 45, Fig. 12), where the three registers represent Heaven, Earth and Underworld; note the shamanic figure in the centre, climbing up and down these worlds along the celestial pole.

3.7. From the Tree (in subsequent CITIs diversified into NarCom 12a 'The world and humanity from the tree', and NarCom 12b 'the leg-child')

This interpretation has something to recommend it

Not only is the Tree a very ancient mytheme reconstructed to have been in Pandora's Box but also many more recent representations of the Tree of Life, at least ever since the

Neolithic (but the argument has been made for earlier manifestations of the tree of Life motif in Mesolithic and Palaeolithic iconographies) are strikingly similar to the Blombos pattern

In the next few Figures I will consider some of these later attestations:

- The Assyrian and Urartian tree of life
- The Jewish Sephiroth, also conceived as a tree of life
- The Ancient Egyptian Djed pillar, associated with Osiris who is himself a god of vegetation closely associated with the themes attending the Tree of Life

Yet at this exploratory state I will not pursue the Tree explanation any further in relation with the crosshatching on the Blombos block, proposing to leave this for further research

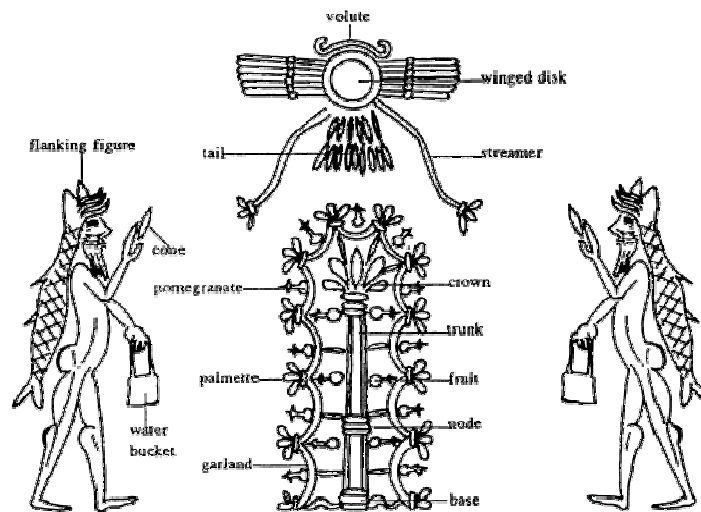


FIG. 1.—Structural elements of the Assyrian Tree Motif

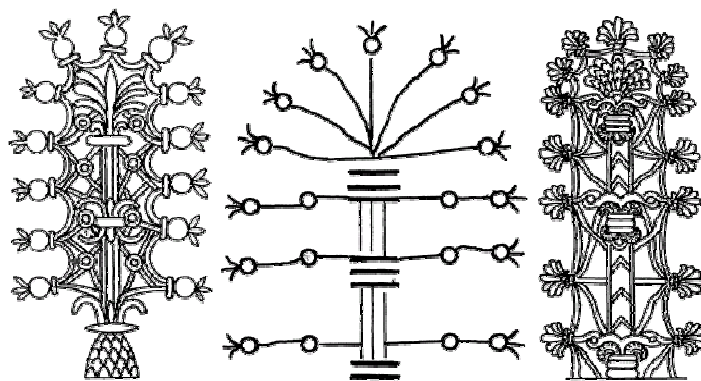


FIG. 2.—Triadic configurations of Nodes, Volumes, and Circles

Fig. 7. Proto-sephiroths Assyria after Parpola.¹³ [Note the priests with fish garments emulating the deities

¹³ Parpola, S., 1993, 'The Assyrian tree of life: Tracing the origins of Jewish monotheism and Greek philosophy', *Journal of Near Eastern Studies*, 52, 3: 161-208.

Dagon or Artagatis; present-day bishop's mitres reputedly derive from such priestly garments] . Parpola's interpretation is in general terms of the 'tree of life', a prominent symbol in the Ancient Near East and throughout comparative mythology, and going back to the NarCom 'From the Tree', reconstructed by me to have been part of Pandora's Box

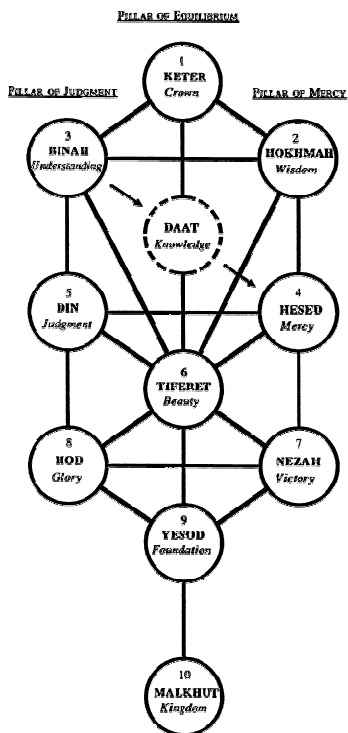


FIG. 5.—The Sefirotic Tree

Fig. 8. Developed Jewish sephiroth (Parpola 1993);



Fig. 9. Djed pillar

'Isis then, according to Plutarch's version of the narrative, which is the best known, fashioned Osiris an artificial phallus and aroused the god, so that Horus was conceived (...). With this same act Osiris was reborn (...), and his heart being found pure at the Weighing of the Heart (...), he either sailed off or climbed up a ladder to his throne in the spirit kingdom of the West (...). His heir on earth, Horus, became known for his warlike righteousness: he was the avenger of his father (...) defeating Set and succeeding to the throne of Egypt. The prime symbol of Osiris in his majesty, and of his rebirth is, when it is ceremonially erected, the red Tet pillar.' (Troy , Mark L., 1976, *Mummies of Resurrection: The Cycle of Osiris in Finnegans Wake* , Doctoral dissertation at the University of Uppsala 1976)

So in the context of Ancient Egypt, Ladder and Djed pillar as the standard connections between Heaven and Earth, and both evoke the pattern of crosshatching we are studying here.



Fig. 10. 1st-dynasty Djed pillars from Helwan¹⁴

3.8. The Spider (subsequently transformed into 'the feminine arts' in CITI VI).

This is a possibility for the interpretation of the Blombos pattern, although not very convincing and therefore discarded at this stage

The spider mytheme (associated with creation, the primal god, and the sun) assigns these dominant roles to mythical characters in sub-Saharan Africa, North America and Oceania (see distribution map Fig. 12),

Spider-like symbolism especially in terms of weaving also underlies the chain of apparently demoted primal goddesses relegated to domesticity (e.g. Antinea, Neith, Athena, Artagatis, Anath, Anahita, etc.) ranging from the Sahara to the Mediterranean and West Asia (such demotion is a general pattern throughout the Old World in the Bronze Age, cf. van Binsbergen 2010); it is these goddesses who represent the

¹⁴ Picture J.D. Degreeef; courtesy <http://www.pyramidofman.com/Djed/> .

transformation of the Spider motif towards ‘the feminine arts’ from the Neolithic onward.

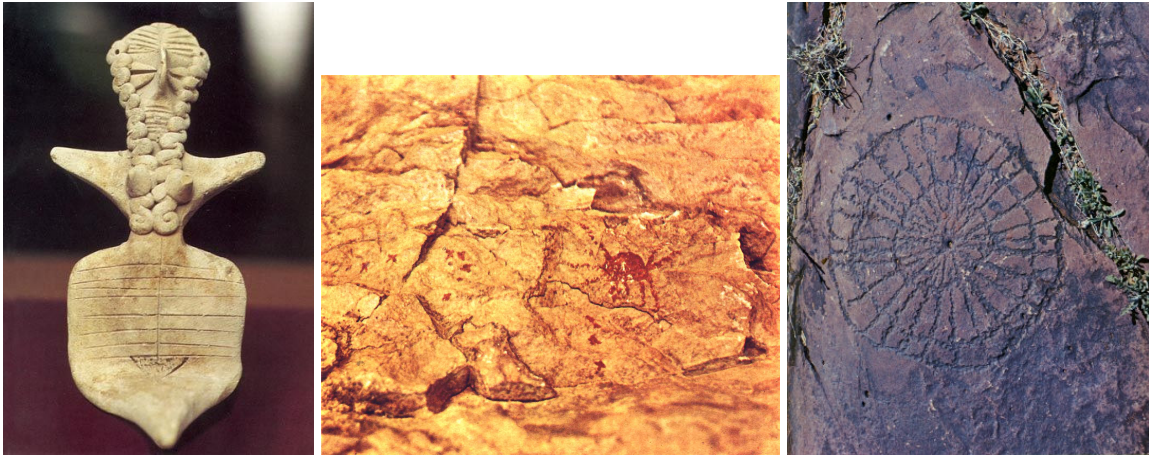


Fig. 11. (left) The West Asian goddess Anahita; note the symmetrical hair coils perhaps reminiscent of the Blombos pattern, and the insect-like body; also Neith and Athena had insect connotations, not exclusively spider-like; (middle) A spider depicted in Mesolithic rock art, Spain; (right) Spider web or solar emblem in Australia rock art, undated.

The Blombos pattern might be interpreted as part of a spider’s web, although far more convincing weblike structures are known from ancient rock art, e.g. Australia.

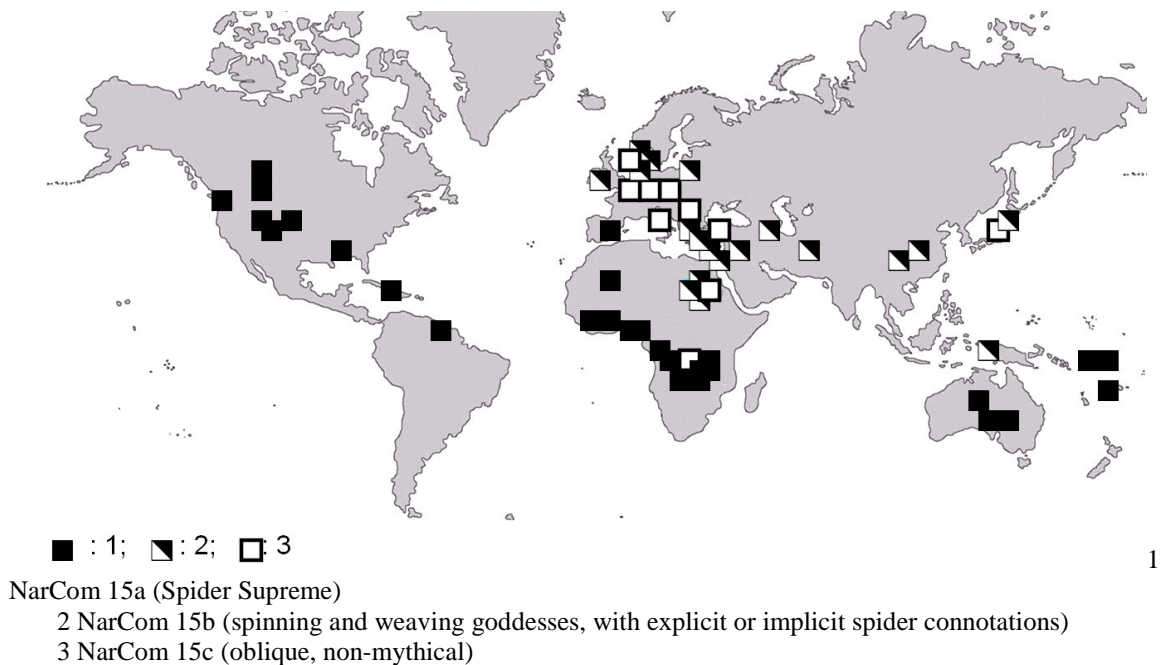


Fig. 12. NarCom 15 ('The Spider [and Feminine Arts]'): Distribution¹⁵

¹⁵ van Binsbergen, Wim M.J., in press (2011), Out of Africa or out of Sundaland: Mythical discourse in

3.9. The Lightning Bird (and the World Egg)

This is a distinct possibility for the interpretation of the Blombos pattern. It is on this interpretation that I concentrated when drafting the first version of this argument in 2006 – but I had to give up because I was left with too many loose ends and an ultimately unconvincing case.

Lightning as an unmistakable meteorological phenomenon does not require the invention of a transcendent Heaven separate from the human lifeworld.

The zigzag element in combination with the red colour of the ochre block makes lightning a happy guess – it is a recognised fact that lightning is represented by a zigzag pattern in many prehistoric and historic cultural contexts, while the equation of red = fire = heat = light is equally common.

The lightning bird is a conspicuous element in Southern African (e.g. Zulu) mythology, with ramifications to other parts of Africa (e.g. Acholi of Uganda), but as far as I know unattested outside Africa

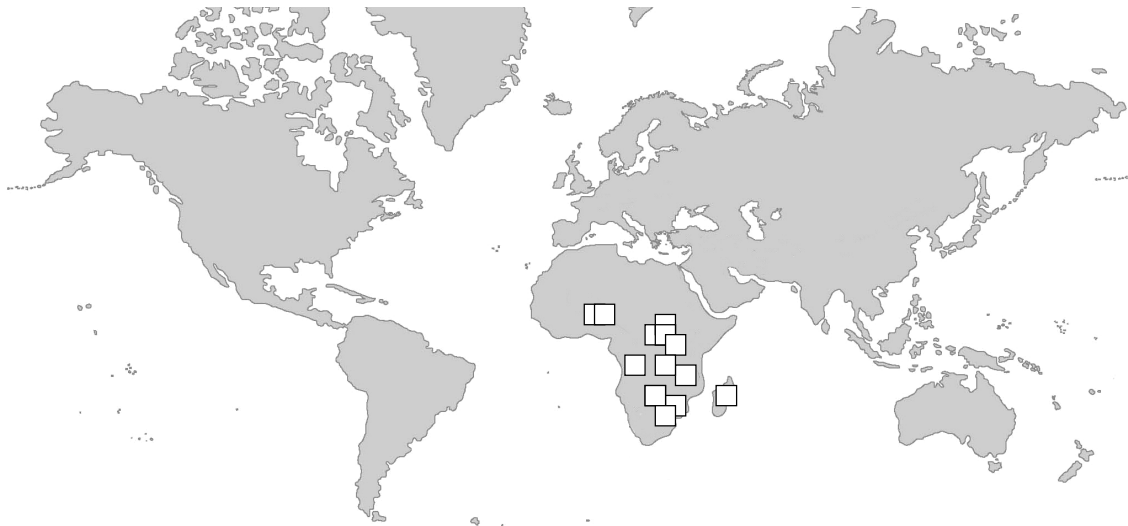


Fig. 13. Attestations of the lightning-bird mytheme in historical times

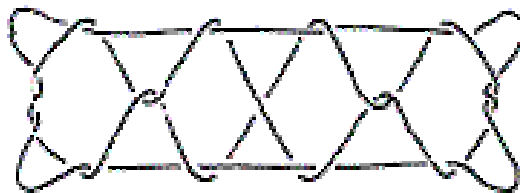


Fig. 14. Jacob's Ladder (Probert n.d.)¹⁶

global perspective, Leiden: Papers in Intercultural Philosophy / Transcontinental Comparative Studies.

¹⁶ Watch a short video of the construction of a simplified version of the string figure known as Jacob's

Our best chances of making sense of the Blombos pattern in terms of Lightning is by tracing the global distribution of the corresponding string figure. Here I rely on Martin Probert:

‘Jacob’s Ladder

A subsequent development [from the string figure called ‘Two Eyes’] would be to apply the Index into Thumb-Triangle Extension which we used on the 2-loop Opening (and which resulted in Two Eyes) to a more elaborate figure. An obvious substitute for the 2-loop Opening is the ubiquitous 2-mesh Net. A construction designed to illustrate the process is: steps 1 and 2 as above; pass each index loop down through the little finger loop; pass each little finger loop down through the index loop (giving a 2-mesh Net); give each little finger loop a half turn towards you (this step is once again desirable to ease the release of 5 during the final extension); then steps 3 to 7 as above. The resultant ‘four eyed’ figure (fig. 23) is known as Jacob’s Ladder among other names. This four-eyed figure (like the two-eyed figure) has been recorded from North America, South America, Hawaii, Africa and Japan.’¹⁷

Probert does not believe in diffusion for the simple Two Eyes figure from which Jacob’s Ladder is a development: the ubiquitous distribution is according to him based on parallel invention

‘Other string figures of worldwide distribution

Many other figures of worldwide distribution can be shown to be the result of a relatively simple logical approach to string figure creation: Two Boys Fighting for an Arrow (317-320), Brush House (301-6), Shears (251), Pouch (376), Cassowary (378), Darkness (373), Well (85-7), Mouth (282-6), Saw (356-7) and Dressing a Skin [[also known as] Cup and Saucer] (30-2). The numbers in brackets are page references to the 1962 Dover reprint ISBN 0-486-20152-X of Caroline Furness Jayne’s classic *String Figures* 1906.

Further conclusions

The string figure Two Eyes is to be expected in any culture which has discovered a technique for drawing each frame string through the opposite supporting loop.

Jacob’s Ladder may have evolved independently in different places from the application of a logically derived Index into Thumb-Triangle Extension to the easily discovered 2-mesh Net.

The analysis suggests that the underlying reason for the distribution of the widely known *string figures* has been the independent invention of the *techniques* involved (e.g. frame string manipulation leading to Jacob’s Ladder and other ‘eyed’ figures).

A contrary conclusion of a common origin or diffusion for the widely known figures would assume that in each case no other string figure making community remote in space or time had succeeded in arriving at that figure except at second hand. While this may be true in the case of other more locally distributed string figures, there is something in the nature of the worldwide figures that facilitates the process of discovery.’

Ladder at: <http://www.alysion.org/figures/introkids.htm>

¹⁷ Probert, Martin, n.d. [ca. 1999-2000] , The Origin of String Figures -- Part III - Why is Jacob’s Ladder so widely distributed?, at: <http://website.lineone.net/~m.p/sf/origin3.html>

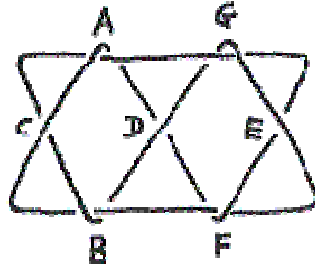


Fig. 15. The string figure called Pygmy diamonds

There is also the very similar string figure known as ‘Pygmy diamonds’

The latter name conveys a sense of primordial Africanness (Pygmies are often considered Palaeo-Africans closely linked with the pre-Out of Africa population marked by the mitochondrial DNA haplotypes L1, L2 and L3) and hence to be implicitly, though very distantly, related to the Blombos archaeological culture

But also the name of Jacob’s Ladder is eminently significant in the present context..

Mythologically, the Separation of Heaven and Earth (as the dominant cosmogonic paradigm from the Upper Palaeolithic onward) was a disaster, whose negative effects have been countered by all sorts of devices to restore the connection between Heaven and Earth

- some of these devices are static/ stationary and natural, such as trees and mountains,
- others are man-made, such as altars, spires, towers, ladders etc.
- some derive from humans’ conceptualisation of the natural order, such as the celestial pole, meteorites, *lightning*, as principal connections between Heaven and Earth
- others are social and cultural: kings, shamans, twins, priests, as roles in which the re-connection of Heaven and Earth is to be embodied
- While also mythical characters are to play the latter role: demiurge, god’s son, etc.

The remarkable point now is that Lightning typically appears as the connection between Heaven and Earth, but that Jacob’s Ladder (from Genesis 28:11–19) is a conceptualisation of the same kind of connection

Also in Ancient Egyptian mythology, a prominent part is played by the Ladder into Heaven (associated with Horus and Seth – in the Old Kingdom partners rather than the deadly enemies they were made out to be later)

"Homage to thee, O divine Ladder! Homage to thee O Ladder of Set! Stand thou upright, O divine Ladder! Stand thou upright, O Ladder of Set! Stand thou upright, O Ladder of Horus, whereby Osiris came forth into heaven." (Pyramid Texts)



Fig. 16. Jacob's Ladder depicted in a medieval European MS

Although in my earliest analyses towards the Aggregative Diachronic Model of World Mythology I assumed that the Lightning Bird and the Cosmic or World Egg (laid, by implication, by the lightning bird) were one and the same mytheme, and had to be included in Pandora's Box, subsequent analyses have now made me change my mind.

It turned out that the distribution of the Cosmic Egg (see Fig. 17), although not universal, was rather more extensive than of the lightning bird.¹⁸

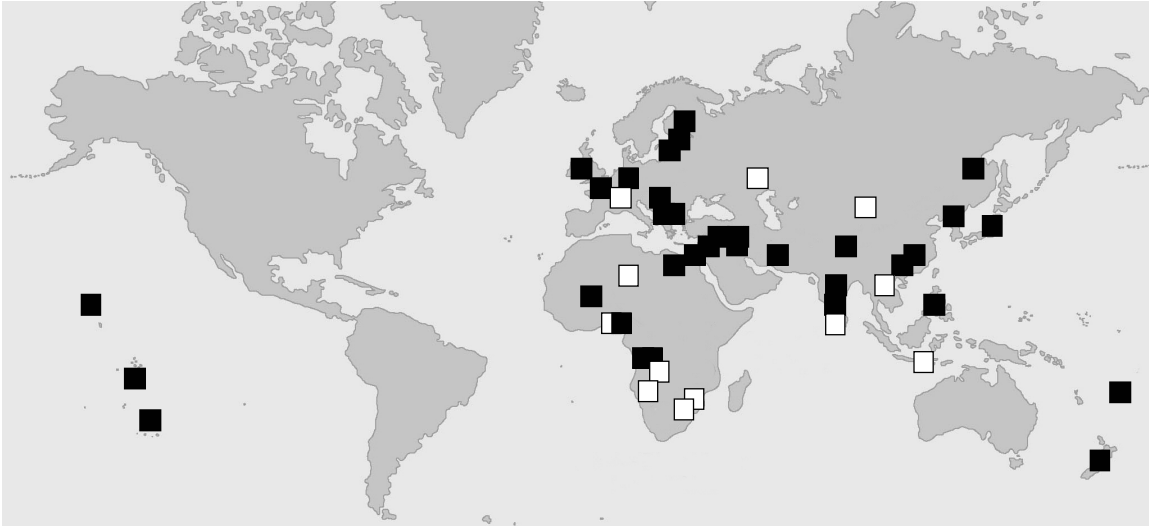
Even this more extensive distribution of the cosmic egg mytheme is still too restrictive to quality, on second thoughts, for inclusion in Pandora's Box; note the absence in Australia and New Guinea.

For reasons outside our present scope, I propose to explain this distribution as the result of

1. emergence of the mytheme in the Eurasian Upper Palaeolithic in a Eurasiatic (possibly proto-Uralic) linguistic context,
2. its subsequent spread in transformed form to the West and South-west into the proto-Pelasgian realm of the Neolithic,
3. Finally, from the Bronze Age onward, transmission into all four directions, as

¹⁸ van Binsbergen, Wim M.J., in preparation, 'Black Vulcan' ? A long-range comparative mythological and linguistic analysis of the complex relations between the Greek god Hephaistos and the Egyptian god Pth - Exploring the Pelasgian realm and its African connections c. 3000 BCE - c. 400 CE), MS drafted 2008-2009, 400pp.

happened to so many Pelasgian traits, largely on the spur of horse-riding and chariot technologies)¹⁹



black symbol: mytheme of cosmic egg attested (or merely implied, or uncertain: white symbol)

Fig. 17. NarCom 4. The Cosmic Egg, global distribution²⁰

Thus we are brought to remove the mytheme of the Lightning Bird / World Egg from Pandora's Box, and from proposed primal mythemes that could illuminate the Blombos Block pattern

In other words, there is no longer empirical support for my initial hypothesis that the Blombos pattern represents lightning.

There is a suggestion of the Blombos type of pattern having come to be associated, in much more recent millennia, with the re-connection of Heaven and Earth, but as we have seen an interpretation of the Blombos pattern itself in such terms is likely to be an anachronism

Meanwhile we have to realise that, in addition to Lightning, other celestial phenomena or conceptualisation fit our bill as possible interpretations of the crosshatching pattern of Blombos, notably:

- The celestial pole (an essentially shamanic concept, probably already available in the Upper Palaeolithic but probably not yet in the Middle Palaeolithic to which Blombos belongs)

¹⁹ van Binsbergen, Wim M.J., in press [2010], Towards the Pelasgian hypothesis: An integrative perspective long-range ethnic, cultural, linguistic and genetic affinities encompassing Africa, Europe, and Asia, Leiden: Papers in Intercultural Philosophy and Transcontinental Comparative Studies.

²⁰ van Binsbergen, Wim M.J., in preparation, 'Black Vulcan' ? A long-range comparative mythological and linguistic analysis of the complex relations between the Greek god Hephaistos and the Egyptian god Pth? – Exploring the Pelasgian realm and its African connections c. 3000 BCE - c. 400 CE.

- The rainbow – which features as the connection of Heaven and Earth, not only in Genesis (8-9) but in a great many mythologies from all over the world, including Greek, Australian Aboriginal, and Japanese
- The Milky Way: The NarCom ‘The Lightning Bird (and the World Egg)’ has a wide distribution, and in more recent millennia appears to have come close to that of the stones – for, like lightning, also stones in the form of meteorites came to be considered a major way in which Heaven and Earth are connected

Meanwhile it has been suggested²¹ that the zigzag /crosshatching / Jacob’s Ladder pattern discussed above (with also Australian attestations) would have an obvious interpretation, from an Australian perspective, in the conventionalised *yam* iconographic pattern – evoking the creepers of the yam plant (genus *Dioscorea*).

The yam pattern is claimed to have been an art motif in Australia since the Middle Palaeolithic, i.e. from the arrival of Anatomically Modern Humans there.

This offers interesting possibilities in terms of the wider cosmogonic mythical repertoire, and the unfolding and transformation of that repertoire in the course of the transition from (pre-Out-of-Africa) Africa to Australia. Particularly significant is (in Eric Venbrux’s words)

‘that the clan using this [conventionalised yam] image has for its major ‘dreaming’ (*irumwa*) a bird, notably the jungle fowl [*Megapodius tumulus*] . Digging up the yam causes rain and lightning, according to the ritual leader of this clan [who was Venbrux’s initiation mentor]’.



Fig. 18. Two birds associated with lightning: (top) Hamerkop (*Scopus umbretta*) from Southern Africa; (middle) Jungle fowl (*Megapodius tumulus*) from Northern Australia;

Note the hammer-shaped (or double-axe-shaped) head in both cases, and similar associations of lightning in mythologies attested in historical times (Nordic Thor – Fig. 19. right), West Asian Teshub, West African Shango (Fig. 19. left); – suggestive of a

²¹ Cf. Venbrux, Eric, personal communication, 16 and 18 December 2005; cf. Chaloupka, G., 1993, *Journey in time: The world’s longest continuing art tradition*, Chatswood: Reed.

Neolithic rather than Palaeolithic communality

Cf. the proto-Indo-European root *malt-/e- which means both ‘hammer’ and ‘lightning’, which is found in most branches of the Indo-European phylum including Hittite and Baltic (e.g. the hammer of the weather god Perkunas, and Germanic, e.g. Mjǫllnir, ‘Thor’s Hammer’.



Fig. 19. (left) Thor’s hammer,²² and (right) Shango²³



Fig. 20. Left: Australian Aboriginal bark painting: *Fish; yam; echidnas*: Natural earth pigments on

²² Cf. Pokorny, J., 1959-69, Indogermanisches etymologisches Wörterbuch, 2 vols. Bern & Munich: Franke, II 284 f., 300.

²³ Picture source <http://www.hamillgallery.com/YORUBA/YorubaShangoStaffs/YorubaShango32.html> with thanks

eucalyptus bark. Artist unknown.²⁴ Right: *Dioscorea villosa*, photographed in New Zealand.²⁵

In Africa, the lightning bird is often fowl-like. So there are indications that the lightning bird association also adheres to the crosshatching pattern in its present-day Australian usage

Initially I thought that in this North Australian belief we hear a remote echo of the Lightning Bird motif reconstructed to have been in Pandora's Box and subject to early eastward transmission along the Southern Route of the Out of Africa Exodus.

However, since subsequent analysis suggests that the Lightning Bird mytheme is rather more recent than Pandora's Box, we can no longer interpret the surprising bird and rain connotations of the Australian crosshatching-like yam pattern in terms of Southern Route Exodus continuities

Given the exposure of Northern Australia to the Indonesian archipelago, and the establishment of a maritime transcontinental network in recent millennia, it is also possible that the Africa-Australia connection in the case of the implied Australian lightning-bird beliefs is far more recent

It would have been nice if Australian yam could be argued to originate in Africa, and to have been taken East in the Out-of-Africa Exodus along the Southern Route (along with yam / lightning relating myths, presumably), but for the time being I have no such evidence: although yam does not seem to be indigenous to Australia I have not been able to trace its background beyond South East Asia; many edible varieties of *Dioscorea* exist all over the tropical zone of the earth

3.10. The Cosmic / Rainbow Snake

3.10.1. *The case for a serpentine / rainbow interpretation*

Since my original interpretation in terms of Lightning became less convincing, I have concentrated on interpreting the Blombos pattern in terms of The Cosmic / Rainbow Snake.

In several contexts the pattern of crosshatching as in Blombos is considered to represent the snake's skin and scales,

- (a) as widespread symbols of rejuvenation and rebirth (for a snake casts its skin without dying)
- (b) as widespread symbols of the earth (lacking legs or wings, snakes are largely confined to the earth)
- (c) As widespread symbols of such conspicuous meteorological phenomena as
 - The rainbow (such as usually only appears after the rain and lightning has stopped,

²⁴ Picture source: <http://www.bcgalleries.com.au/gf35.html>

²⁵ Picture source: http://www.sbs.auckland.ac.nz/info/schools/nzplants/food_climb_dioscorea.htm

so as an alternative to these other meteorological phenomena)

- Perhaps also the Milky Way



Fig. 21. This well-known Mesolithic rock painting (1) from the Cueva de la Araña, Spain (here adapted after Lommel,²⁶ p. 45 Fig. 12), has usually been interpreted the pragmatic as a depiction of honey-collecting (with the object at the top displaying concentric circles identified as a honey comb, the vertical lines as a rope ladder, and the object in the top human's right hand a collecting bag). Cross-cultural evidence (2) from Central Asia (where precisely such honey collecting is still practiced today; see next Figure) supports such an identification.

However, in addition to this pragmatic meaning the image may have the more general meaning of humans or gods ascending to or descending from heaven. In that case the objects clustering in the top of the image may not just be bees, but (like in archaic Greek

²⁶ Lommel, A., 1976, Prehistoric and primitive man, London etc.: Hamlyn, first published 1966.

iconography) spirits. Then it also becomes more understandable that the vertical lines appear to be topped by an antelope's head (much like in the Southern African rock paintings, where antelope's ears are identified as a sign of divine beings.²⁷ Alternatively, the headed and horned vertical line could be interpreted as a horned serpent connecting heaven and earth, and the topmost human figure as a heaven-dweller. The enlarged inset allows us a closer view. Rock art style, microliths and presumably also Khoi-Sanoid language affinities as reconstructed, connect Mesolithic Spain and Southern African rock art.



Fig. 22. Present-day Honey hunting in Nepal²⁸

However fitting this naturalistic interpretation appears to fit the Cueva de la Araña image, the following Figure presents what appears a parallel image from Zimbabwe, which

²⁷ Garlake, Peter S., 1995, *The Hunter's Vision: The Prehistoric Art of Zimbabwe*, London: British Museum Press / Seattle: University of Washington Press, p. 130.

²⁸ Valli, Eris, & Summers, Diane, 'Honey hunters of Nepal', *National Geographic*, 174, 5, november 1988: 660-671.

Garlake interprets in terms of the current entoptic / trance hypothesis of rock art, but that is compatible with a reading in terms of the rainbow snake horizontally inclining next to the vertical celestial pole



Fig. 23. One of the most elaborate and best preserved painted panels of San rock art in Zimbabwe, at Makoni. Garlake, the specialist on Zimbabwe rock art, interprets (1995, o.c.) the large reclining figure as an archetypal trancer, his body full of white dots marking potency. His face has the markings of a sable antelope (incidentally, elsewhere in Garlake's work this suggests a divine, rather than human nature).

Fig. 24 shows another rock painting from Zimbabwe, featuring a vertical line dominating the entire figure, thus looking rather similar both to the Cueva de la Araña painting and to the Makoni one.

By analogy with Zimbabwean practices in historical times, this image has been explained

(Lommel 1976, o.c.: 149), with vivid but probably anachronistic detail, as a rain ceremony, where a virgin princess is buried alive as sacrifice at the foot of a tree (the vertical line however looks very little like a tree – but it may well be considered some other connection between heaven and earth), people ascending, and a large female goddess, with smaller human figures, up in the sky, as well as a heavily zigzagged being which is probably the Rainbow Serpent – its position at the top of the vertical suggests that it is obstructing Rain.

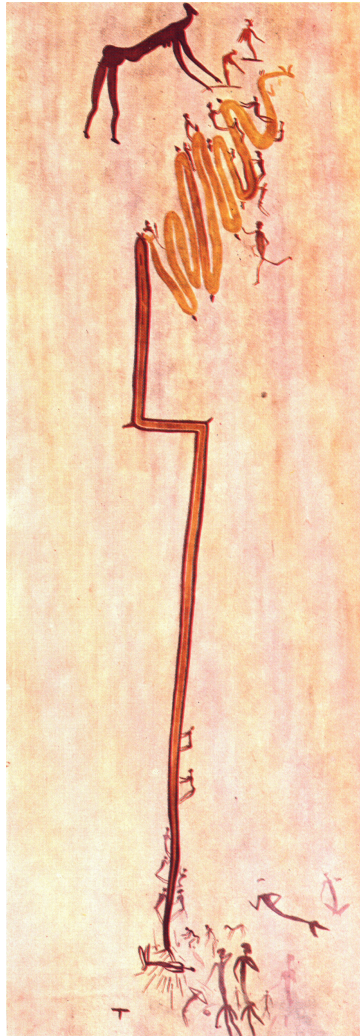


Fig. 24. A rock painting from Marondera (Marandellas), Zimbabwe

Such an explanation finds much support in recorded local myths and practices prevailing up to the middle of the 20th c. CE. However, considering the age of this painting, estimated (Garlake 1995, o.c.: 131) at a few thousand years at least, this reading may be totally inappropriate, the pictorial equivalent of a popular etymology.

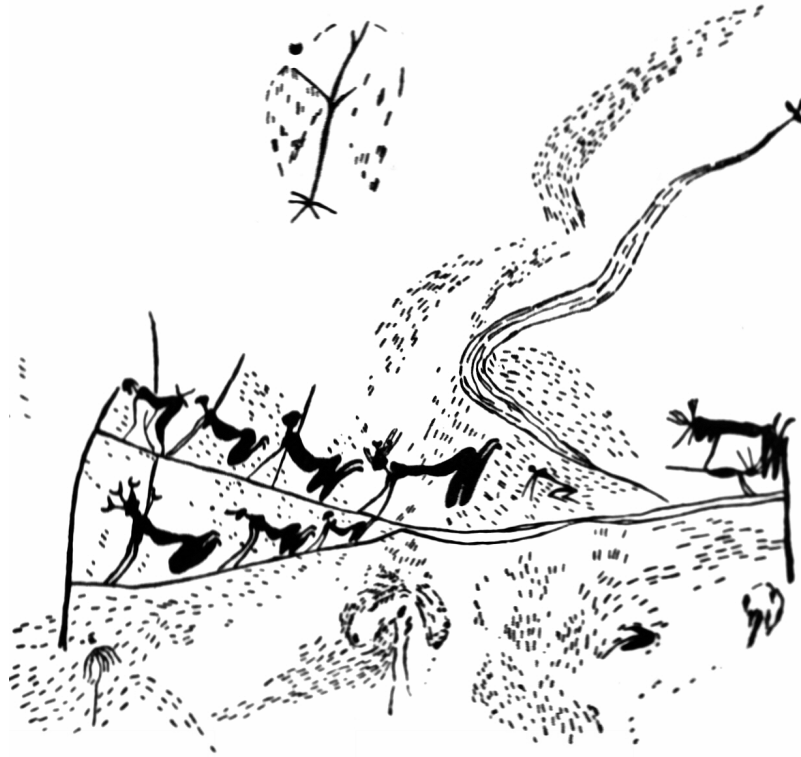


Fig. 25. Rock painting near Harare, Zimbabwe.

Fig. 25. shows another rock painting near Harare, Zimbabwe (Frobenius 1931, Fig. 31, p. 315),²⁹ which von Sicard (1968, o.c.) interprets, against an impressive review of Bantu-speaking astronomical myths, in terms of a Bantu-speakers' astronomical myth: the hero (marked by crescents in his hair) and two companions cross Ntande's bridge [equated with the celestial axis]; the eared elongated creature in the upper right-hand quadrant is interpreted as the Milky Way, *gwara raKuruvu* ['the Path of Luwe', a widespread unilateral mythical character.³⁰ Such a reading assumes that realistic (river crossing) and symbolic elements (Milky Way as snake) mix freely in this kind of representation. It also assumes that, across more than 1000 km, the Luba (Congo) spider-like character Ntande, with his bridge may be invoked to explain a rock painting in Zimbabwe.

Considering the emphasis, today, on the trance interpretation of Southern African rock art (cf. Lewis-Williams), we might drop the idea of a river crossing and interpret the figures' progress, on all fours, along 'Ntande's bridge' as standard shamanic progress along the celestial axis.

While there thus seems to be considerable support, in prehistoric iconography from

²⁹ Frobenius, L., 1931, *Erythräa: Länder und Zeiten des heiligen Königsmordes*, Berlin/Zürich: Atlantis-Verlag; von Sicard, H., 1968-1969, 'Luwe und verwandte mythische Gestalten', *Anthropos*, 63-64: 665-737.

³⁰ see von Sicard 1968-69, o.c.; and van Binsbergen, 2010, *Continuities*, o.c. .

Southern Africa, for a serpentine reading of any very ancient iconography cropping up in that part of the world, with the exception of the zigzag motif in the top of the Marondera image there is nothing to specifically connect these much more recent images with a pattern of crosshatching, like at Blombos

In order to make this remaining step, let us consider Nkoya female puberty rites once more, and in more detail.³¹

3.10.2. *Kutembwisha kank'anga: female puberty rites among the Nkoya of Zambia*

With first menstruation, a girl is thought to become polluted with the dreaded anti-social spirit (N)K'anga, that is associated with the anti-social, destructive connotations of menstrual blood; the rites (which ideally extend over a period of a year, and lead on to first marriage) are supposed to neutralise or domesticate (N)K'anga

During the training period, the girl is harshly taught domestic, social and sexual skills, and is subject to several taboos: on being seen by men, on sexual intercourse, on salt, on the consumption of fish

No further commentary is available concerning the nature of the (N)K'anga spirit; this makes the girl novice into *ka(n)k'anga*, '(N)K'anga-person'.

This is not an exceptional situation in South Central Africa. Both in language, culture and region the Nkoya people are closely related to the Ndembu, on which Victor Turner has written seminal works in religious ethnography.³² Also the Ndembu scarcely provide an explicit exegesis of ritual and symbol, their religious song texts are multilayered and extremely difficult to interpret, and therefore Turner's interpretation is largely his own.

Assuming that the name (N)K'anga has a Bantu etymology (which is by no means self-evident; one Nkoya mythical character, Kapesh, has an Indo-Aryan etymology: *gabhasti-*, 'forked (carriage-) pole, hand'; cf. van Binsbergen 2010, 'Continuities'), such

³¹ Cf. van Binsbergen, W.M.J., 1987 / 2003, 'The shadow you are not supposed to tread upon': Female initiation and field-work in central western Zambia', paper presented at the Third Satterthwaite Colloquium on African Religion and Ritual, University of Manchester/ Satterthwaite (Cumbria), 21-24 April, 1987; revised version in: van Binsbergen, Wim M.J., 2003, *Intercultural encounters: African and anthropological lessons towards a philosophy of interculturality*, Berlin / Boston / Munster: LIT, ch.3, pp. 93-124; also at: http://shikanda.net/intercultural_encounters/Intercultural_encounters_FINALDEFDEF9.pdf

My student Thera Rasing has devoted a PhD thesis and a monograph to female puberty rites among the Zambian Bemba, and while she does not dwell on string figures, also there the novices are taught by reference to geometrical figures painted on the wall and suggestive of an astronomical meaning which however could not be ascertained; Rasing, T., 2001, *The bush burned the stones remain: Women's initiation and globalization in Zambia*, Ph.D. thesis, Erasmus University Rotterdam; Hamburg/Muenster: LIT Verlag.

³² Turner, V.W., 1967, *The forest of symbols: Aspects of Ndembu ritual*, Ithaca (N.Y.): Cornell University Press; Turner, Victor W., 1968, *The Drums of Affliction: A Study of Religious Processes among the Ndembu of Zambia*. Oxford: Clarendon Press; Turner, Victor., 1969, *The Ritual Process: Structure and Anti-Structure*, Aldine: Chicago.

an etymology, once established, might help us to learn more about this spirit's nature:

Guthrie, proto-Bantu roots: **-káNg-**to fry; to roast 1009

-káNgà 9/10 guinea-fowl 1010

Meeussen, proto-Bantu roots:

kang- 'dry', 4.3. (a dry vagina – with maximum resistance to the penetrating penis – is the proud and assertive ideal of Nkoya feminine sexuality (van Binsbergen 2003), and this ideal is forcibly transmitted during female puberty training, and enforced by vaginal insertion of specific herbs which, moreover, can be suspected³³ to cause female infertility as a side effect

- Cf. *Borean: *Borean (approx.): KVVV 'burn, roast, dry', attested in Eurasiatic: **ǵVñV* ('to dry, to be thirsty, hungry', attested in Old Indian, and Germanic: **xúnx-r-a-/xung-r-á- m.*; **xung-r-ía- vb.* (whence the word 'hunger'); and in Afroasiatic: **kò^wVn-* 'burn' (in Chadic and Omotic).

-kang- 'threaten', 4.3. (there is little that Nkoya women fear more than (N)K'anga)

-kánga 9 'guinea-fowl', 4.3. (I am not aware of Nkoya female taboos in relation to guinea-fowls; a menstruating woman cannot handle salt; a female puberty novice cannot eat fish)

The 'dry' semantics seem particularly relevant in this connection. The proto-Bantu root(s) *kan/Ng[a]* may be provisionally associated with Borean in various ways (Table 3).

Borean root	Borean meaning	proto-Bantu root (numbers indicate noun classes)	remarks
KVMV	dry	-yóm-, -kám-	-yóm-: dry and hard; -kám-: dry up
KVCV10	dry	Bantu *-ka?c- 'dry up'. M -kád- become dry, 4.4.	
KVRV26	dry	Bantu *-ka?d- 'dry up'. M -kád-u, dry, 4.4.	

Table 3. The root *kan/Ng[a]* in Bantu and *Borean

³³ Cf. Central Statistical Office, Lusaka, Zambia, 1975 study of female fertility – discussion of the infertility belt west-east across Central Africa.

This suggests that the dryness theme in the connotations of K'anga may not be limited to the time span of the existence of Bantu, but may even be considerable longer, and date back to Upper Palaeolithic times, which is when language forms similar to *Borean were supposed to have been spoken.

Although it is a long shot, I suggest that on the basis of a presumed Bantu etymology, (N)K'anga might be provisionally understood as 'the spirit of dryness'

Mythologically, there is some support for such a reading in the name of one of the major legendary Nkoya kings: Shihoka Nalinanga, 'Serpent child of Dryness' – an apt evocation of the Rainbow Serpent (known among the Nkoya and neighbouring peoples as Ngorongoro) although Shihoka Nalinanga merely appears as a successful king magically thwarted by his sister – one of several parallels between Nkoya and Celtic mythology (cf. van Binsbergen 2010, *Continuities*, o.c.). The rainbow connection of kings is thus subdued in the Nkoya case, but very conspicuous in the Luba case with whom the Nkoya are closely associated in language and culture



Fig. 26. Female puberty rites in South Central Africa (left) and in North America (Apache, right)

In the context of the girl's festive coming-out ceremony at the end of the training period, there are various oblique references to the relationship between the novice and rain.

It is considered a disaster (spelling infertility and untimely death) when it rains on the day of this ceremony

Yet – like among her North American counterparts – the girl's ceremonial dress is

adorned with tingling pieces of metal (these days usually crowned bottle tops) and ankle rattles made of strings of round seed pods, both of which are consciously intended to imitate the sound of rain

It is as if the rite both acknowledges

- the overwhelming importance of rain (Nkoya: Mvula, the major connection between Heaven and Earth; child of the Supreme God Nyambe (who herself or himself has Spider connotations; van Binsbergen, *Continuities*, o.c.); indispensable to in this agriculturalist society, central symbol of luck and fertility; and considered to be the origin of – ideally female – kinship),
- and the domestication of that immense power through socio-cultural institutions and ritual

Female puberty rites in South Central Africa (top) and in North America (Apache, bottom) are remarkably similar, e.g.

- Exclusively for one girl
- Who surrounded by her kin performs a solo dance in a cleared square space at daybreak
- Extensive rain symbolism in clothing and sound, etc.

There are many further parallels in such fields as mythology (e.g. flood stories, the Cooking Pot of Kingship), material culture (basketry, fishing), divination and gaming pieces. Also the Amerind linguistic macrophylum cluster with African macrophyla (notably Khoisan and Niger-Congo) more than with Eurasiatic, Afroasiatic and Sino-Caucasian. The explanation for this continuity lies in a common substrate deriving from Central Asia in the Upper Palaeolithic, and brought to Africa through the Back-into-Africa movement (van Binsbergen, 2010, *Continuities*, o.c.).

The Apache, and the Navaho who will feature below, speak the Dene macrophylum and are reckoned to a super-macrophylum Dene-Sino-Caucasian which extends across all three northern continents of the world, and therefore may be expected to have more Old World traits than other Native Americans but also the properly Amerind speaking groups share in the transcontinental cultural continuities noted.

Apparently, in female puberty rites, we are dealing with a very old symbolic layer, at least dating back to the Upper Palaeolithic

If this is so, comparative mythology may help us to further narrow down the possible implications here.

The rainbow serpent, well attested as a mythical character in South Central Africa,³⁴ is also (and this is the main reason for its proposed inclusion in Pandora's Box) a well-known character in Australian mythology, and considered to feature in many very old specimens of Australian rock art.

³⁴ Luba, Nkoya; cf. Reefe, T.Q., 1981, *The rainbow and the kings: A history of the Luba empire to 1891*, Berkeley & Los Angeles: University of California Press.

An Australian myth of menstruation and the rainbow serpent

'In one version of the myth of the Wawalik sisters, the sisters, with their two infant children, camped by the Mirrimina waterhole. Some of the older sister's menstrual blood fell into the well. The rainbow serpent Yurlunggur smelled the blood and crawled out of his well. He spit some well water into the sky and hissed to call for rain. The rains came, and the well water started to rise. The women hurriedly built a house and went inside, but Yurlunggur caused them to sleep. He swallowed them and their sons. Then he stood very straight and tall, reaching as high as a cloud, and the flood waters came as high as he did. When he fell, the waters receded and there was dry ground.' (Arnhem Land, Northern Territory, Australia)³⁵

Note that 'he stood very straight and tall, reaching as high as a cloud' in this Australian myth closely corresponds with the Zimbabwean rock paintings we have considered above

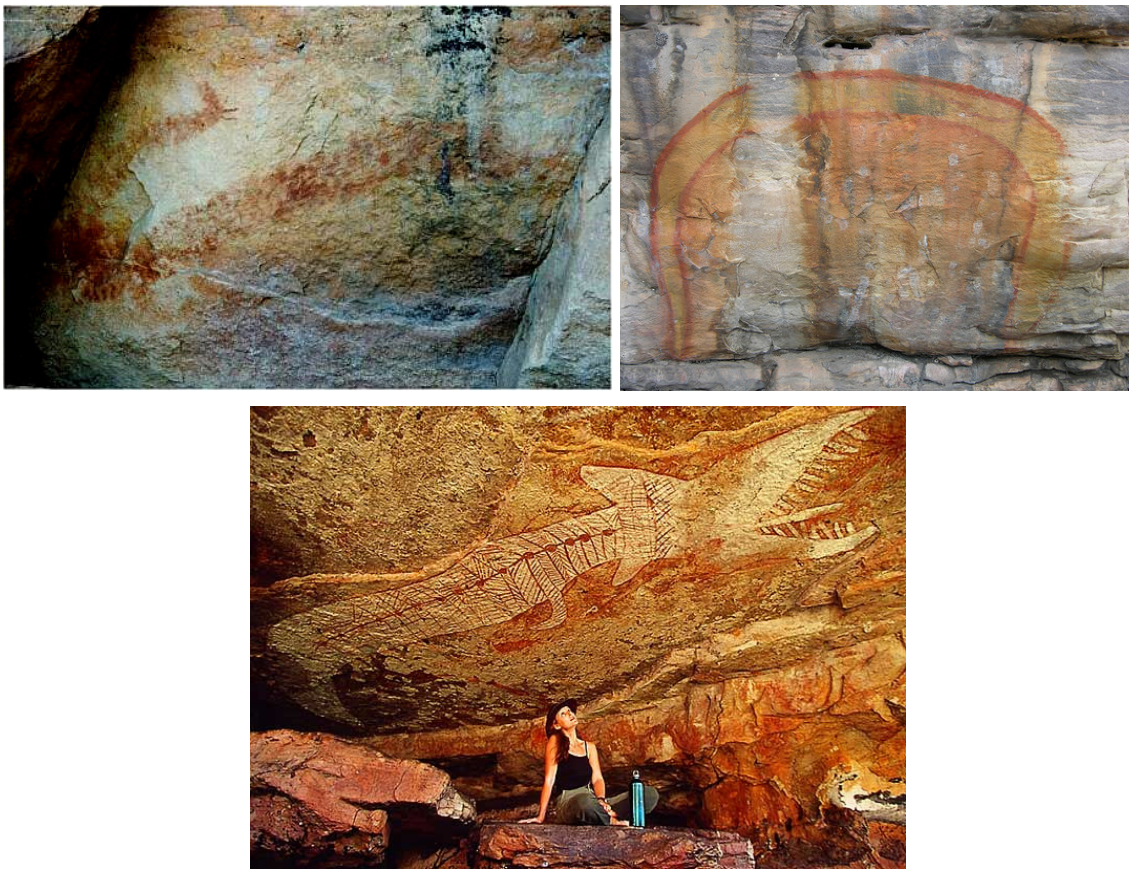


Fig. 27. Further representations of Dreamtime Serpent / Rainbow Serpent, Australian rock art, undated

³⁵ Buchler, Buchler, Ira R. & Kenneth Maddock (eds.). 1978. *The Rainbow Serpent, A Chromatic Piece*, Mouton Publishers, The Hague, 1978. pp. 134-135; Isaac 2006, o.c.



Fig. 28. Human and animal forms from Arnhem Land, Australia; note how snake-like beings (each bringing out one colour of the rainbow?) are rendered through granulation, like the emus below

A rather similar relationship between menstruation and rainbow is to be found as far from Australia as South America:

'Rainbow does not like menstruating women to enter the water, or even to drink from it. One day a young woman broke this taboo because her mother and sisters didn't leave her any drinking water when they left for the day. Driven by thirst, she went to the lagoon. When she had returned, rainbow, full of anger, caused a strong wind, accompanied by whirlwinds and heavy rain. All were drowned in the ensuing flood. (Toba people, Northern Argentina),³⁶

This is not the kind of arbitrary, unsystematic Frazerian mythological comparison from all over the world, which has given comparative mythology and diffusionism such a bad name.³⁷

³⁶ Bierhorst, John. 1988. *The Mythology of South America*, William Morrow, New York, 1988, pp. 142-143; Isaac 2006, o.c.

³⁷ Frazer, James George., 1918, *Folk-lore in the Old Testament: Studies in comparative religion, legend, and law* London: Macmillan and Company)

In recent work³⁸ flood myths have been subjected to systematic theoretical analysis, and recognised to constitute a very old, and globally converging mythological substrate – although there is some controversy about whether they belong to Pandora’s Box (Witzel) or to more recent CITIs (the view I have advocated so far, but I begin to be persuaded that Witzel is right).

Thus it would appear that in a very old layer of human mythology, so widespread that it may well belong to Pandora’s Box (the comparative mythologist Berezkin in his recent work has perceived very ancient myths in South America, where Anatomically Modern Humans went within millennia of their first arrival in the New World), there is the following connection

The (male) rainbow owns/controls water/rain and protects it against (female) blood

Rainbow and the female gender in both myths appear as cosmologically incompatible, as mortal enemies

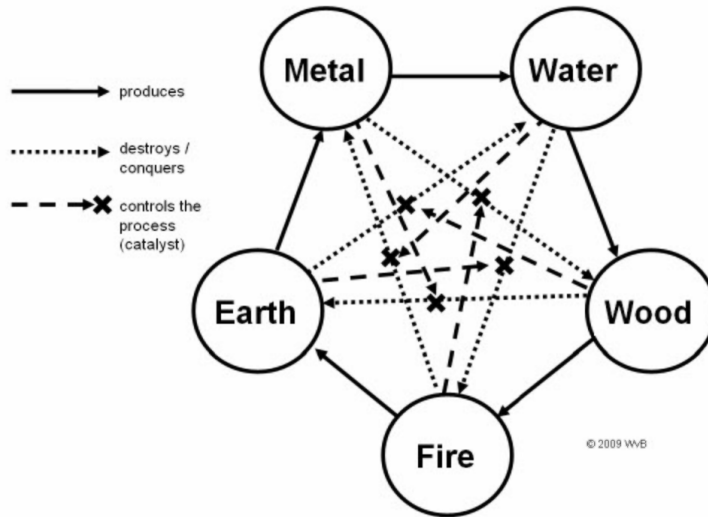
When we apply this principle in the context of the Nkoya female puberty rites, we would be inclined to say that the Rainbow (who appears only when the rain is over and therefore is conceivably the enemy and destroyer of rain),

- appears as a force which seeks to overpower adolescent women at menarche
- and it is only when the Rainbow force has been domesticated (through rites permeated which the emulation of Rain, i.e. women’s ally, evocative of their ‘natural’ ‘humid’ condition, and of their royal and celestial prerogatives)
- that womanhood can come to full fruition in other words that the adolescent woman is ready for marriage and motherhood
- is aptly named as ‘the spirit of dryness’

‘The (male) rainbow owns/controls water/rain and protects it against (female) blood’

Such a formula reminds us of the operations of a particular kind of cosmology: a elemental cycle of transformations, where each particular element is supposed to produce / further or annihilate / hinder one other element, often under the catalytic influence of a third element.

³⁸ Witzel, M., 2001, ‘Comparison and reconstruction: Language and mythology’, *Mother Tongue*, 6: 45-62; Witzel, Michael, 2010, ‘Pan-Gaeon Flood myths: Gondwana myths — and beyond’, in: Wim M.J. van Binsbergen & Eric Venbrux, eds., *New Perspectives on Myth: Proceedings of the Second Annual Conference of the International Association for Comparative Mythology*, Ravenstein (the Netherlands), 19-21 August, 2008), Leiden / Haarlem: *Papers in Intercultural Philosophy and Transcontinental Comparative Studies*, pp. 217-235, also at: http://www.quest-journal.net/PIP/New_Perspectives_On_Myth_2010/New_Perspectives_on_Myth_Chapter10.pdf; and van Binsbergen with Isaak, 2008, o.c.



This is essentially a rendering of the formula given by Needham with Li (1956: II, 260f):

‘Wood destroys (conquers, red arrow) Earth, but Metal controls (x) the process
 Metal destroys (conquers, red arrow) Wood, but Fire controls (x) the process
 Fire destroys (conquers, red arrow) Metal, but water controls (x) the process
 Water destroys (conquers, red arrow) Fire, but Earth controls (x) the process
 Earth destroys (conquers, red arrow) water, but Wood controls (x) the process’

with this proviso that in addition to the destruction relations, I have also shown the productive relations

Fig. 29. The Taoist transformation cycle of elements³⁹

The illustration shown here is based on Chinese Taoism, but I have claimed that such a cosmology may have obtained in various regions throughout the Old World from the Bronze Age on.⁴⁰

Under such a cosmology, mythical evocations of strife / killing and of alliance / engendering may be read as personifications of the logical relations of the cyclical

³⁹ Needham, J., in collaboration with Ling, W., 1956, *Science and civilization in China, Vol. II: History of scientific thought*, Cambridge: Cambridge University Press; van Binsbergen, Wim M.J., 2009, ‘Izanami giving birth to Kagutsuchi / Fire: Evidence for a widespread proto-historic cosmology revolving on an elemental transformative cycle, in Japan, Africa, throughout the Old World, and in the New World – as a step in the world-historic development of modes of thought’, paper presented at the Third Annual Meeting of the International Association for Comparative Mythology, Tokyo, Japan, 23-24 May 2009.; available at: http://www.shikanda.net/topicalities/paper_Japan_final.pdf

⁴⁰ cf. van Binsbergen, Wim M.J., 2009, ‘Izanami giving birth to Kagutsuchi / Fire: Evidence for a widespread proto-historic cosmology revolving on an elemental transformative cycle, in Japan, Africa, throughout the Old World, and in the New World – as a step in the world-historic development of modes of thought’, paper presented at the Third Annual Meeting of the International Association for Comparative Mythology, Tokyo, Japan, 23-24 May 2009.; available at: http://www.shikanda.net/topicalities/paper_Japan_final.pdf

transformation of elements⁴¹

However, systematic reasons are discussed in these papers why such a transformative elemental cosmology can only have emerged from the more recent, post-Palaeolithic CITIs and cannot be projected back into the Middle Palaeolithic context of the Blombos block.

To sum up, it appears as if my intuition was right that the crosshatching of the Blombos block reflects a fundamental cosmological arrangement

- But instead of referring to Lightning (which, as part of thunderstorm, belongs to the world of rain as connection of heaven and Earth)
- The association appears to be rather with ‘Rain’s adversary’, the Rainbow

Among the Nkoya, Rain (Mvula) appears as the main demiurge, the principal connection of heaven and earth, and as the origin of kingship. Traditionally, kings were female, and male kingship is considered a relatively recent innovation.⁴² Come to think of it, the transition, among the Nkoya, from female to male kingship (a transition explicitly acknowledged in Nkoya oral traditions) must be considered a transition from Rain to Rainbow (cf. the Luba), as centre of the local symbolic order. The Nkoya explains this transition by reference to the need for male leadership in warfare, but that seems to be begging the question – but for the time being I have no better explanation. There is a distinct tradition of warrior queens among the Nkoya (Queen Shikanda), in Angola and elsewhere in Africa.

Throughout human history, the colour red has been associated with blood and menstruation, and it is not impossible that the red ochre Blombos block served in early female puberty rites – illustrating the mythical enemy of menstruating women as evoked in globally distributed myths of apparently great antiquity

We cannot go here into the related, interesting question of the very extensive distribution of the use of red ochre in space and time since the Palaeolithic

Since we are in the realm of meteorological phenomena anyway, we should not be surprised that

- in later millennia the juxtaposition of Rain and Rainbow was lost, as a complementarity constitutive of the cosmic order, and
- that the system of crosshatching exemplified by the Blombos block took on connotations of other connections of Heaven and Earth: the Milky Way, divine wisdom (in the Hebrew sephiroth), the celestial pole, the Celestial serpent as

⁴¹ van Binsbergen, Wim M.J., 2010, The heroes in Flood myths worldwide; Seeking to capture prehistoric modes of thought by means of quantitative contents analysis’ (70 pp.), paper, 4th Annual Meeting, International Association for Comparative Mythology, Department of Sanskrit and Asian Studies, Harvard University, Cambridge (MA), USA, 8-9 October 2010; at: http://shikanda.net/topicalities/binsbergen_flood_heroes.pdf)

⁴² cf. Van Binsbergen, W.M.J, 1992, Tears of Rain: Ethnicity and history in western central Zambia, London/ Boston: Kegan Paul International; also at: <http://www.shikanda.net/ethnicity/Tearsweb/pdftears.htm>

complementary to the Terrestrial Serpent i.e. Earth (in Indo-European the reflexes of 'earth' (**dg' hem-*) and 'serpent' (**g' hem-*) are hardly distinguishable)

Likewise, fusion takes place with other primal mythical themes such as the Tree of Life (cf. Osiris / Djed motif)

Thus the nice distinctions which have been analytically useful to us so far, must be taken with a pinch of salt:

- they could not have operated with the same kind of precision and sharpness at the level of the historical actors' consciousness (my introductory argument on 'historical logic')
- And they were prone to all sorts of fusion and confusion, transformation and innovation across the many millennia that have elapsed since Blombos.



Fig. 30. Noah's Thanks offering (c.1803) by Joseph Anton Koch.

In the two myths cited from Australia and South America, rainbow and water/rain appear to be closely related, allied, almost indistinguishable

This is in line with the specific type of logic argued above for the Middle Palaeolithic

A rather different conception is to be found in Genesis 9, where the rainbow, explicitly set in Heaven over Noah's altar on the Earth, appears as the radical alternative to, and not as a cause or effect of, the flood

As we have seen, this is also the cosmological conception that can be argued to underlie the Nkoya female puberty rites

This rather marks the Nkoya situation as almost 'modern', in an palaeoanthropological perspective

In the Middle to Upper Palaeolithic worldview, probably no strict distinction of Heaven and Earth would have been thinkable, with Heaven being on a transcendent plane absolutely different from humans' ordinary life world. The Waters Above, Aside and Below; however, it may have been possible to distinguish between the watery nature of these waters (all of which uninhabited and uninhabitable by humans), and the dry land on which humans dwell. Much as 'the Mother of the Waters' (or at least, some comparable local concept) would be the source and origin of life, and a role model for women especially in initiation, she would inhabit the periphery – whilst the dry land, associated with men and with the Rainbow Serpent, would implicitly be considered the centre of the life world.

This already foreshadows a development that was to lead, in the Upper Palaeolithic, to the two successive cosmogonies, (a) Separation of Land and Water, (b) of Heaven and Earth

Here a difficulty arises for which I have no solution yet:

- Mythically and ritually constructed to be inimical to women, 'Drought' / 'the Spirit of Dryness' / 'The Rainbow serpent' (who incidentally is also depicted as the mortal enemy of women in Genesis 3:14-15; Freudian symbolism would inevitably apply a phallic reading here) would occupy the ordinary centre of the life world
- whereas the realms particularly charged with cosmological and existential power: the Waters Above, Aside and Below (what today we would call Heaven, the Ocean and the Underworld) would appear in the periphery, in some incipiently transcendent 'not here and not now'

Subsequently however, when Heaven begins to form a well-articulated, transcendent segment of these Waters, also the decisive cosmological powers are projected onto Heaven, and no longer onto Earth, whose fertile and nurturative essence, although acknowledged as a NarCom, becomes junior to the power of Heaven – whilst in a process of masculinisation Heaven, although endowed with the cosmic power of the Mother of the Waters, acquires male characteristics of dominance

Was the Rainbow Serpent originally male? More likely the gender element was less articulated than the dry/wet dimension

Unable to answer these questions as yet, let me at least adduce additional archaeological support for my serpentine reading of the Blombos pattern.

3.10.3. Further grounds for a serpentine reading: The Tsodilo snake cult, Botswana, 70 ka BP – and later manifestations of granulation

The plausibility of a serpentine reference for the Blombos pattern is further enhanced by the discovery of a snake cult in the Tsodilo Cave, Botswana, Southern Africa

Not only is this rather close to Blombos; it is also claimed by its discoverer Sheila Coulson to be contemporary to the Blombos archaeological culture (70 ka BP)

The point about the rock being snake-like is not only its elongated shape but also its

displaying hundreds of man-made indentations



Fig. 31. The pecked snake rock at Tsodilo Cave, Western Botswana

The plausibility of a serpentine reference for the Blombos pattern is further enhanced by the discovery of a snake cult in the Tsodilo Cave, Botswana, Southern Africa

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Here is a short report on Coulson's research:

'The Tsodilo Hills are still a sacred place for the San, who call them the "Mountains of the Gods" and the "Rock that Whispers".

The python is one of the San's most important animals. According to their creation myth, mankind descended from the python and the ancient, arid streambeds around the hills are said to have been created by the python as it circled the hills in its ceaseless search for water.

Sheila Coulson's find shows that people from the area had a specific ritual location associated with the python. The ritual was held in a little cave on the northern side of the Tsodilo Hills. The cave itself is so secluded and access to it is so difficult that it was not even discovered by archaeologists until the 1990s.

When Coulson entered the cave this summer with her three master's students, it struck them that the mysterious rock resembled the head of a huge python. On the six meter

long by two meter tall rock, they found three-to-four hundred indentations that could only have been man-made.

"You could see the mouth and eyes of the snake. It looked like a real python. The play of sunlight over the indentations gave them the appearance of snake skin. At night, the firelight gave one the feeling that the snake was actually moving".

They found no evidence that work had recently been done on the rock. In fact, much of the rock's surface was extensively eroded.

When they saw the many indentations in the rock, the archaeologists wondered about more than when the work had been done. They also began thinking about what the cave had been used for and how long people had been going there. With these questions in mind, they decided to dig a test pit directly in front of the python stone.

At the bottom of the pit, they found many stones that had been used to make the indentations. Together with these tools, some of which were more than 70,000 years old, they found a piece of the wall that had fallen off during the work.

In the course of their excavation, they found more than 13,000 artifacts. All of the objects were spearheads and articles that could be connected with ritual use, as well as tools used in carving the stone. They found nothing else.'

Apparently, the Tsodilo serpentine representation through pecks, specks or dots followed a pattern that was to persist well into modern times.

Many more examples from Eurasia could be cited of pecks / specks / granulation indicating serpentine nature, cf. the following Figures.



Fig. 32. (left) Sumerian depiction the goddess Inanna with snakes; (right) Vinča, Neolithic, where specialists have recognised granulation to be closely associated with a serpentine nature, and with the connection between Heaven and Earth (second half fifth mill. BCE)



Fig. 33. (left) ‘The Polesini Wolf’ (Upper Palaeolithic, Grotta Polesini, Tivoli, Italy);⁴³ (right) a python⁴⁴ – note the granulated effect of the shimmering scales

However, as the image (Fig. 33 left) of ‘The Polesini Wolf’ shows, pecks and granulation are by no means the distinguishing features of snake iconography; rather, they signify power and violence, and as such they may be applied to snakes, leopards, predators in general

I have studied much of the relevant data world-wide (also paying attention to snake representations) in my analysis of leopard-skin symbolism.⁴⁵

Without the slightest pretension of completeness or even representativity, let me add a few more examples of speckled serpents from historic times:

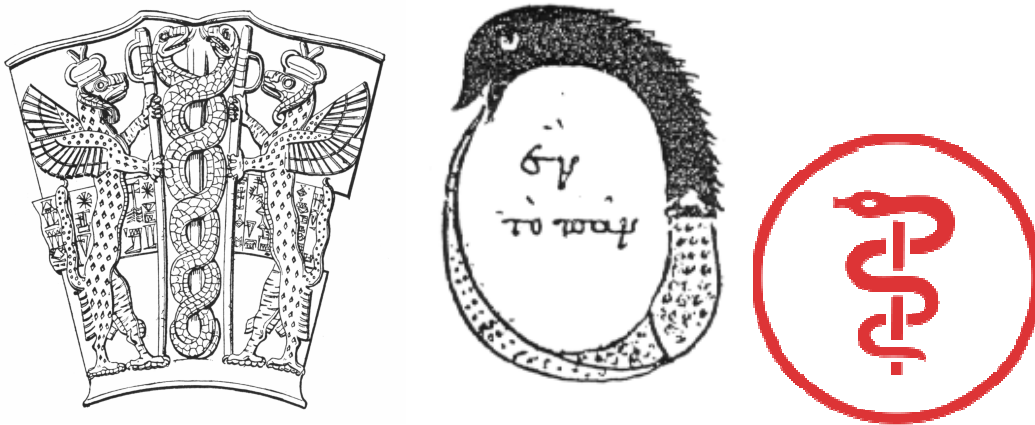


Fig. 34. (left) Gudea Vase with depiction of Underworld god Ningišzida (‘Ruler of the Good Tree’ (!)) on the Gudea Vase, Ancient Mesopotamia, flanked by two griffins. Note how the griffins’ skin is rendered by

⁴³ Picture source: <http://www.soslupi.bioparco.it/lupoaroma.htm> , with thanks.

⁴⁴ Picture source: <http://www.everwonder.com/david/snakes/python.jpg> with thanks.

⁴⁵ Still awaiting publication in a more definitive format: van Binsbergen, Wim M.J., 2004, ‘Long -range mythical continuities across Africa and Asia: Linguistic and iconographic evidence concerning leopard symbolism’, paper presented at the Round Table on Myth, Department of Sanskrit and Indian Studies, Harvard University, Cambridge (Mass.), 8-10 May, 2004; at: http://www.shikanda.net/ancient_models/leopard_harvard/leopardwww.htm .

granulation. This is the oldest known image of snakes circling around a pole, late 3rd mill. BCE; cf. the snake-encircled staff of the medicine god Asklēpios / Aesculapius; (middle) Late Antiquity cosmic and alchemical symbol of Ourobouros; note how also here snake-skin is rendered by granulation; (left) modern esculape pictogram.



Fig. 35. (left) Atargatis (Dea Syria), ‘Lady Goddess of the Sea’, akin to Anat, Ashera and Astarte. Note the Neith-like emblem (two arrows crossed in front of a shield or of a pole topped by a totemic cushion) repeated on her body; (middle) as the golden image from Tut-^cankh-Amun’s tomb indicates, Neith (primarily a primal goddess, of the waters, the sky, and later a virgin goddess of feminine arts including weaving and warfare) was also conceived as a cobra . (left) 1st dynasty Egyptian stele of Queen Mr Nt, with her theophoric name featuring the theonym Neith

Crosshatching designs have persisted to the present day to mark particularly potent ornaments, manifestations of supernatural / celestial powers – from the sephiroth (Fig. 8) to the Celtic knot, and the gaming and divination tokens of Southern Africa and North America (Fig. X).



Fig. 36. Crosshatching and related patterns in the form of Celtic knots (left),⁴⁶ divining / gaming tablets

⁴⁶ From Brompton Cemetery, near Earl’s Court, South West London, 2005, photo Tracy Ducasse.

from (middle) Southern Africa (Ndebele people, Zimbabwe and Botswana)⁴⁷ and (right) from Northern America⁴⁸

Given the similarity of these African and American tablets in form and function

both sets consist of four tablets, all marked so as to be different four the other three – which when upward-facing or down-facing position is taken into account, produces $2^4 = 16$ unique configurations when cast

against the background of more such parallels between North America and sub-Saharan Africa as indicated above, I am inclined to think of a common Palaeolithic substrate pattern, mediated through Central Asia

- While the Blombos block suggests that the patterns ultimate origin may be in pre-Exodus sub-Saharan Africa
- And my present analysis suggests that the pattern originates in serpentine / rainbow iconography

3.10.4. The Milky Way connection

Although there appears to be some plausibility in the above argument for interpreting the Blombos pattern as the evocation of a primordial mytheme of the Rainbow Serpent,

And although there is contemporary evidence (Tsodilo Cave) to support a serpentine reading

Yet we must not put all our eggs into one basket.

My original list of NarComs was formulated on a very limited basis: African cosmogonic myths (rather poorly) attested in historical times, and provisionally traced by me, in what I argued to be their systematic transformations, to other continents

There is reason to suspect that more NarComs existed, even so early as to form part of Pandora's Box

Also, there is further evidence from Southern African rock art that may be more convincingly explained in other terms than that of the Rainbow Serpent mytheme

I have already indicated that the Milky Way offers another possible interpretation for the Blombos pattern. Let me develop this point now.

⁴⁷ Author's collection, from Bulowayo, Zimbabwe, 1989.

⁴⁸ Zuñi, New Mexico; Culin, S., 1975, Games of the North American Indians, New York: Dover; facsimile reprint of the original 1907 edition, the Accompanying Paper of the Twenty-fourth Annual Report of the Bureau of American Ethnology of the Smithsonian Institution, 1902-1903, by W.H. Holmes, Chief.



Fig. 37. An incised pattern from South African rock art, implied to be Upper Palaeolithic

Holm presents a number of incision patterns from South African prehistory, and claims that they are

‘Considered to be among the oldest signs in Southern African rock art’,⁴⁹ ‘they have a striking similarity with Italian pebble and bone incisions from Barma Grande, [i.e.] Grimaldi, and from Polesini’ (idem., my translation)

crosshatching is conspicuous in these incisions and constitutes a major point of correspondence with the Italian Upper Palaeolithic examples mentioned by Holm) – or with other Upper Palaeolithic art, e.g. as discussed in Marshack’s pioneering book *The Roots of Civilization*.⁵⁰

However, my point here is that this crosshatched pattern seems to have a cosmological reference, like my reading of the Blombos pattern, but not in necessarily in terms of the rainbow, but also of the Milky Way

⁴⁹ Holm, E., 1969, *Die Felsbilder Südafrikas*, Tübingen: Wasmuth, p. 76f, Textabbildung 22.

⁵⁰ Marshack, A., 1972, *The roots of civilization: The cognitive beginnings of man’s first art, symbol and notation*, London: Weidenfeld & Nicholson/ New York: McGraw-Hill; first published 1970, and followed by much later work in the same vein – and much criticism

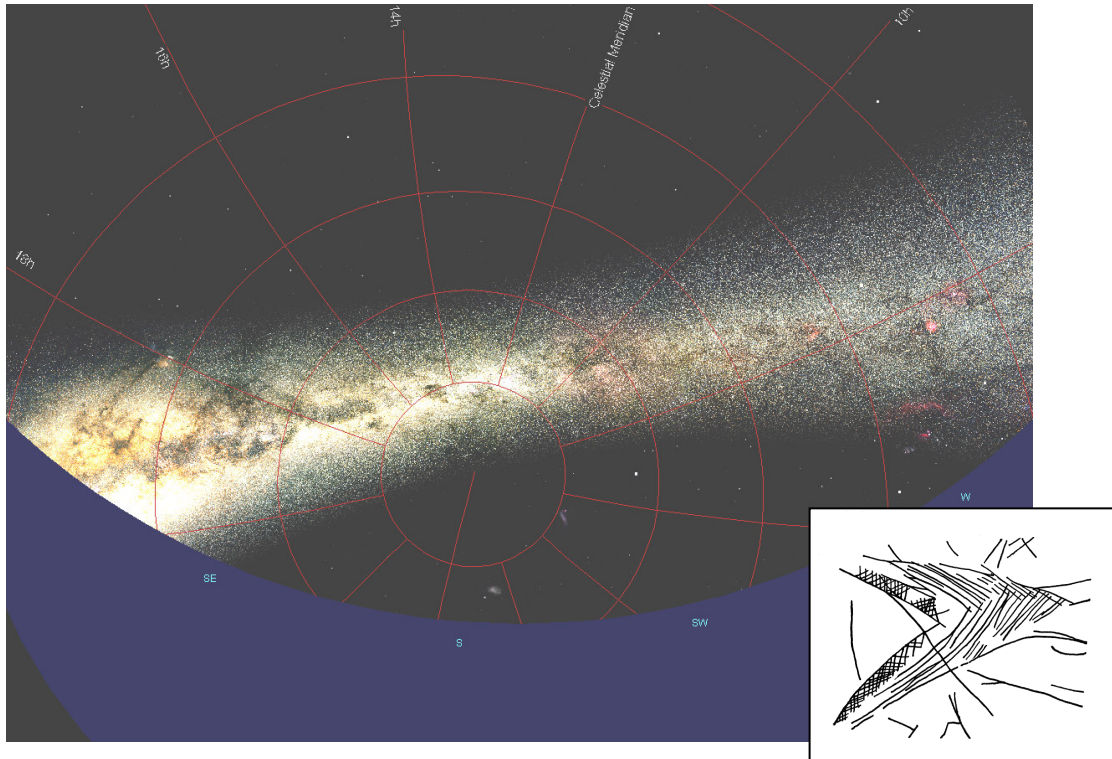


Fig. 38. The Milky Way as seen at Bloemfontein, South Africa, 6th September 48300 BCE, 6: 57 am; note the directions; the astronomical grid has, of course, been imposed

The rock image of Fig. 37 (insert) could very well be considered a depicted of the typically forked shape of the Milky Way at this point in the sky

The following illustration makes this point even more eloquently

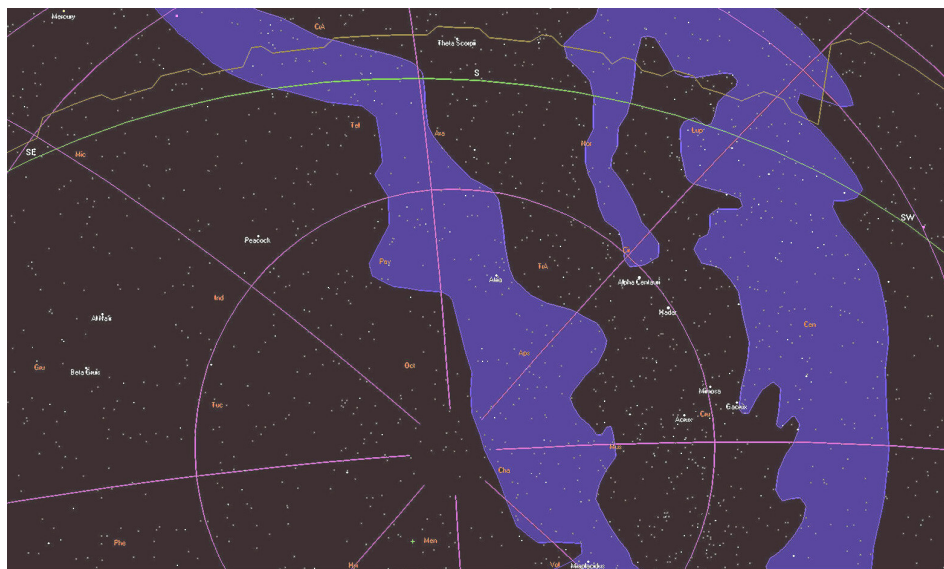


Fig. 39. The two branches of the Milky Way around the South Pole (image produced with the SkyGlobe4

astronomical software). Situation as on 4 January 2011; despite slight proper motion of individual stars, the pattern would have been rather similar in the Middle Palaeolithic, whence the Blombos block dates

In order to accommodate these findings in our argument, let us look at the mythological associations of the Milky Way through space and time (Table 4)⁵¹

TABLE 4. MYTHOLOGICAL CONNOTATIONS OF THE MILKY WAY

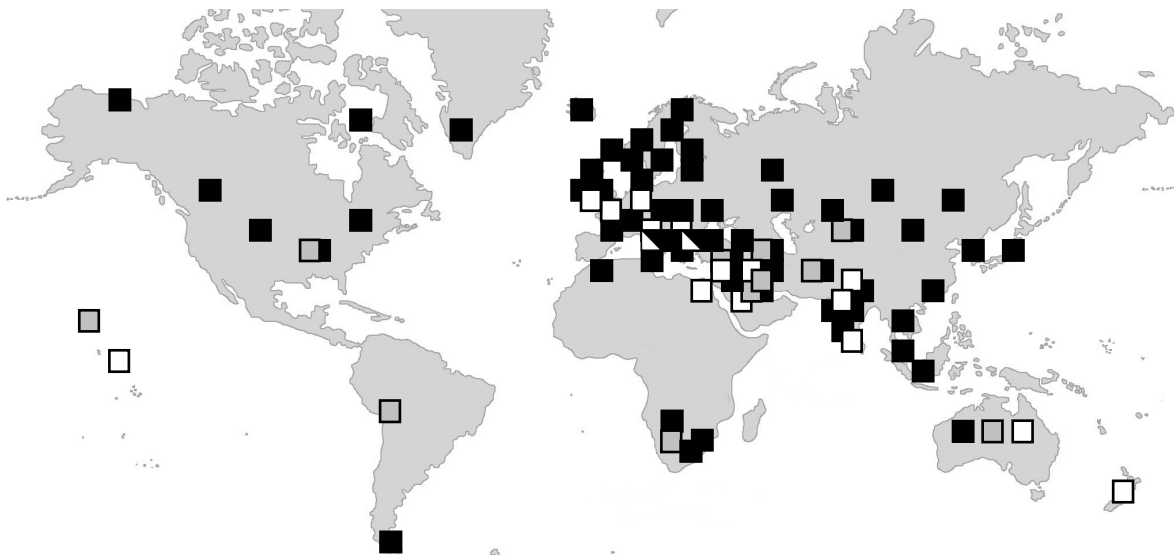
theme: A = one-dimensional path; B = scatter of identical elements; C. cyclical path; X: other; the semi-colon separates descriptions in the centre column, and is analogously repeated in the right-hand column

ethnic group or region	short description and remarks	theme
Anglo-Saxons	Watlingastre (of the giant sons of King Waetla)	A
Arabic world	أم السماء Umm al-samā', Mother (i.e. Paroxysm, Essence) of the Sky; النهر the River	X
Armenian, West and Central Asia (including Iranians, Turks, Uighur), Arabia (درب التبانة (<i>Darb Al-Tabānīn</i>))	Straw (Thiefs' / Carriers') Way; (I have not been able to consult: Lagercrantz, Sture, 1952, The Milky Way in Africa. - Ethnos, 17: 64-72.); cf. Zulu, but the various claims that this is generally found in Africa rests on a misreading of Allen 1899's 'Ethiopian'	A; B
Australian Aboriginal	river in the skyworld.; termites blown into the sky; thousands of flying foxes carrying away a dancer known as Purupriggie (cf. the Makoni rock painting in Zimbabwe?)	A; B; elongated human shape X (~A)
Berber	Beam of the sky	A
Cherokee	The Way the Dog Ran Away (with stolen cornmeal)	A; B
East Asia	Silvery River (銀河) between Altair and Vega periodically bridged by magpies and crows (cf. Chinese myth of weaving girl and cowherd boy); River of Heaven (天の川 Japanese, 天河 Chinese (also the separate concept 漢, 'Han river in the sky', < preclassic Old Chinese <i>shārs</i>); 밀리내 Korean	A
Egyptian	pool of cows milk of celestial cow goddess; Maravelia argues that the goddess Nut – associated with the celestial rebirth of deceased kings – specifically represents the Milky Way (Maravelia, Amanda-Alice, 2003, 'Cosmic Space and Archetypal Time: Depictions of the Sky-Goddess Nut in Three Royal Tombs of the New Kingdom and her Relation to the Milky Way.' Goettinger Miszellen, Heft 197, Pages 55-72)	a quantity of fluid X
Eskimo	Ashen Path (cf. San)	A
Europe, medieval Christianity, especially Iberian	'Road to Santiago', 'Compostella' (pilgrimage centre for St James/ Jacob), Jacob's Road; the same idea also in the world of Islam (specifically Turks), in regard of Mecca	A...
Faroer, Iceland, Norway, Sweden	Winter Way; Milky Way	A; A

⁵¹ sources include: Anonymous, Milky Way (mythology), wiki, at [http://en.wikipedia.org/wiki/Milky_Way_\(mythology\)](http://en.wikipedia.org/wiki/Milky_Way_(mythology)); Allen, R.H., 1963, Star names: Their lore and meaning, Dover: New York; reprint of the 1899 first edition, entitled Star-names and their meanings, New York: Stechert; Hastings, J., 1908-1921, ed., Encyclopaedia of Religion and Ethics, 12 vols. Edinburgh: T. & T. Clark. New York: Charles Scribner's Sons, 2nd ed. 1974-1981; Toivanen, Sampsa; Sipilä, 2006, Heikki. What is the Milky Way called in different languages? at: <http://web.archive.org/web/20060925125110/http://users.tkk.fi/~stoivane/milkyway/>).

Gaelic	White Stream of Heaven	A
Georgia (West Asia)	The deer jump	A
Greek, Ancient	Circle of the Galaxy; Eridanus, the Stream of Ocean, River of Heaven; Seat of the Heroes; Band (Ptolemy)	C; A; X; A
Hawaii	Starry realm	B
Hebrew, Graeco-Roman, Antiquity, post-Antiquity Europe	Milky Way: spurted mother's milk of goddess; older: milk of cattle; Babylonian background for this conception has been argued (Heimpel, Wolfgang., 1989, 'The Babylonian Background of the Term 'Milky Way.' In: Behrens, Hermann. et al., Editors, DUMU-E2-DUB-BA-A: Studies in Honor of Åke W. Sjöberg., Philadelphia : Samuel Noah Kramer Fund, Pages 249-252)	scattered quantity of fluid (~B); concentrated quantity of fluid X
Hungarian	The Road of the Warriors / of War; Milky Way	A
India	Bhagwan ki Kachahri, the Court of God; Swarga Duari, 'Dove of Heaven'; path of Aryaman; Bera da ghas, 'the Path of Noah's Ark'; Nagavithi, 'the Path of the Snake'. <i>Note the closeness to the serpentine theme</i>	X; X; A; A; A
India, Nepal	The Ganges River of the Sky; abdomen of the dolphin of the sky; milk stream	A; concentrated field of bright colour X; A
Indonesia, Malaysia	Magical Bhima [Mahabharata hero, second of the Pandava brothers; went on a long military expedition to the East]	(A)
Ireland	Fair Cow's Path; Big Fence of Stars; Lugh's [a major Hero] Chain	A; A; A
Jews, Israelites	Crooked Serpent (cf. Job, xxvi:13); Aroch / Arocea / Aruhah, 'Long Bandage'. <i>Note the closeness with the Serpentine motif</i>	A; A
Malta	Road of St Anna	A
Māori	hero's canoe; fish of Maui (culture hero), of the sky, long fish	man-made large utensil or animal of elongated shape X (~A)
Mesopotamia, Ancient	"River-of-the-Snake.", "River-of-the-cord-of-the-God great", "River-of-the-Abyss great." <i>Note the closeness of the Milky Way motif to the Serpent motif here.</i> River-of-the-Shepherd's-hut; dust-cloud high; River-of-the-Divine-Lady / of Inanna	A; A; B; A
Mongolians, Kalmyks	Heavenly Seam	A
Native Americans	Path of the Ghosts; muddy water stirred up by a turtle swimming along the bottom of the sky	A; (~B)
Norse, Ancient	Path of the Ghosts; Allen 1899: 'glo-Saxon glossaries have it as Iringes Uueg, Weg, or Wec, Iringe's Way; and as Bil-Idun's Way, these personages being descendants of Waetla, and both Ways leading to Asgard over the bridge at which Slavonic mythology terminated this celestial way, and thus joined earth to heaven, "where four monks guard the sacred road and cut to pieces all who attempt to traverse it.'" Later on this Asgard Bridge was the title indiscriminately applied to the Milky Way and Rainbow, varied, as to the latter, by Bifrost or Asbren'. <i>Note the closeness of the Milky Way and the serpentine, specifically Rainbow motif.</i> Further: Wuotanes Weg, or Straza, Wuotan's, or Woden's, Way, or Street; among the Midland Dutch, Vronelden Straet, the Women's Street, and Hilde, or Hulde, Strasse, Saint Hilda's, or Hulda's, Street; in Jutland, Veierveien, or Brunel, Straet; in Westphalia, Wiar Strate, the Weather Street, and Mullen Weg, the Milky Way; and in East Friesland, Harmswith and the Melkpath	A; A; A;.....
Patagonians	Patagonians think the Milky Way the road on which their dead friends are hunting ostriches	A
Peru (Incas)	dust of stars	B
Polynesia	Long, Blue, Cloud-eating Shark	X (A)
Romans	Coeli Cingulum, 'Heavenly Girdle', and as a Circle; Pliny: Circulus lacteus, 'Milky Circle'; embers bordering the path of the sun (Manilius, who, however,	C; C; A; (C)

	also has the circular notion)	
Sami (Lapp)	Bird's Ladder	A
San ('Bushmen')	embers thrown into sky	B
Slovenia	Roman [pilgrimage] Road	A
Thailand	ทางช้างเผือก 'The way of the white elephant' [symbol of kingship]	A
Tswana	<i>mola wa godimo</i> , 'edible mmola tree berry / river bed / interstitial space / rainbow' of the spirit way / of God	A
Turks	Hajiler Yuli, 'Pilgrims' Road'	A
Ukrainia	ox drivers' / traders' way	A
Uralic, Altaic, Baltic (Indo-European)	The Pathway of the Birds	A
Wales	Castle of Gwydion / Arianrhod 'Silver Street'	man-made large structure X; A
Xhosa	<i>Umnyele wezulu</i> : Celestial Road	A
Zulu	<i>Umthala</i> : tall thatching grass <i>Erianthus capensis</i> (cf. straw, above); ⁵² Milky Way; paunch muscle in cattle; dark streak from navel down in humans; tuft on infant's hand	A



theme: (black symbol) A = one-dimensional path; (grey symbol) B = scatter of identical elements; (black-and-white symbol); C. cyclical path; (white symbol) X: other; the letters refer to the listing in Table 4.

Fig. 40. Mythological connotations of the Milky Way

We see that, in historical times, the overwhelming association of the Milky Way has been

⁵² It is tempting to read here a connection with the Zulu cosmogony/anthropogony from a primal reed clump, which has parallels among the Nkoya, in Ancient Egypt, and in Asia e.g. Japan. Cf. van Binsbergen, *Continuities*, o.c. Under present-day conditions one would think that reed and tall grass are not easily confused. However, the confusion does consist in the Ancient Egyptian context, where *nswt* is rendered both as 'reed' and as 'sedge'. Given the European custom of thatching with reed, it may be that 19th-century mythographers have wrongly imposed the distinction upon African and Asian expressions.

*that of a one-dimensional path.*⁵³

There are a few circular variations to this general rule, as indicated under (C) in the Table.

Most other variants appear the result of free creative invention around the same underlying theme. Note how the straw motif comes back as grass among the Zulu, another indication of Bantu-Central Asian continuities which I have explored at length elsewhere and accommodated in my Pelasgian hypothesis, o.c.

What largely remains only implied in these listings is the widespread conception of the Milky Way as, specifically, *the path of souls*; this connotation of the Milky Way transpires in the Norse and Native American 'Path of the Ghosts', but also in Manilius.⁵⁴

This conception of the Milky Way is ultimately shamanic, and may merge with the conception of the celestial axis as well as with the much older (Pandora Box) conception of the Rainbow Serpent.

Concerning such proposed merging back in time, some additional data may be presented here.

In the first place, when drawing up the table I had repeatedly occasion to note the rapprochement between a specific conceptualisation of the Milky Way, and the serpentine theme of our discussion of the Rainbow Snake.

Moreover, although my analysis revolves on a clear distinction between Rainbow Serpent / Rainbow, on the one hand, and the Lightning / Rainstorm / Rain, on the other, our brief discussion of Palaeolithic logic has already prepared us for a situation where such a distinction may be blurred, or altogether absent.

There are a few linguistic indications from historical times⁵⁵ for such indistinction between meteorological phenomena that in our modern mind are so clearly distinct as the Rainbow, Rain, and Lightning.

Thus Proto-Tungus-Manchu (a branch of Altaic < Eurasiatic) **siarū* - means '1 lightning, rainbow 2 light'.

⁵³ which is also asserted, with rich cross-cultural references, in: Allen, Star names, o.c.; reprint of the 1899 first edition, entitled *Star-names and their meanings*, New York: Stechert; Olcott, William., 1911, *Star Lore of All Ages.: A collection of myths, legends, and facts concerning the constellations of the Northern Hemisphere*, New York, London, G.P. Putnam's son

⁵⁴ cf. Lebeuf, Arnold, 1994b, *The Milky Way. A Path of the Souls*. In: *Astronomical Traditions in Past Cultures: Proceedings of the First Annual General Meeting of the European Society for Astronomy in Culture (SEAC)* Smolyan, Bulgaria, 31 August - 2 September 1993. (Kolev, Dimiter und Koleva, Vesselina, Eds.). Institute of Astronomy, Bulgarian Academy of Sciences. National Astronomical Observatory Rozhen, pp. 148-161. Sofia. Smolyan: Printakom Ltd.; Reichel-Dolmatoff, Gerardo., 1978, *Beyond the Milky Way: Hallucinatory imagery of the Tukano Indians*. Latin American Studies 42. Los Angeles (CA): UCLA Latin American Center, University of California, Los Angeles.

⁵⁵ (cf. Starostin, Sergei, & Starostin, George, 1998-2008, Tower of Babel etymological database, participants: Russian State University of the Humanities (Center of Comparative Linguistics), Moscow Jewish University, Russian Academy of Sciences (Dept. of History and Philology), Santa Fe Institute (New Mexico, USA), City University of Hong Kong, Leiden University, at: <http://starling.rinet.ru/babel.htm>)

In Proto-Eskimo (< Eurasiatic) : *aŋ lu- means both ‘rainbow’, and ‘meteor’.

In Inupik, a specific Eskimo language, *tułimā-(ra-) means both ‘rib’ (as of a large mammal, or a boat), and ‘rainbow’.

In Chinese (< Sino-Tibetan < Sino-Caucasian), 霽 *čəj means both ‘rising vapours’, and ‘rainbow’.

In the Nepalese language Limbu (Sino-Tibetan>Tibeto-Burman > Himalayish > Mahakiranti > Kiranti), the central themes of our analysis remarkably merge, in that the word iNwa? means: ‘1) cockerel, rooster [*think of the Lightning Bird!*] ; 2) dawn, daybreak; 3) the brighter arc of a rainbow’; the local word for ‘chicken’ is claimed to be a reflex of the same root, and the follow comment accompanies this entry: ‘rainbow; rainbowing [sic] around the sun (the latter type of rainbow is interpreted to be a gathering of deities (maNha?) who debate on the death of some important person. The side of the rainbow which fades away first indicates the geographical direction in which the death is to occur)’.

The same implied fusion between our central concepts also occurs in the case of the proto-Basque (< Sino-Caucasian) *h orci / *h ošti, meaning: ‘1 sky 2 storm 3 thunder 4 Thursday 5 rainbow 6 cloud’, with the following comment: ‘Apparently ‘Urcia’ was an ancient name for God, originally the sky-god, like Jove/Jupiter, Zeus, etc., thus *h orc-egun ‘Thursday’. See the discussions by Michelena⁵⁶ and Trask 1997,⁵⁷ pp. 277-279.’

The sinister association between rainbow and death, alluded to in one of the above entries, also occurs in Ngeq (< Katuic < Mon-Khmer < Austroasiatic < Austric) : priəŋ ‘rainbow; accidental death’.

The underlying, very ancient notion of the rainbow serpent may explain why in Paraok (< Wa < Mon-Khmer < Austroasiatic < Austric) the word jə ŋ .B, si-, ‘dragon’, derives from the general proto-Wa jə ŋ .B, ‘rainbow’.

On the basis of this overview I would not claim an alternative, Milky Way related argument concerning Palaeolithic crosshatching

But rather see the Milky Way and the Rainbow Serpent explanations as complementary, and ultimately having a common origin. Yet it is clear that much further work remains to be done. In that connection we will also have to look at North American cases of crosshatching with a cosmological meaning for the local actors, as in the next few Figures.

Trudy Griffin-Pierce⁵⁸ presents a Navaho string figure rather similar to that of the Nkoya female puberty rites, and claims that among the Navaho it represents the Pleiades – a well-known cluster of relatively bright stars, recognised in many cultures, subject to rich

⁵⁶ Michelena, L., 1961, *Fonética Histórica Vasca*, San Sebastián: Bilbao: Universidad del País Vasco, second edition 1977.

⁵⁷ Trask, R.L., 1997, *The History of Basque*. London: Routledge.

⁵⁸ Griffin-Pierce, Trudy, 1992 *Earth is my mother, sky is my father: Space, time and astronomy in Navajo sandpainting*, Albuquerque: University of New Mexico Press, Plate 7 after page xxiv.

mythological elaboration, and often (e.g. in Africa) associated with the agricultural seasons



Fig. 41. From Griffin-Pierce 1992, o.c., original caption: Pl. 7. “Star Stories: Dilyehe (the Pleiades)” (serigraph). A Navajo woman makes a string figure of Dilyehe. Spider Woman taught the Navajo how to make these figures along with the allegorical stories that accompany them. “So we keep our thinking in order by these figures and we keep our lives in order with the stories. We have to relate our lives to the stars and the sun, the animals, and to all of nature or else we will go crazy, or get sick” (Navajo father in Toelken, *The dynamics of folklore* [1979:96]).

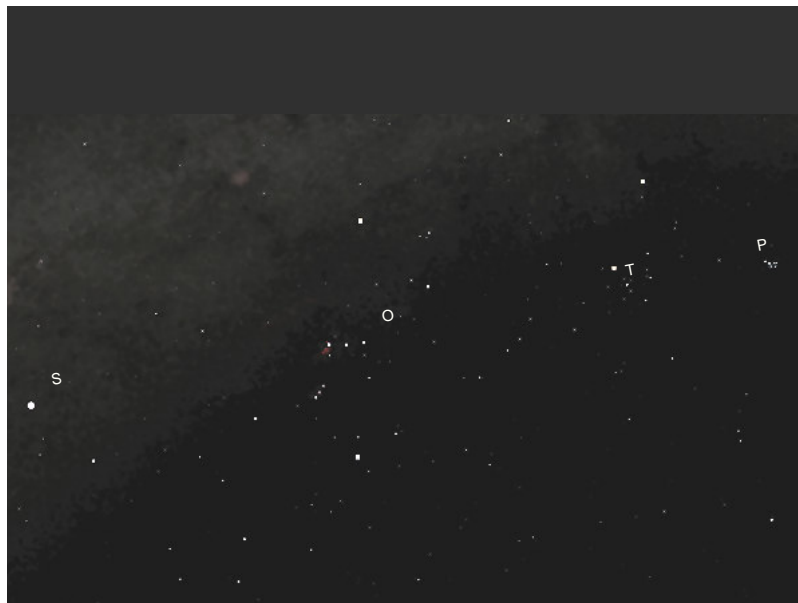


Fig. 42. The starry night as background shown in Fig. 41: the Pleiades (P), Taurus (T), Orion’s Belt (O) and

Sirius (S) in the sky above Navaho country today (source: Starry Night 5 Pro astronomical software).

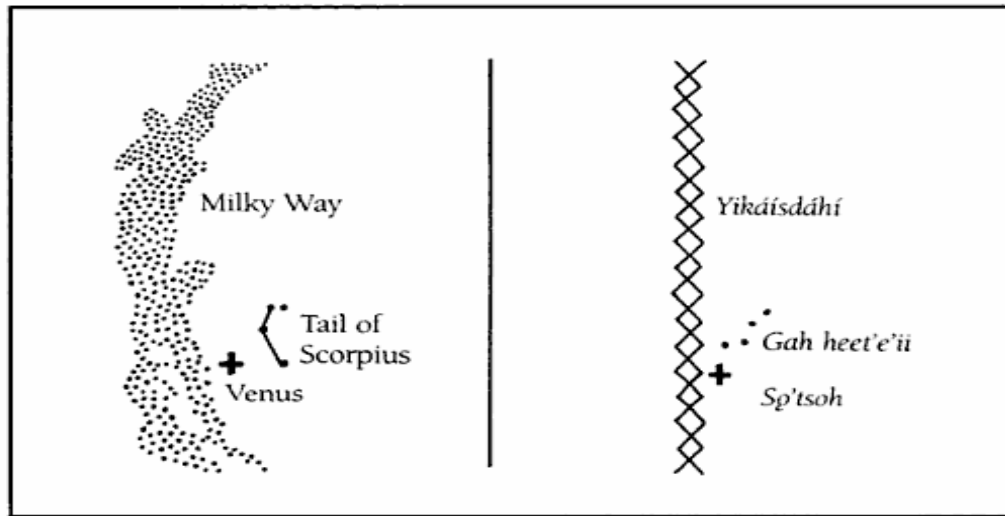


Fig. 4.8. Gah heet'e'ii and Yikáisdáhi and their Western counterparts, the tail of Scorpius and the Milky Way. (Adapted from a drawing by Chanter A.)

Fig. 43. (left)The Milky Way in (right) Navaho representation; from Griffin-Pierce, o.c., Fig. 4.8.

This is interesting, because of the parallels, signalled above, between North American and sub-Saharan African cultures

Among the Navaho, a vertical series of XXXXXXXXXX (without horizontal lines) specifically represents the Milky Way (Griffin-Pierce 1992: 85, Fig. 4.8; see our Fig. 43).

Further reminders of alternative interpretations

I have already stressed the sheer ubiquity of crosshatching as a graphic technique, and hence the impossibility of assigning one general meaning to crosshatching.

Simple decoration and other graphic concerns (filling up a space contrastively with adjacent spaces) always remain real possibilities.

There may also be practical considerations:

- the crosshatching may render the surface of a spearhead rough so that it can be more easily glued onto the spear shaft (Sheriden Cave),
- or it may be part of a sharpening tool (Kassley tablet)

A very small selection of the rich North American prehistoric material with crosshatching elements helps us to appreciate these non-semantic, meaningless aspects of crosshatching, in order to avoid reading meaning over the heads of the original historical

actors.⁵⁹



'This picture shows a magnified view of the tapered base of one of the bone spear points from Sheriden Cave. The "cross hatching" engraved area is where it was attached to a spear. This "roughening" probably helped attach it more firmly in the haft with the use of tree resin or other adhesive substances.'

Fig. 44. Sheriden Cave, Wyandot County, Ohio⁶⁰



(side A:) 'This side of the Kassly Tablet is typical of almost all the known engraved sandstone tablets from the Cahokia area except for the Ramey Tablet which is engraved with birds heads on one side and human heads on the other. The most common design consists of two sets of parallel lines or grooves that bisect each other to form in most cases, diamond designs. This examples has more rectangular shapes than diamonds though. All of the known engraved tablets from the Cahokia area are made of the same stone that abraders are made from which were used for sharpening and shaping bone awls, pins, etc. This abrasive material was also used to make many of their pipes which also have sharpening grooves cut into the sides and bottom to the extent that a large majority of them were destroyed from sharpening wear. This has led to some speculation that the grooves on the sandstone tablets were in some way used for sharpening. Maybe these stones played a part in some type of ceremonial process such as scarification. The Kassly Tablet is deeply grooved.' (side B:) 'This side of the Kassly Tablet shows an important recently discovered engraving with motifs similar to previously reported Mississippian cultural imagery. This example apparently has two themes, the serpent at the top and the birdman underneath. Unfortunately, most of these tablets are broken and one can only guess at how the complete design may have looked. The bird man on this

⁵⁹ For text and figures of this instructive selection, I acknowledge the copyright © 2000 Peter A. Bostrom

⁶⁰ <http://lithiccastinglab.com/gallery-pages/sheridencrosshatching2large.jpg>

tablet can be compared to the only other known example that was found in 1975 during excavations on the east lobe of Monks Mound at Cahokia. Both of these images have a skirt, chest area and out stretched wing. Unlike the Bird Man tablet from Cahokia this one shows a fringe at the bottom of the skirt. Also, instead of an oval design on the chest this one has five punctures or holes in the chest area with another lower down in the skirt area. The tips of the wing are also shown in this version unlike the Birdman Tablet that does not show the wing tips. What is most striking about this tablet is the area where the head would be seems to be cut off by a horizontal groove but this line could also be part of the wing and shoulder since it does not continue to the edge of the tablet. If the head was there it would seem that, unlike the Birdman Tablet, it would have been looking to the right. The other important image on the Kassly Tablet is the serpent motif at the top that may or may not have had a head or even continued across through the damaged area. This same design can be seen on the famous stone disc from the Moundville site in Alabama that shows a hand and eye in the center of a serpent. I have heard for several years about another sandstone tablet with a birdman engraved on it. It was found near Horseshoe Lake at Cahokia many years ago. That tablet was evidently also broken but the finder was very sure that the image was a birdman. Unfortunately, it was sold to someone living in the eastern United States and its present location is unknown. Maybe someday it will surface and the image could be studied and compared with the two known examples.’ ((c) 2000 Peter A. Bostrom)((c) 2000 Peter A. Bostrom)

Fig. 45. The Kassly Tablet Monroe County, Illinois⁶¹



Fig. 46. ‘Birdman tablet’, Cahokia Mounds State historic site, Madison & St. Clair counties, Illinois (tablet owned by the People of Illinois)

In this tablet the two sides implicitly enact the complementarity of Heaven and Earth: on the basis of systematic parallels with other such tables, the specialists read the crosshatched pattern, apparently as a matter of self-evidence, as serpentine – in other words, a reference to the Earth; and the anthropomorphic image as a birdman, complete with wings

While this seems to add some general plausibility to our above argument, we must not forget that these tablets are relatively recent and certainly belong to a post-Palaeolithic era where the Separation of Heaven and Earth has become the dominant mytheme, of which Fig. X offers further examples from China and (with snakes replaced by Pygmies)

⁶¹ <http://lithiccastinglab.com/gallery-pages/kasslytabletcrosslarge.htm>

the Ancient Graeco-Roman world (Francois vase), and Ancient Mesopotamia (another depiction of Ningishzida).



Fig. 47. Complementarity of bird and snakes (or other terrestrial symbols, e.g. Pygmies) as evocations of the Separation of Heaven and Earth, from China (top left), Ancient Greece (top right, the Francois Vase), and Ancient Mesopotamia (bottom)

Another such example (if it is not a modern forgery) may be the artefact shown in Fig. 48.



‘The large, smooth, rounded stone artifact roughly triangular in shape. On one side there are incised lines in a crosshatch pattern. On the other side there are incised lines that depict a serpent-like creature with large

teeth, a fish-like tail and exaggerated spines decorated with crosshatching. A zigzag line is drawn from the eye to the heart. The artifact is made from black Ohio shale. It has been broken into three pieces and glued together. Item was found in Clay Township, Scioto County, Ohio.⁶²

Fig 48. Incised artefact from Clay Township, Scioto County, Ohio; source mentioned in main text.

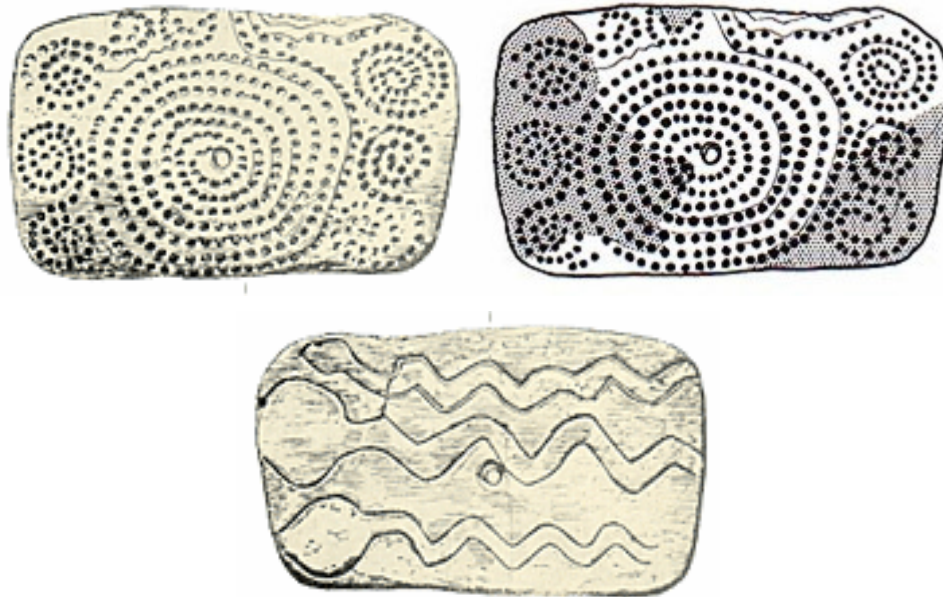


Fig. 49. The Mal'ta (Lake Baikal) pendant

Another Upper Palaeolithic pair of images reminiscent of the complementarity of Heaven and Earth is shown in Fig. 49: two sides of a pierced ivory pendant from Mal'ta, Lake Baikal, c. 19 ka BP – one side showing concentric dotted spirals surrounded by others (top; the peripheral spirals are contested, see main text); the other side showing three undulating serpentine forms (bottom).

As is often the case with prehistoric artefacts that have circulated in the secondary literature for some decades, the available images leave much to be desired. In an illuminating critical discussion of the scholarship of straight lines in prehistory – an inspiring complement to my present argument – Richard Flavin points out⁶³ that Marshack based his reading of this artefact (o.c.) on a condition when it was for c. 50% reconstructed in wax (shaded area in bottom figure); most of the peripheral spirals may therefore rest on fantasy

By the same token, the famous birthing goddess of Neolithic Çatal Hüyük, Turkey,

⁶² Natural History » Geology » Clay and Shale » Black Ohio Shale Artifact , at: <http://www.ohiohistorycentral.org/image.php?rec=2824&img=2260> , retrieved 1-1-2011

⁶³ Flavin, Richard D., n.d. , 'Straight lines: Selected reviews', at: <http://flavinscorner.com/reviews.htm>

features in most specialist and lay publications with a tacitly reconstructed bald head (Fig. 50).



Fig. 50. The birth-giving mother goddess from Çatal Hüyük, before (left) and after (right)⁶⁴ restoration

4. Crosshatching in the Upper Palaeolithic, and before

Bringing together a large number of repetitive and apparently decorative art forms – including crosshatching – in schematic form, the mathematician Jablan demonstrated that most can be seen as applications of, and variations upon, relatively simple mathematical principles.⁶⁵

This yields a lesson similar to the one we receive when looking at crosshatching-like string figures: if the productive rules for a particular formal structure are simple, they may be reinvented at various places and in various periods, without specific cultural transmission (diffusion) being necessarily involved

However, when the resulting patterns are named and charged with mythical / religious meaning in very similar or identical ways, then cultural transmission is difficult to exclude, especially if there are other indications (linguistic, archaeological, genetic) of tangible continuity between the periods and/or places in question

⁶⁴ <http://albertis-window.blogspot.com/2010/07/prehistoric-playskool.html> , with thanks

⁶⁵ Jablan, S.V., 1995, Theory of symmetry and ornament, Belgrade (Yugoslavia): Mathematical Institute, also at: <http://www.emis.de/monographs/jablan/chap32.htm>

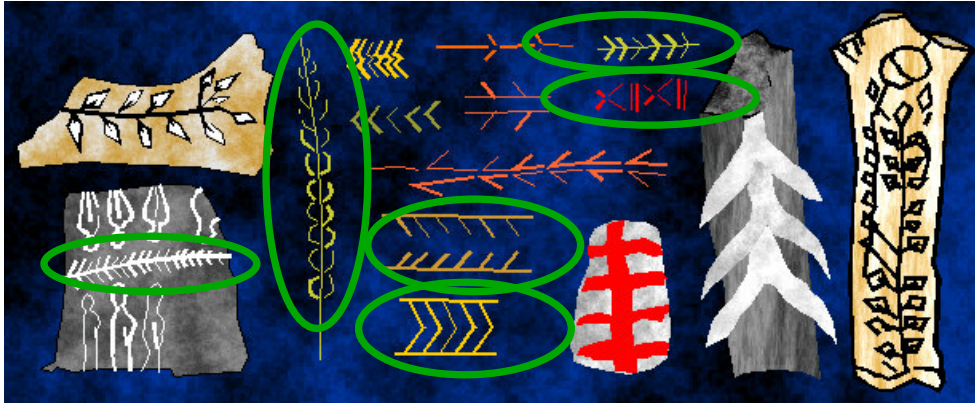


Fig. 51. Jablan, o.c.: Friezes with the symmetry group **1m** in Palaeolithic art (Ma[s] d’Azil, La Madele[i]ne, Barma Grande [= Grimaldi], Laugerie Basse, around 10000 B.C.).

The crosshatching theme of ‘Jacob’s Ladder’ does not in itself appear, but has affinities with the patterns encircled in green

Note the prominence of leaf motifs, which were also in evidence when, above, we considered the possibility of transmission of the lightning theme from Africa to Australia.



Fig. 52. Jablan, o.c., Fig. 2.53. Friezes with the symmetry group **mm** in the Palaeolithic (Magdalenian, around 10000 B.C.) and Neolithic.

In Fig. 52 the Blombos type of cross hatching is very conspicuous: most items qualify.

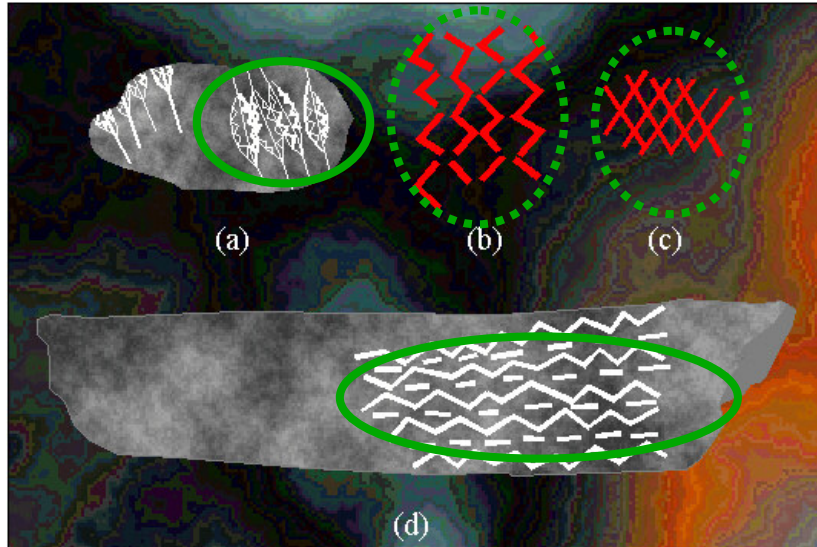


Fig. 53. Jablan, o.c. Figure 2.85: Ornaments with the symmetry group **cmm** in Palaeolithic art: (a) Polesini Cave; (b) Laugerie Haute; (c) Pindel and Vogelherd.

Crosshatching as a conspicuous motif in Upper Palaeolithic art was also part of Leroi-Gourhan's listing of basic patterns, many of which has been explained as traps (Fig. 54).

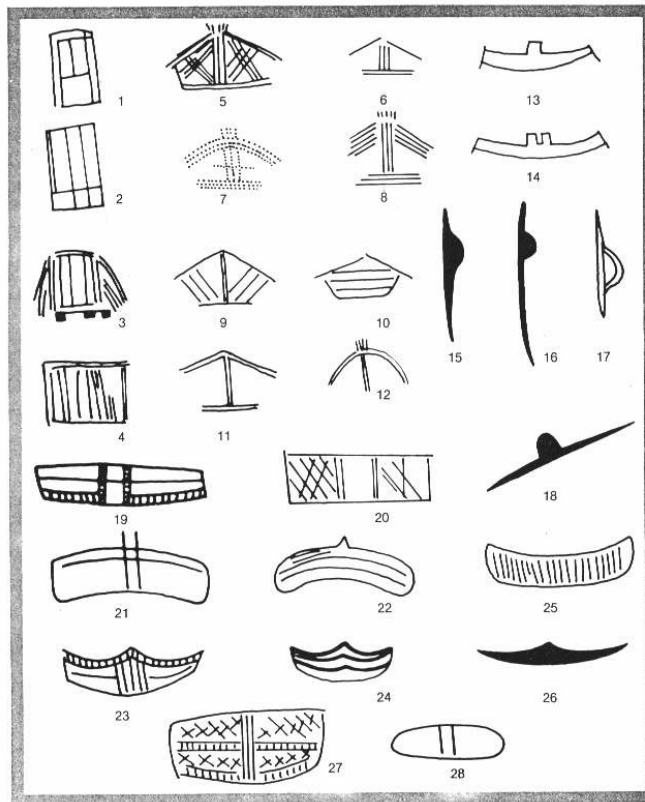


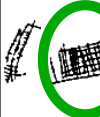


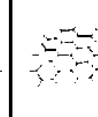

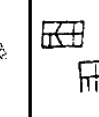
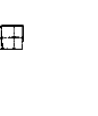




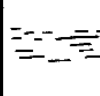


















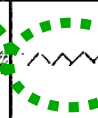
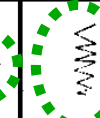
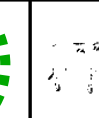







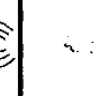






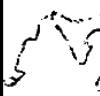






Fig. 54. Overview of Upper Palaeolithic patterns, Leroi-Gourhan.⁶⁶

Fig. 55 presents an even more ambitious listing: an overview of all ‘entoptic’ forms known from both San art and Palaeolithic art

Entoptic taken in the sense of Lewis-Williams & Dowson’s hypothesis,⁶⁷ seeking the rationale of rock art in the production of trance-inducing images

Entoptic Forms	San Rock Art		Palaeolithic Art						
	engravings	paintings	mobile art	parietal art					
1									
2									
3									
4									
5									
6									

Adapted from Lewis-Williams and Dowson, 1988, pages 206 and 207

Fig. 55. Overview of Upper Palaeolithic patterns,⁶⁸ crosshatching highlighted with green oval. The fourth row comes close to the Blombos pattern and could perhaps be interpreted in terms of the Rainbow Serpent. Lewis-Williams & Dowson 1988, o.c. See also Leroi-Gourhan, o.c. from whom the right hand section of this listing was derived

The overview of Fig 55 suggests (see green outlines) that the extent of crosshatching in prehistory has been very extensive

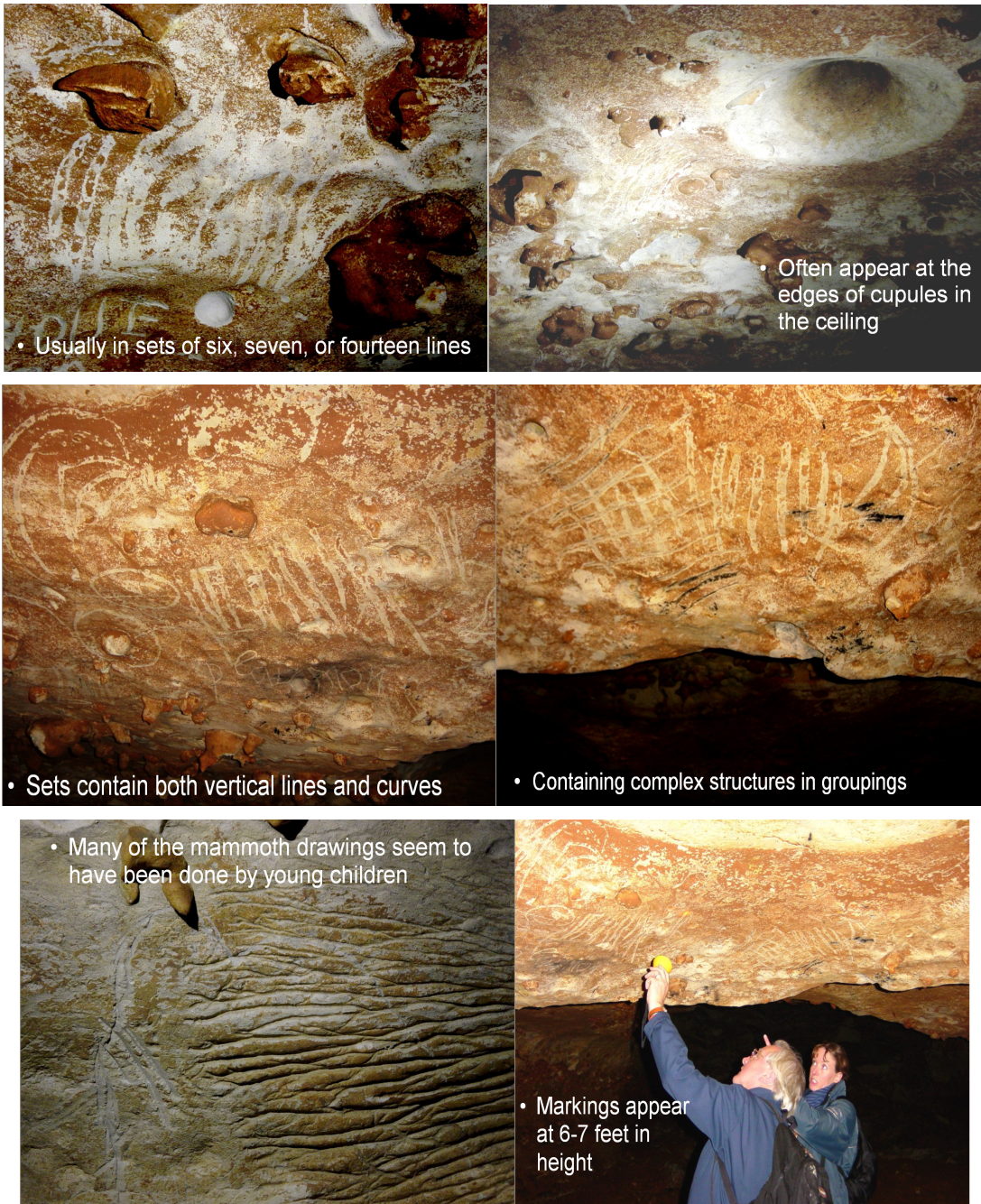
Further testimonies on Upper Palaeolithic crosshatching may be gleaned (including their

⁶⁶ E.g. Leroi-Gourhan, A. 1976, *Les religions de la préhistoire: Paléolithique*, Paris: Presses Universitaires de France, first published 1964, 4th edition 1983.

⁶⁷ Lewis-Williams, J.D., & T. Dowson, 1989, *Images of power: Understanding Bushman Rock art*, Johannesburg: Southern Book Publishers; and much subsequent work.

⁶⁸ After <http://www.wynja.com/arch/graphics/entoptic.gif>, courtesy Eric Pettifor, with thanks.

photographs and captions, with thanks) from the fascinating presentation 'Prehistoric Finger Flutings in Rouffignac Cave' by Kevin Sharpe and Leslie Van Gelder.⁶⁹



⁶⁹ 'Prehistoric Finger Flutings in Rouffignac Cave' by Kevin Sharpe and Leslie Van Gelder, http://www.ksharpe.com/word/AR57_files/fullscreen.htm



Fig. 56. Examples of crosshatching from Rouffignac Cave, France, Upper Palaeolithic. © Kevin Sharpe and Leslie Van Gelder. The large inverted cupmark betrays the *Karst* environment of this painted cave (and most others of its kind).

The fact that many lines turn out to have been produced by young children (as indicated by the distance between fingers and the width of the hand) suggests that these Upper Palaeolithic crosshatchings have actually been produced in initiatory context – in line with the hypotheses advanced in my present argument

And, as the very case of Blombos indicates, we need not stop at the Upper Palaeolithic.

Throughout most of the 20th c. CE our fixation on the Franco-Cantabrian rock art and its association with Crô-Magnon humans suggested a European origin and a rather shallow time frame for representational art – which in the 1980s still gave rise to a considerable literature on ‘the Human Revolution’, which palaeoanthropologists tended to situate then and there

In the 1980 however we also began to realise that representational art, still considered as central characteristic of Anatomically Modern Humans, has a much longer history, largely outside Europe (where Anatomically Modern Humans only arrived c. 40,000 BP), and especially in Africa, to where mitochondrial DNA pointed, subsequently to be corroborated by concrete archaeological finds

In the most recent years however more and more claims are made that representational art may be much older than Anatomically Modern Humans, and would date from Acheulian times (100ka-1Ma); This has been one of the principal themes in the work of Robert G. Bednarik; also in that of James B. Harrod,⁷⁰ who since the 1980s has significant

⁷⁰ Harrod, J. B., 1987, European Upper Paleolithic semiotic systems: Context, classification, and a semiotic analysis of a Franco-Cantabrian protolanguage. Valcamonica Symposium 1987: Prehistoric and Primitive Art. Centro Camuno di Studi Preistorici, Capo di Ponte, Valcamonica, Italia.; Harrod, J.B., 1997, The Upper Paleolithic "Double Goddess": "Venus" figurines as sacred female transformation processes in the light of a decipherment of European Upper Paleolithic language. In J. Marler, ed.), From the realm of the ancestors: An anthology in honor of Marija Gimbutas, pp. 481-497. Knowledge, Ideas and Trends. Manchester, CT; Harrod, James B., 2004, ‘Deciphering Upper Paleolithic (European): Part 1. The Basic Graphematics—Summary of Discovery Procedures’, Language Origins Society Annual Meeting 1998.

contributions to the study of Upper Palaeolithic semiotic systems in Europe)

A rather spectacular case from the Lower Palaeolithic, with incipient crosshatching, is that of Fig. 57: an engraved forest elephant bone fragments from Bilzingsleben, Germany, c. 350 000 years old

I have been all the more prepared to take such a long perspective on human symbolic faculties very seriously, since a decade ago I worked intensively on what I believed (and to some extent still believe) to be evidence of a Neanderthaloid stellar map.⁷¹



Fig. 57. An engraved forest elephant bone fragments from Bilzingsleben, Germany, c. 350 000 years old.⁷²

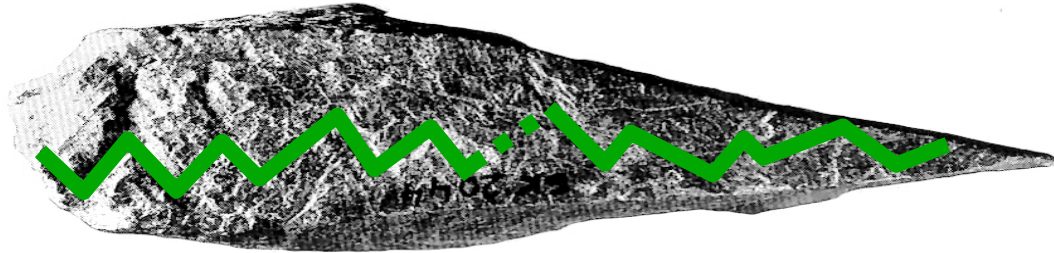


Fig. 58. Middle Palaeolithic, Neanderthaloid piece of bone from Bacho Kiro in Bulgaria

⁷¹ : van Binsbergen, Wim M.J., with the collaboration of Jean-Pierre Lacroix, in preparation, Cupmarks, stellar maps, and mankala board-games: An archaeoastronomical and Africanist excursion into Palaeolithic world-views; provisional version at: http://www.shikanda.net/ancient_models/gen3/starmaps_3_2000/cupmarks_0.html

⁷² Bednarik, Robert G., n.d., On the cognitive development of hominids', at: http://mc2.vicnet.net.au/home/cognit/shared_files/hominidcognition.pdf ; this is an updated version of a paper first published in 1990, in *Man and Environment*, Volume 15, Number 2, pp. 1-7; Figure I. .

In 1993, some of the world leaders in Neanderthal research⁷³ could still write in connection with Fig. 58:

‘Evidence for Middle Paleolithic art and symbolism is extremely rare. This [Neanderthaloid] piece of bone from Bacho Kiro in Bulgaria bears heavily incised lines, but it probably lacked any symbolic meaning’, p. 189

Against the background of the evidence brought together by researchers like Bednarik and Harrod, such an assertion ‘probably lacks’ all ground

Ultimately the Blombos pattern could not be convincingly interpreted in terms of lightning (although that initial interpretation lead to way to one that, for the time being, looks rather convincing). But perhaps our abortive analysis yet contains a bonus. The pointed shape of the Bacho Kiro artefact is very compatible with the idea of a lightning bolt; to support this point I have highlighted the artefact’s central, deep and wide zigzag central groove

- cf. the double-wedged Min hieroglyphic of Ancient Egypt, that also had a meteorological significance: it represented a meteorite
- the thunderbolts apparently wielded by Zeus, Baal and other Mediterranean gods
- and the thunder-and-lightning-related Indo-European hammer complex discussed above.

5. Conclusion

Apparently, despite the freedom of the human spirit to invent, fantasise and mythologise endlessly in all directions, it is not totally impossible (because even the most fertile imagination works within an established, in principle detectable, and in principle understandable, local cultural framework) to argue the meaning of prehistoric signs with a certain degree of reasoned intersubjective plausibility

But a large amount of comparative data need to be considered

Against the background of a theoretical framework

And against the critical examination of all alternative interpretations that theoretical framework would allow

Yet the outcome is never more than reasonably plausible, at best

Some of the lessons we have learned:

- (a) Without a broad underlying theory, no specific interpretation is possible
- (b) We need to be very conscious of the danger of temporal ethnocentrism, in other words anachronism, not only when imputing concepts to prehistoric actors, but

⁷³ Stringer, Chr. & C. Gamble, 1993, In Search of the Neanderthals. Solving the Puzzle of Human Origins. London: Thames and Hudson Ltd., London 1993. p.189 fig. 92.

also when doing so for logical procedures

- (c) Although in our interpretation of prehistoric iconographic meanings we are limited by our present-day experience and limited also to data available today, intersubjective interpretation of prehistoric iconography is in principle possible,
 - 1. not so much by assuming parallel invention on the basis of the common structure of the mind of Anatomically Modern Humans (an argument that ignores the very real and empirically detectable evolution that mind must have undergone as a result of the very cultural processes to which it has been subjected, e.g. articulate speech, agriculture, statehood, reading)
 - 2. but primarily because all Anatomically Modern Humans have been part of the same genetic, linguistic and cultural world history, in which their respective manifestations, however much unique and specific, yet occupy a systematic place, systematically interconnected with that of all others, and open to systematic theoretical and empirical investigation
- (d) Comparative ethnography, especially when fed by extensive live ethnographic experiences in the field, may be an irreplaceable source of interpretative inspiration
- (e) Initiatory ritual may provide a major, and rather reliable, repository for very ancient meanings
- (f) Yet the formulation of anything like a grammar of prehistoric meanings is still far off.

Since the purpose and summary of my argument have already been given in the beginning, I propose to end here.⁷⁴

⁷⁴ Much bibliography has already been presented in the footnotes, but more is to follow in the final version of this draft paper.