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Myths we (still) live by

Contribution to the public lecture series on myths,
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Introduction

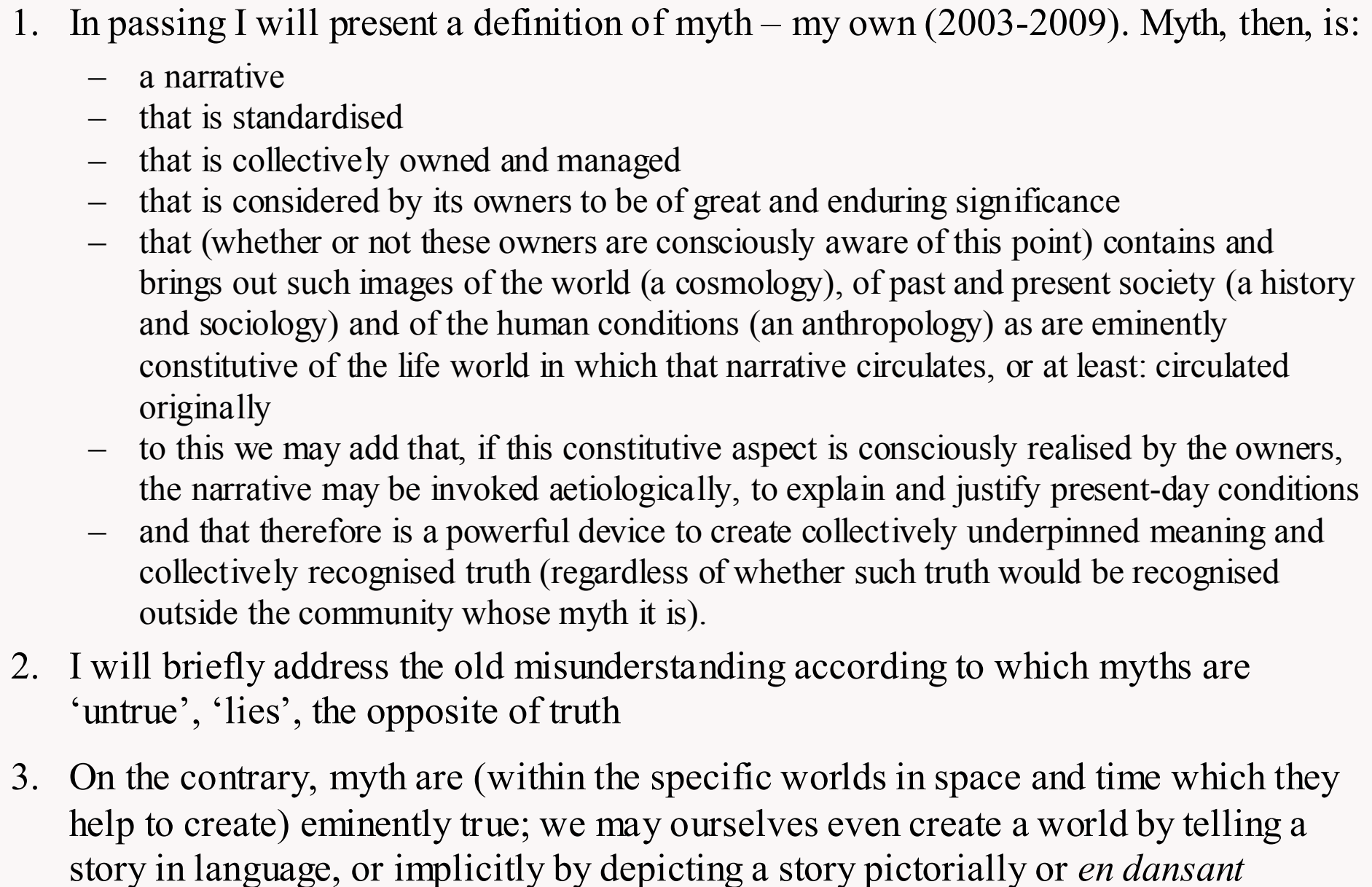
In two days' time I will depart for a month's fieldwork in Sri Lanka, and as a result the preparation time for this seminar was too short to prepare a full Dutch-language presentation. So I am mainly using my pre-existing English material, adapted to today's occasion.

The pictorial background to the slides represents a myth in its own right: the creation of the world by the Chinese creation gods Fu Xi 伏羲 and Nü Wa 女媧; their Chinese names are to be found in the rectangular shields centre left and right. Despite their snake-like legs (but cf. Erichthonios, first king of Athens! And the fish tail of Dagon, Ea and Oannes in Ancient Mesopotamia and adjacent regions) they are in the first place evocations of rational order, architects with drawing hook and plummer.

Mythical depictions may be found in nearly every culture, and our purpose today is not to consider them in general or in detail. I propose the following structure for my argument:



The West Asian fish-tailed god Oannes / Dagon / Ea in a 17th-c. CE representation (Kirscher)

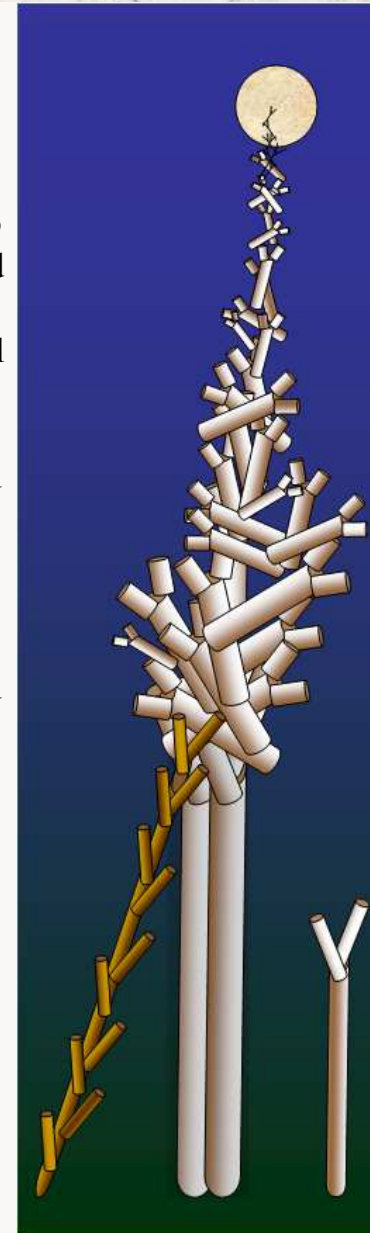
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1. In passing I will present a definition of myth – my own (2003-2009). Myth, then, is:
 - a narrative
 - that is standardised
 - that is collectively owned and managed
 - that is considered by its owners to be of great and enduring significance
 - that (whether or not these owners are consciously aware of this point) contains and brings out such images of the world (a cosmology), of past and present society (a history and sociology) and of the human conditions (an anthropology) as are eminently constitutive of the life world in which that narrative circulates, or at least: circulated originally
 - to this we may add that, if this constitutive aspect is consciously realised by the owners, the narrative may be invoked aetiologically, to explain and justify present-day conditions
 - and that therefore is a powerful device to create collectively underpinned meaning and collectively recognised truth (regardless of whether such truth would be recognised outside the community whose myth it is).
 2. I will briefly address the old misunderstanding according to which myths are ‘untrue’, ‘lies’, the opposite of truth
 3. On the contrary, myth are (within the specific worlds in space and time which they help to create) eminently true; we may ourselves even create a world by telling a story in language, or implicitly by depicting a story pictorially or *en dansant*

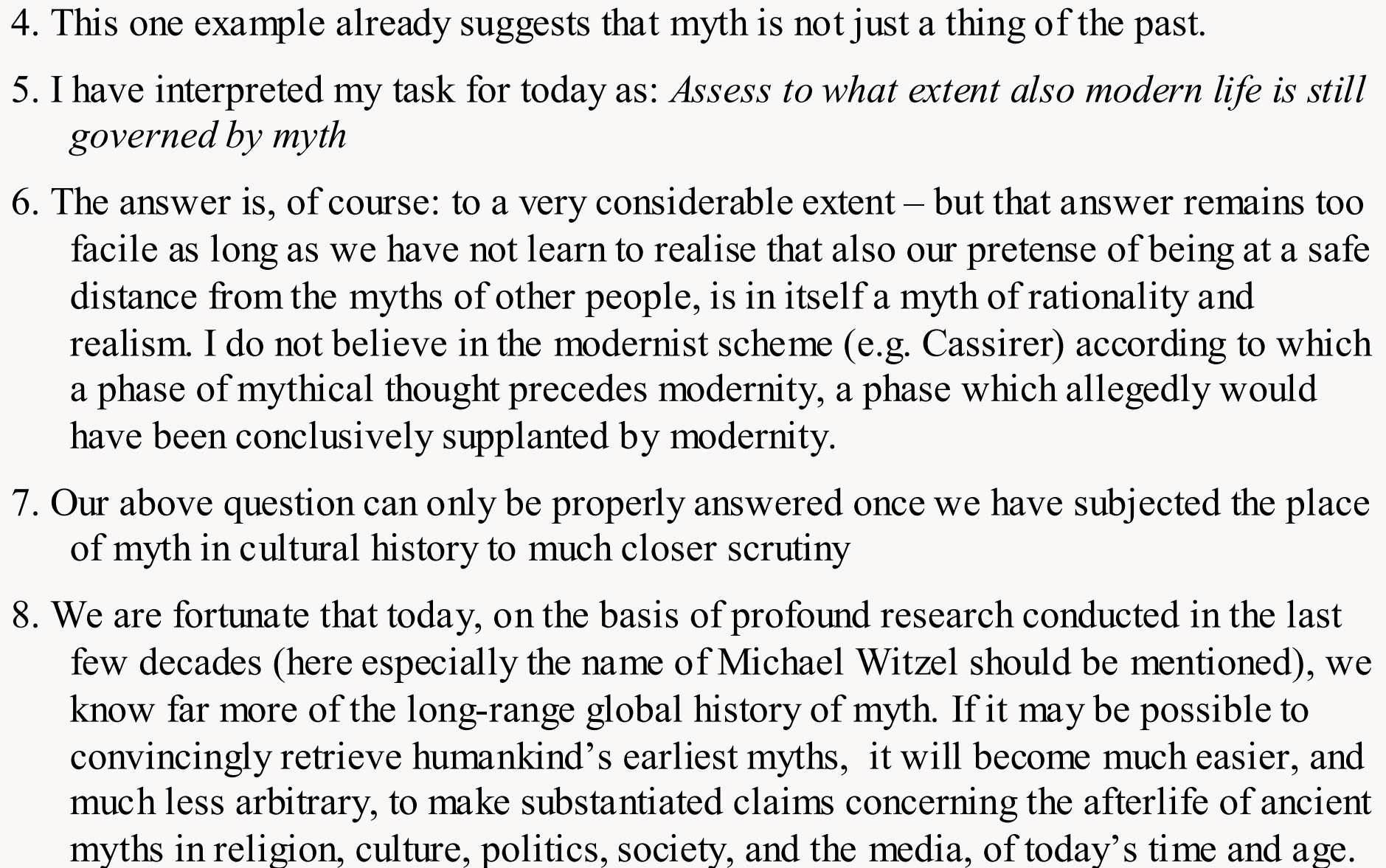
For a first orientation let us look at a myth I heard for the first time among the Nkoya people, in Zambia some 40 years ago, and which also surfaces in older publications – it has moreover worldwide parallels including *Genesis 11* (Tower of Babel):

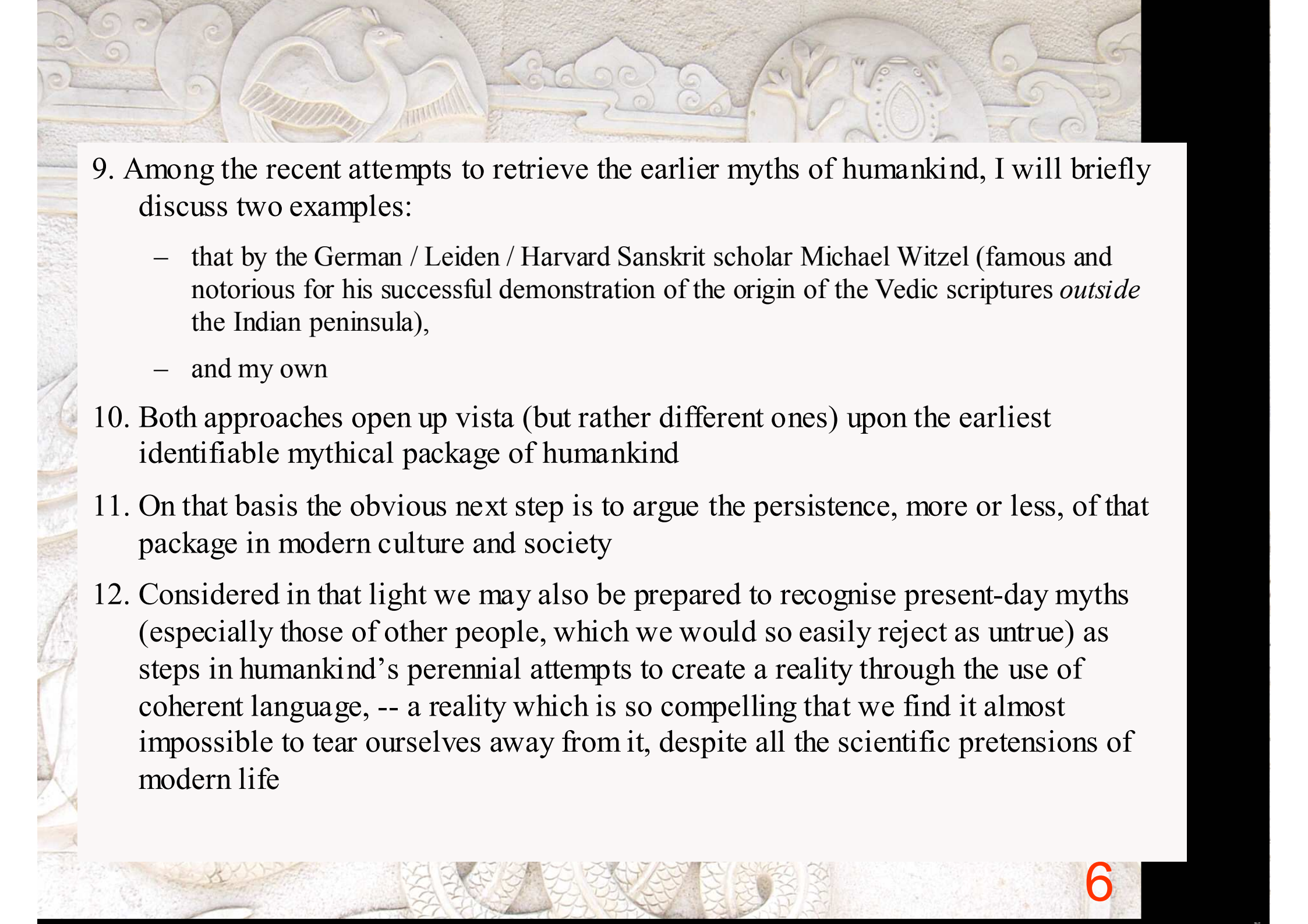


The moon as pendant The royal child (of unspecified gender) says to the king (by the name of Kapesh?): “I want to wear that white round thing in heaven as a pendant” (kings in South Central Africa still wear (see left), as pendants or stuck into their headgear, a white shell disc – *mpande* of *nyoro*: the bottom of the *Conus* shell from the Indian Ocean). The royal child does not take no for an answer. So the subjects build a tower out of forked branches. The tower is called Kapesh – which has no meaning in the regional languages, but means ‘capering gait’ in Hebrew and which in Buddhism is reminiscent, among other associations, of the name of an ancient king who had his palace on a very high rock in Sri Lanka). The tower reaches into heaven, but it collapses with great loss of life, and among the survivors the diversity of languages and of peoples manifests itself for the first time.”

Interpretation: Ever since the Late Palaeolithic (from c. 25 ka BP) the separation of Heaven and Earth has been the dominant mythical theme of Anatomically Modern Humans (AMH, emerged in Africa 200 ka BP). The construction of the tower is to overcome that separation. The moon is also the symbol of rebirth (Frazer 1918) and hence of life eternal – the Separation meant the introduction of death in the world. When the Separation cannot be undone, this leads to fragmentation of the human life world.



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4. This one example already suggests that myth is not just a thing of the past.
 5. I have interpreted my task for today as: *Assess to what extent also modern life is still governed by myth*
 6. The answer is, of course: to a very considerable extent – but that answer remains too facile as long as we have not learn to realise that also our pretense of being at a safe distance from the myths of other people, is in itself a myth of rationality and realism. I do not believe in the modernist scheme (e.g. Cassirer) according to which a phase of mythical thought precedes modernity, a phase which allegedly would have been conclusively supplanted by modernity.
 7. Our above question can only be properly answered once we have subjected the place of myth in cultural history to much closer scrutiny
 8. We are fortunate that today, on the basis of profound research conducted in the last few decades (here especially the name of Michael Witzel should be mentioned), we know far more of the long-range global history of myth. If it may be possible to convincingly retrieve humankind's earliest myths, it will become much easier, and much less arbitrary, to make substantiated claims concerning the afterlife of ancient myths in religion, culture, politics, society, and the media, of today's time and age.



9. Among the recent attempts to retrieve the earlier myths of humankind, I will briefly discuss two examples:

- that by the German / Leiden / Harvard Sanskrit scholar Michael Witzel (famous and notorious for his successful demonstration of the origin of the Vedic scriptures *outside* the Indian peninsula),
- and my own

10. Both approaches open up vista (but rather different ones) upon the earliest identifiable mythical package of humankind

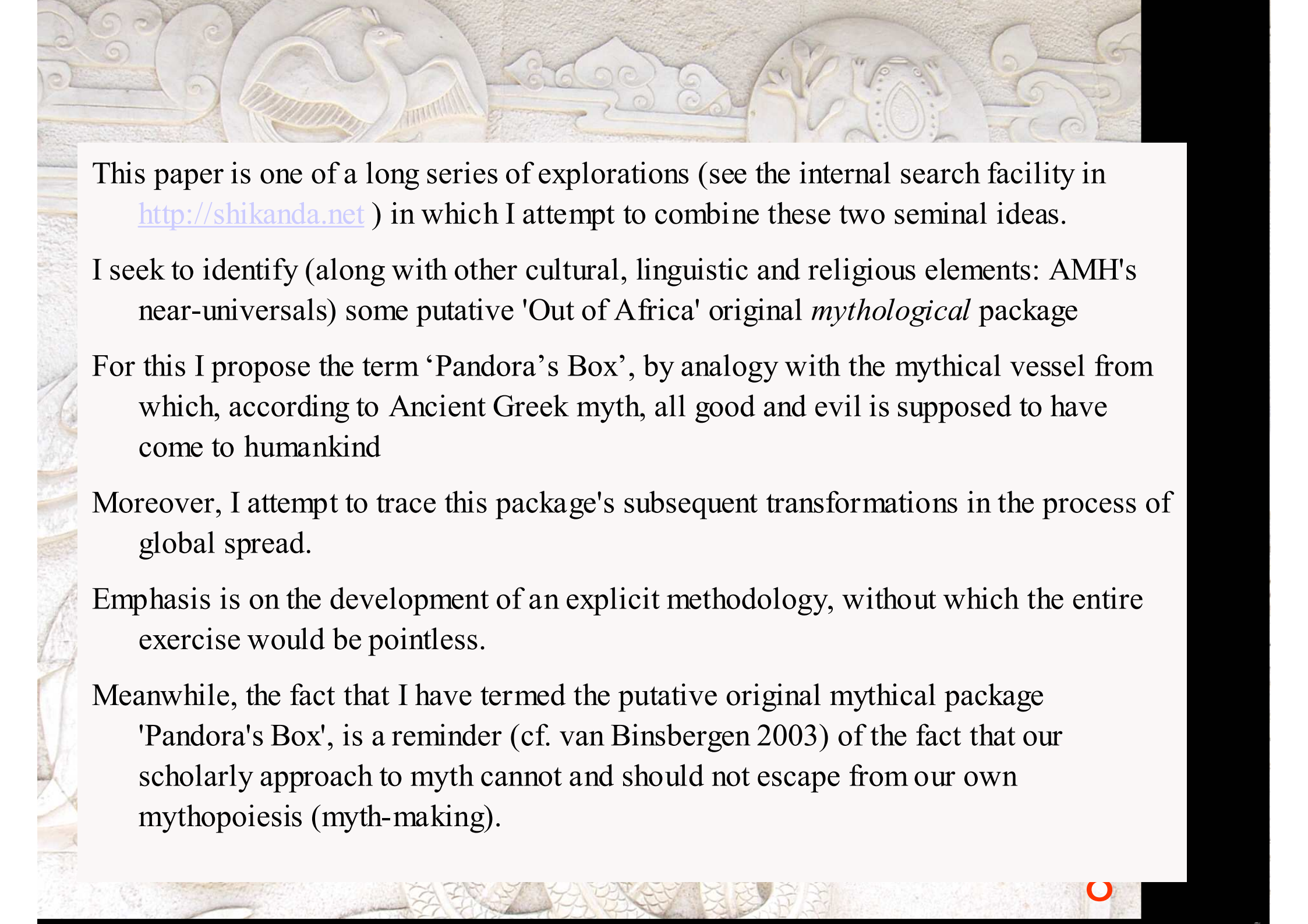
11. On that basis the obvious next step is to argue the persistence, more or less, of that package in modern culture and society

12. Considered in that light we may also be prepared to recognise present-day myths (especially those of other people, which we would so easily reject as untrue) as steps in humankind's perennial attempts to create a reality through the use of coherent language, -- a reality which is so compelling that we find it almost impossible to tear ourselves away from it, despite all the scientific pretensions of modern life



My argument departs from two seminal ideas:

1. In recent decades, advances in genetics have led to the fairly general adoption of an Out-of-Africa scenario for the origin and early spread of Anatomically Modern Humans (AMH). This scenario subsequently found initial confirmation by archaeology, and has meanwhile found considerable linguistic support in Fleming's and Starostin's *Borean Hypothesis.
2. According to Witzel (2001, 2010), comparative mythology may offer, in its own right, a key to humankind's remote cultural history, in a way complementary to genetics, linguistics, archaeology, and ethnography.



This paper is one of a long series of explorations (see the internal search facility in <http://shikanda.net>) in which I attempt to combine these two seminal ideas.

I seek to identify (along with other cultural, linguistic and religious elements: AMH's near-universals) some putative 'Out of Africa' original *mythological* package

For this I propose the term 'Pandora's Box', by analogy with the mythical vessel from which, according to Ancient Greek myth, all good and evil is supposed to have come to humankind

Moreover, I attempt to trace this package's subsequent transformations in the process of global spread.

Emphasis is on the development of an explicit methodology, without which the entire exercise would be pointless.

Meanwhile, the fact that I have termed the putative original mythical package 'Pandora's Box', is a reminder (cf. van Binsbergen 2003) of the fact that our scholarly approach to myth cannot and should not escape from our own mythopoiesis (myth-making).

Forms of aggregation

To begin with, formal analysis of an extensive corpus of cosmogonic myths attested in sub-Saharan Africa in historical times, suggests that much of their contents (over 200 distinct mythemes) may be regarded as the elaboration and transformation of (combinations of) about twenty different 'Narrative Complexes', each with its own specific minimum story line.

This reduction of the dazzling wealth of African cosmogonic myth to less than twenty Narrative Complexes indicates the aggregative element in my approach

A list of the Narrative Complexes (= NC) discernable in my specific African cosmogonic data set appears on the next slide.


Space does not permit to discuss these NC in any detail here; cf. van Binsbergen, n.d.

The basic orientation of my approach: each NC has a history, and I have been determined to identify that history, if at all possible.

Overview of a set of twenty cosmogonic NCs as constructed on the basis of my set of over two hundred individual mythemes in African cosmogonic myths attested in historical times

1. The separation of heaven and earth
2. The connection between heaven and earth after separation
3. What is in heaven?
4. The lightning bird (and the world egg)
5. The mantis
6. The ogre
7. From the mouth
8. The stones
9. The moon
10. The earth as primary

11. The primal waters and the flood
12. From under the tree
13. The cosmic / rainbow snake
14. Fundamental duality
15. The spider and feminine arts
16. Shamanism, bones
17. Spottedness and the leopard
18. Honey and honey-beer
19. The cosmogonic virgin and her son/lover
20. Contradictory messengers bring death



A further aggregative element is the claim that these various NCs are not just specific to sub-Saharan Africa in remote or historical times, but may also be found back in much (though probably not all) mythology outside Africa

Meanwhile my argument's purpose is *merely heuristic*, and not exhaustive: we cannot expect the stunning riches of world mythology to be *exhaustively* described by reference to what is, after all, both in subject matter (cosmogony) and provenance (sub-Saharan Africa) a rather limited corpus

Even so, we may accord a pivotal role to the African material:

Why (near-)universals in human culture?

We have ample evidence of an extensive corpus of (near-) universals attested for humankind in historical times (Brown 1991, 2000; Wiredu 1990, 1996; Gellner 1990), including universals in the linguistic field (Greenberg 1963; Décsy 1988; Hawkins 1988; Aitchison 1989) and the mythological field (Fontenrose 1980).

These universals have been explained by reference to, e.g.

1. The presumably universally uniform, innate structure of the (AMH's) human mind (e.g., if Flood myths would be truly universal – and we will see that they are certainly not! –, then we could have: 'Flood myths result from dreaming about having a full bladder, as all humans do' (Roheim))
2. The presumably converging effects of non-human reality, governed by presumably immutable natural laws (e.g. 'Flood myths result from the experience that – under pre-modern technology – no human life can be sustained under water for more than a few hours')
(numbered series continued)



3. The increasing convergence of human experience under proto-globalisation and globalisation

(e.g. ‘Flood myths have one origin in some historical catastrophe or some historical imagination, specific in time and space, and from there they have spread to other communities through pre-modern means of information and communication, including sailing ships, caravan trade, itinerant shamans and stories tellers, conquering armies, etc.’)



However, the ‘Out-of-Africa’ model offers a 4th partial explanation:

4. *AMH manifest (near-)universals because of common origin, not only as regards genetics (and on this point most specialists agree), but also as regards cultural universals.*

[It is prudent to confine ourselves to the claim of *near*-universals; for after all, even with a shared common origin, the traits present in that origin will only survive integrally and without exception to the present if there is *total retention*, i.e. if no traits die out in-between; and since we understand too little of the mechanisms of cultural, including mythological, retention over many thousands of years, any claim of total retention would amount to hybris – even more so than the present argument in itself already does...]

The ‘Out-of-Africa’ model is a rather convincing basis for a developmental model of world mythology:

- myths are carried by human communities which, as gene pools, are more or less traceable genetically
- therefore, if all AMH (i.e. the whole of present-day humankind) ultimately derive from a fairly limited gene pool that was situated in the African continent over 80 millennia (kiloyears, ka) ago,
- then we may presume that these ancestors of AMU held in common not just a set of genes but also a set of cultural including linguistic, social-organisational and mythological traits,
- which were taken ‘Out-of-Africa’ along with these genes,
- and like these genes were substantially transformed and innovated after leaving Africa.

The dynamics of NCs

Next, for each NC a putative origin is proposed in space and time – in each case prompted by a combination of considerations:

- the NC's empirical distribution in space and time, not only in texts (which only afford a time depth of 5 ka (kiloyears, millennia) maximum, but also iconographically in archaeological data, which go back much further
- any relevant outside material constraints open to scientific scrutiny, e.g. in astronomy, glaciology, modes of production analysis, and especially genetics;
- hermeneutics of a NC's contents, which may bring out implications that may contain time- and space specific clues.

1. My emerging aggregative model of global spread and transformation of world mythology is, in the first place, predicated on the geneticists' finding that AMH initially migrated east from Africa along the Indian Ocean coast to South East Asia, Australia and New Guinea.
2. Only subsequently, in a new migratory wave, were Asia and the other continents populated by AMH.
3. Subsequently, from c. 15,000 BP onwards, a westbound and southbound return migration from Asia 'Back-into-Africa' has been attested genetically.

Clues as to the situation of specific NCs in time and space, may be derived from triangulation with the Australian and New Guinean material; and from specific association between NCs and genetic types identified in time and space.

The dynamics of NCs

Let us have an extensive look at Peter Forster's 2004 state-of-the-art model of the Out-of-Africa spread of AMH, derived from the analysis of mitochondrial (mt) DNA – which, as is well known, is only inherited in the direct female line

Ultimately, our aim is to situate each NC in space and time. But before we can do that, we need to consider


- Background assumptions
- State-of-the-art reconstructions of the genetic history of AMH
- And such iconographic evidence as we may have of NCs, to allow us to peep beyond the mere 5 ka of documentary evidence.

Background assumptions

In the background, my approach is based on a number of assumptions that are highly contentious and whose critical testing, as well as the invitation to critical testing and subsequent improvement by others, are among the aims of my project. These assumptions include:

1. Myth may be defined as 'telling collectively managed stories about fundamental reality', in other words the fundamental human act of subjective world-making
2. Although AMH have, admittedly, an infinite capability for imaginative invention, hence – on the surface – an potentially infinite repertoire of myth, still that invention is constrained by a limited number of basic thought operations (e.g. distinction, juxtaposition, identity etc.) – which are constrained, at least in part, by the structure of the human mind and the structure of the non-human environment
3. Each NC encodes and facilitates one or more of these basic thought operations
4. Although myth can be told in music, dance, spatial layouts etc., its typical (more recent?) form is language-based
5. It is only partially true that myth expresses culture in language; rather, it is myth that *constitutes* language and culture in the first place (cf. Cassirer 1946, 1953f; Donald 1991) – it is, again, the central human act of subjective world-making

(numbered series continued)

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6. Therefore, myth may have been AMH's principal claim to adaptive advantage
 7. AMH are considered to have been the first type of humans possessing articulate language, representation, symbolism, art
 - Before the end of my argument we will have substantially qualified this assumption, by reference to non-AMH Neanderthaloids.
 - Some authors (e.g. Bednarik n.d./1990) claim evidence for human representations already in the Lower Palaeolithic, 0.3 Ma BP or older.

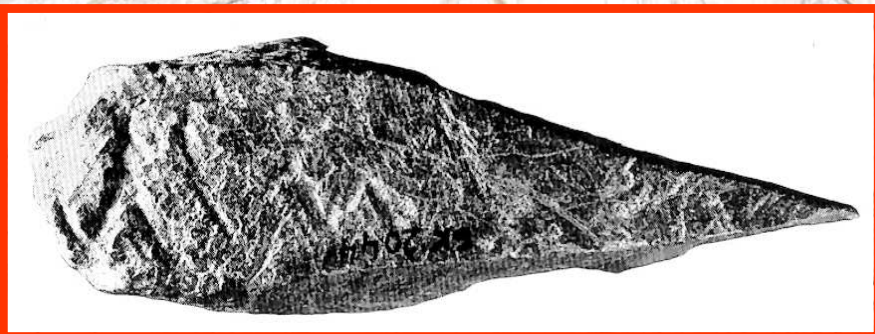


Evidence for human representations already in the Lower Palaeolithic, 0.3 Ma BP or older

engraved forest elephant bone fragment from Bilzingsleben, Germany, c. 350 ka BP (Bednarik n.d.)



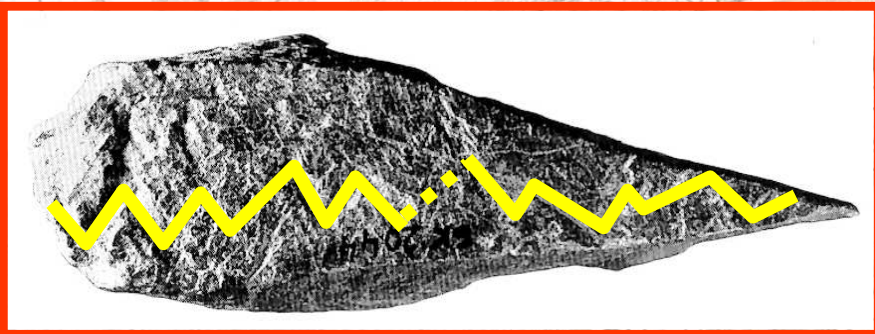
Middle Palaeolithic sculpture, Central Europe; NC 17 (Speckledness and the Leopard)



The jasperite manuport from Makapansgat Cave, S Africa, 2.5 to 3 Ma BP – oldest known palaeoart object in the world (Bednarik n.d.)



Stringer & Gamble 1993: 189 fig. 92: Middle Palaeolithic piece of bone from Bacho Kiro in Bulgaria, Europe: a potential expression of NC 4 (The Lightning Bird) (even though in a Neanderthaloid context, and despite Stringer & Gamble's denying it any meaning)

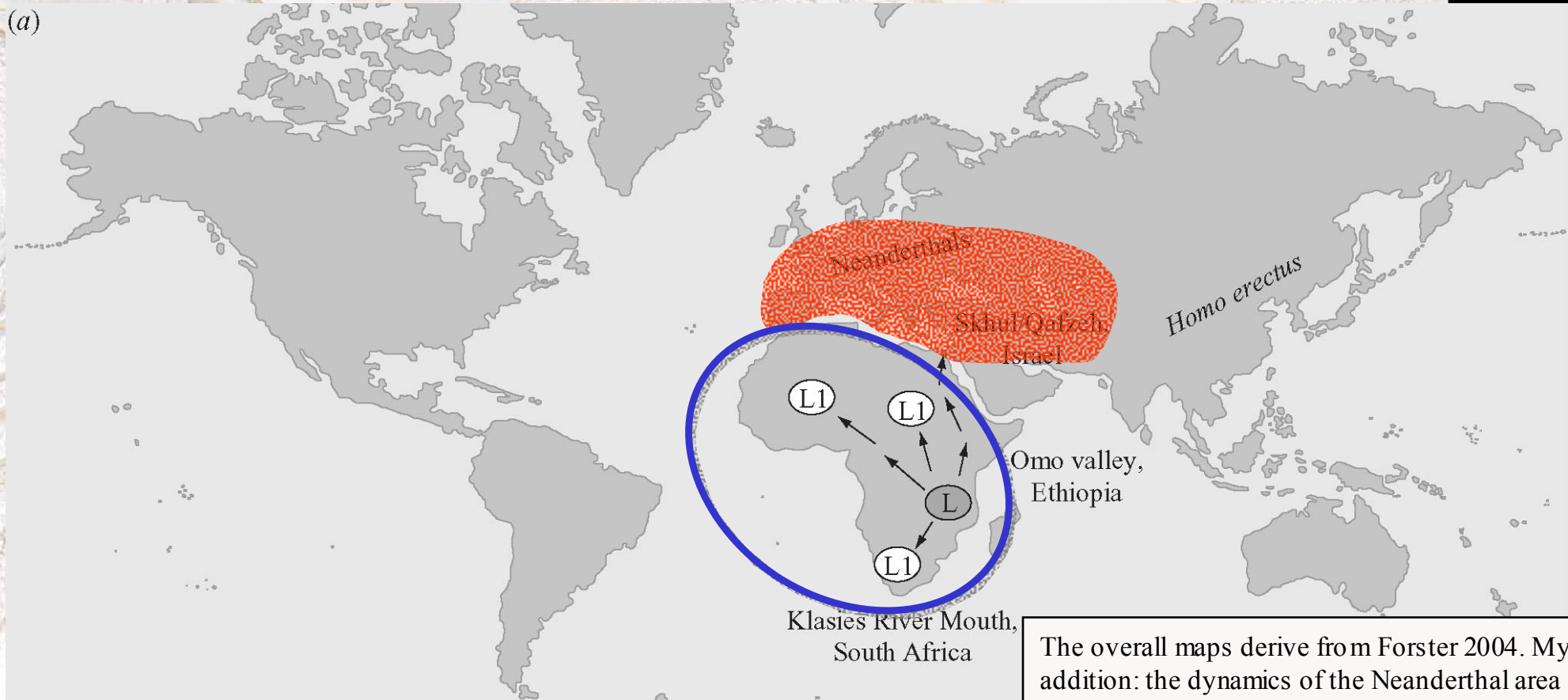





8. My proposed aggregative diachronic approach to world mythology therefore amounts to the reconstruction of the sequence of emergence and transformation of NCs in time and space (in reflection of AMH's increasingly complex and diversified modes of articulating reality through myth), along the paths which AMH (according to the reconstructions by genetics and archaeology) appear to have taken since their emergence in Eastern and/or Southern Africa 200 ka BP.
9. Central myths (cf. our NCs) constitute the ideological/ cosmological knowledge component of any mode of production. Therefore specific modes of production, and specific changes therein, are *among* the factors that power the demographic and mythological processes attending AMH before and after their exodus 'Out-of-Africa'.



The rise and spread of AMH: Evolution, expansion and migration of human mtDNA types across the world on the following seven maps (based on Forster 2004)

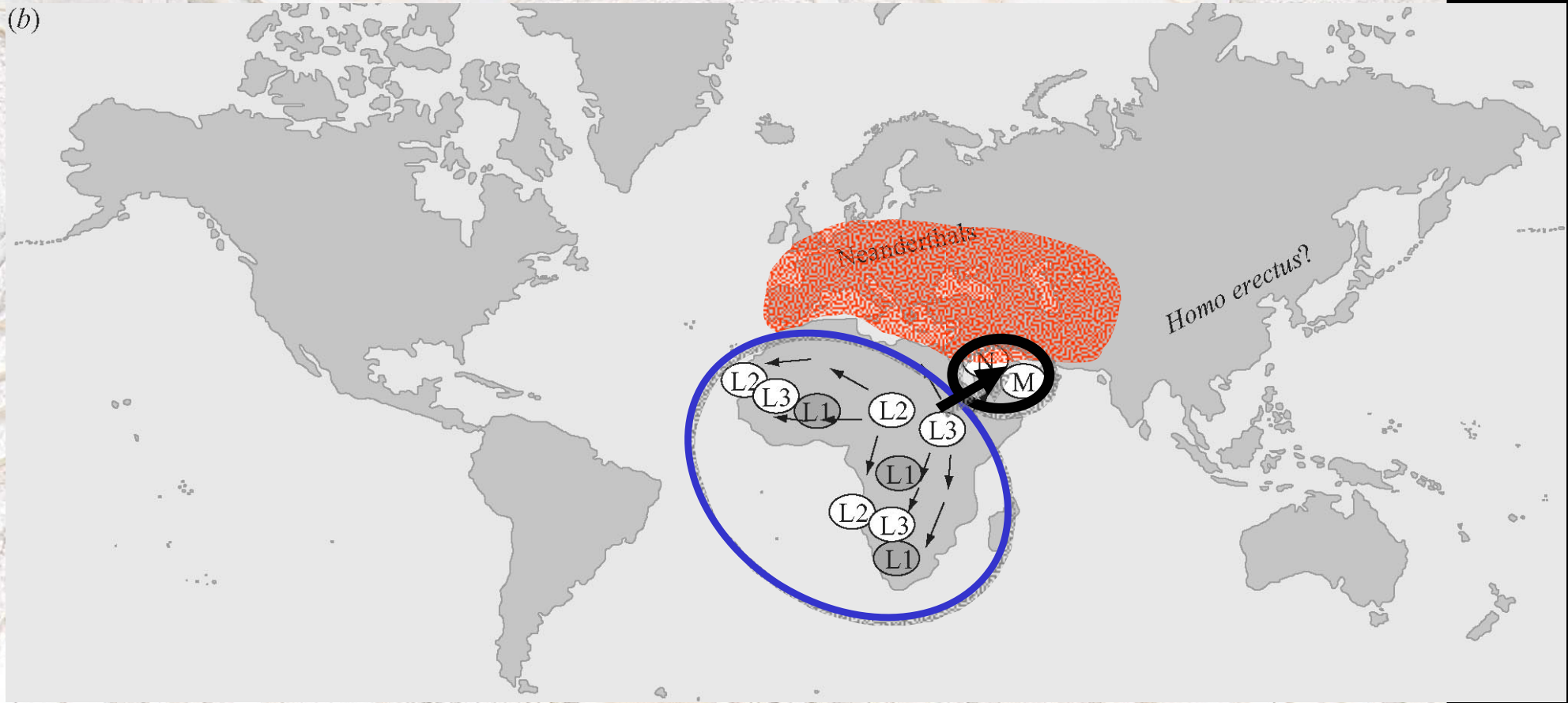


(a) 200-100 ka; AMH exclusively in Africa 

Neanderthals: 

In this period the mythological contents of Pandora's Box is established

The overall maps derive from Forster 2004. My addition: the dynamics of the Neanderthal area and its postulated influence on the expansion of AMH; the distinction between Routes A and B (with a time lag of 15 ka); singling out the Back-to-Africa – including circumlittoral – migration process; and highlighting the global significance of type B (slides below, in purple continuous or dotted lines).

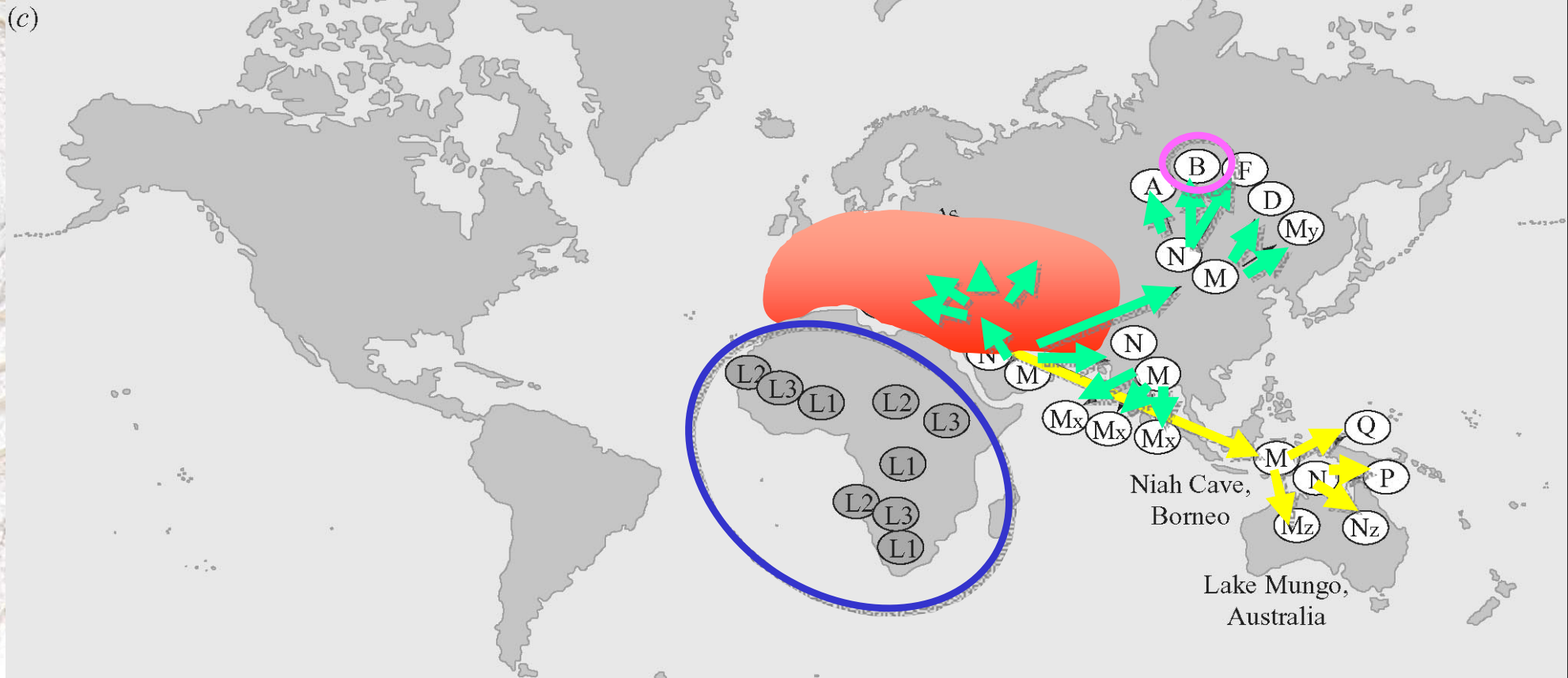


(b) 80-60 ka further percolation and diversification of AMH inside Africa

Neanderthals blocking access to most of West and Central Asia, and to Europe


yet we see AMH's first expansion into West Asia, 80 ka BP, with mtDNA types N and M:

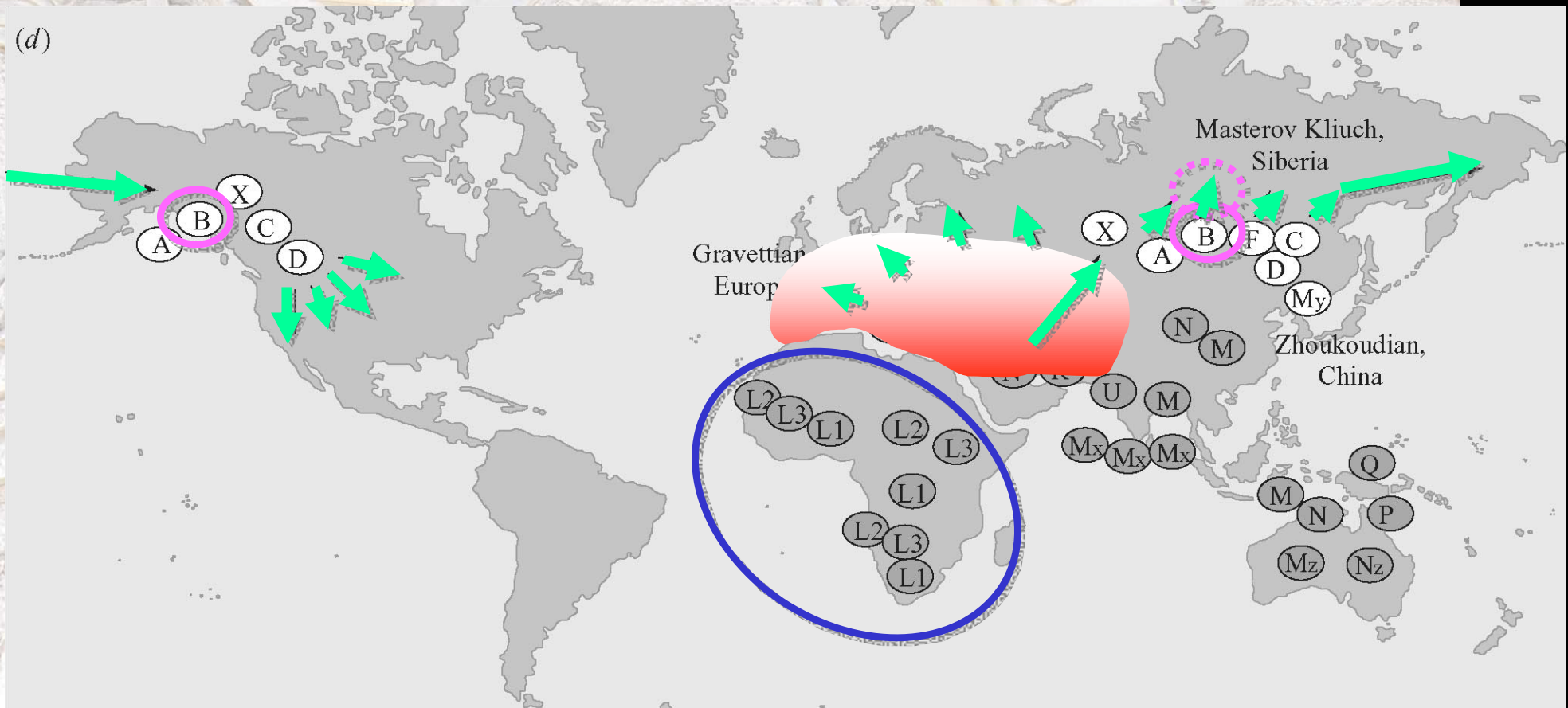




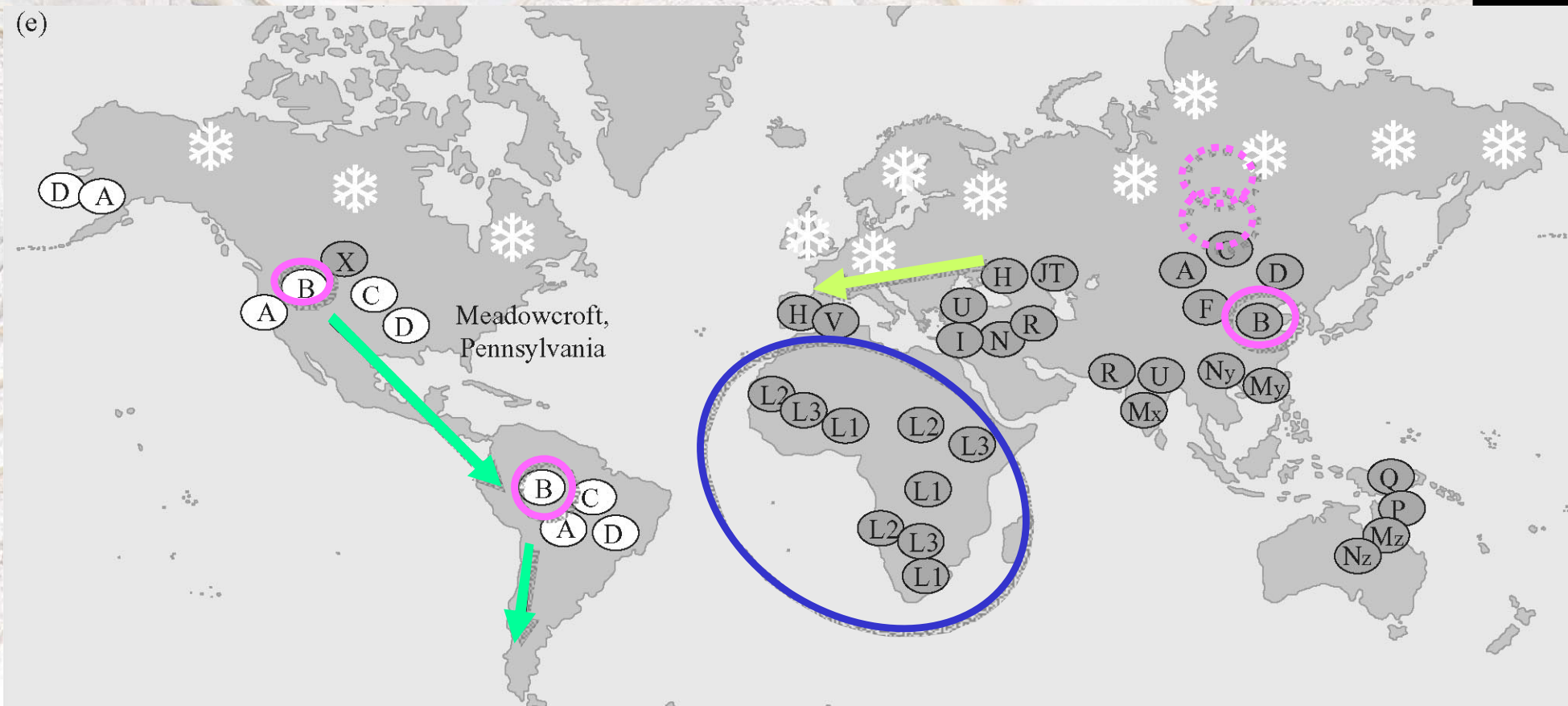
(c) 60-30 ka

 Route A, into Australia and New Guinea along the Indian Ocean coast

<45 ka: Neanderthals retreating:  Route B opens up: AMH beginning their expansion into Asia and Europe; (type B is singled out because it is to play an important role in the Back-to-Africa migration)

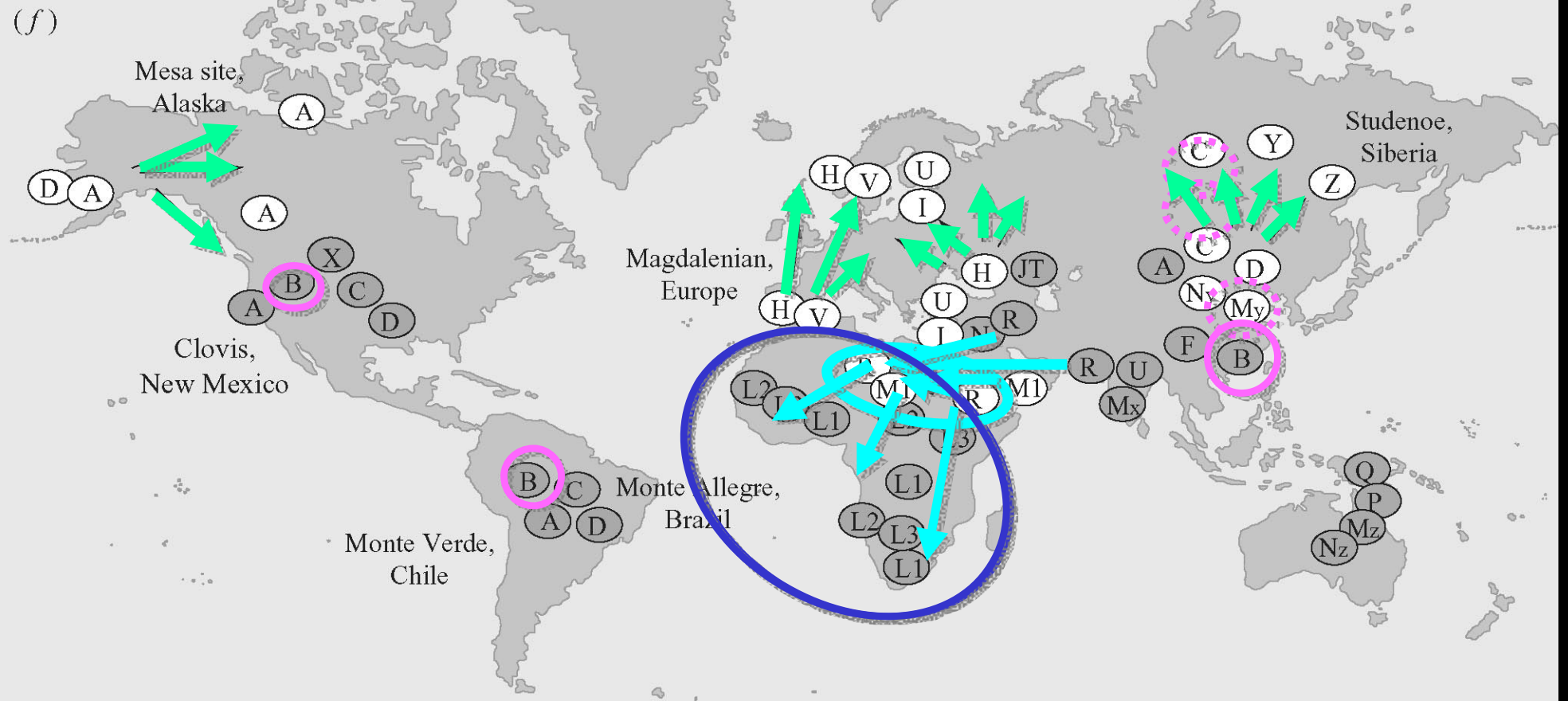


(d) 30-20 ka Neanderthals all but disappeared; last glaciation building up; AMH further expanding into Asia, the New World, and Europe; further diversification with the appearance of the mtDNA types X (Central N Asia) and C (NE Asia), which subsequently made a major contribution to the New World population, along with the earlier types A, B and D



(e) 20-15 ka Neanderthals have disappeared; 18 ka BP height of last glaciation


← installation of Basquoids in the Iberian peninsula, from the Caucasus



(f) 15-2 ka

Spread of types H, U, V into NW Europe; emergence of types Y and Z in NE Asia

← Back-into-Africa return migration involving types M1 and R

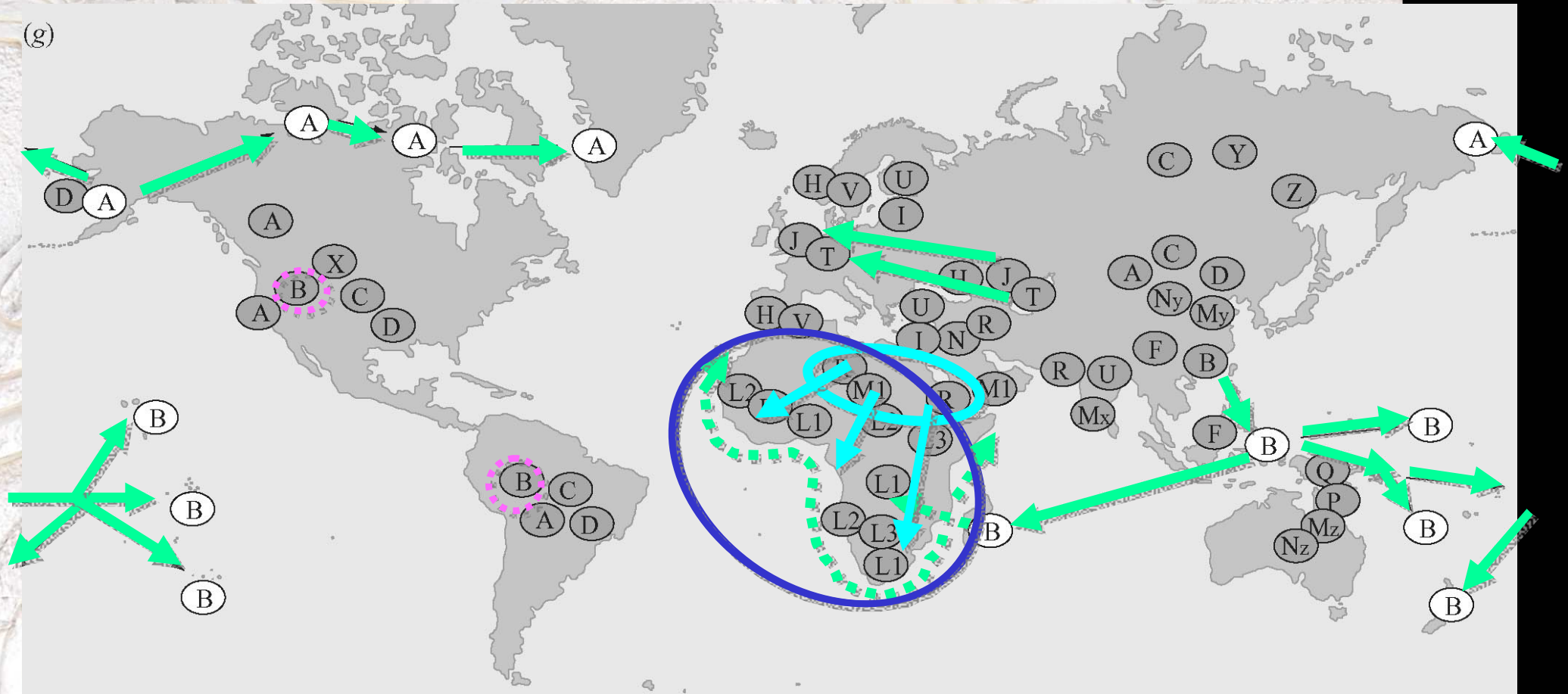


Even though the 'Back into Africa' migration seems to be one of the constituent factors of Africa's four language families today (Afro-Asiatic, Nilo-Saharan, Niger-Congo and Khoi-San), admittedly the relative contribution of Asian and palaeo-African elements towards the present-day linguistic pattern remains a puzzle.

The diagrams underplay the geographical scope and the relative impact of this 'Back into Africa' migration (e.g., there is no indication of its effect in the Southern half of the African continent, where Niger-Congo speakers are now dominant, and where all Khoi-San speakers are found, as tiny minorities

Yet do note the relative stability, from a genetic perspective, of the Southwestern half of the African continent – a likely basis for Frobenius' 'pristine Africa' (see below), despite massive linguistic, cultural and mythological change.

(g)



(g) less than 2 ka: Expansion into the northern arctic (type A); expansion of J/T from Caucasus to North Sea

Expansion into the Pacific Ocean and (as part of the Back-into-Africa migration) Indian Ocean (type B, originally emerged in NC Asia, then associated with China, then Indonesia)

(not in Forster): type B expands via Madagascar into East Africa and circumlittoral Africa in general

Iconographic evidence for NCs?

Initially, our only indication of such NCs as I discern, was in a corpus of African cosmogonic myths attested in historical times. From there to pre-Out-of-Africa times (80+ ka BP) is an enormous step. Documentary evidence only has a time depth of 5 ka. Do we have any other data to bridge the remaining 75ka?

Specialists (e.g. Leiden 2005 conference on Creation Myths and the Visual Arts) have complained that so little of the African cosmogonic mythical material seems to be reflected in African visual arts

They are mistaken, lacking the heuristic device to open up such cosmogonic mythical clues as the African visual arts material contains

A re-examination of the extensive corpus of African visual art in the light of my NCs would reveal that many items of African visual art could be interpreted as attestations of NCs, or a combination

On the following slides I will offer a number of concrete examples of this claim

- The Separation and subsequent re-connection of Heaven and Earth (one of the most common African cosmogonic themes, and one typically associated with the Back-into-Africa return migration from c. 20,000 BP), exemplified in prehistoric rock art from Southern Africa
- the Lightning Bird, part of the original pre-Out-of-Africa package, and to my mind a candidate as possible referent of the geometric pattern displayed by the Blombos block, South Africa, 70,000 BP (Henshilwood et al. 2001; van Binsbergen 2011)



Incidentally, the meta-African distribution of the NCs suggests also meta-African distributions of these Visual Arts applications of cosmogonic mythical themes;

e.g., the Connection between Heaven and Earth (ladder, staircase, cosmic tree, sun beam, moon beam, birds, rain, etc.) is a recurrent theme in European, art history, as it is, e.g., in Ancient Egyptian and Indian art);

This stands to reason because this theme belongs to the Extended Fertile Crescent of the Neolithic, ranging from the fertile Sahara to the Indus, ultimately with extension into China

The latter, through a cultural diffusion whose human agents have remained below the resolution threshold of our data on mtDNA types

However, there are myriad other genetic markers

Yet we had better face the truth that not all stps in the history of world mythology can be traced genetically

Especially not the closer we come to the present, with its reality of (post-Neolithic) genetic globalisation.

First example: African rock art as attestation of NCs: 2: Separation of Heaven and Earth, and their subsequent Connection

A rock painting from Marondera (Marandellas), Zimbabwe, showing a vertical line dominating the entire figure, thus looking rather similar to the Cueva de la Araña painting on the next slide.

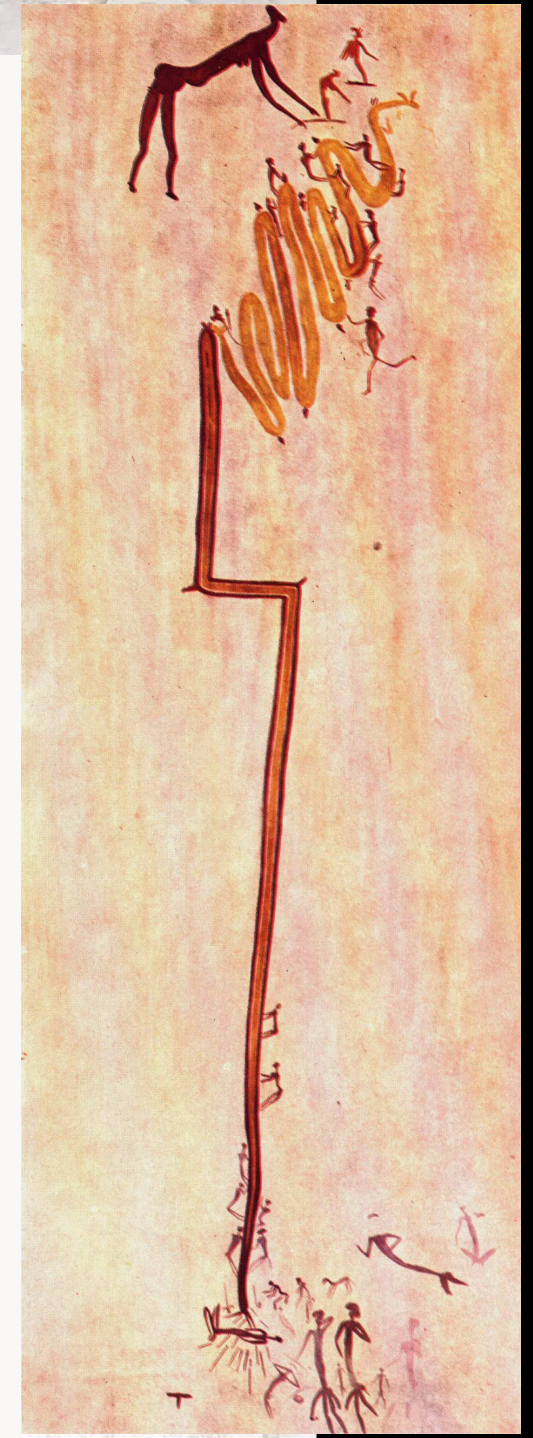
This image has been explained (Lommel 1976: 149) as a rain ceremony, where a virgin princess is buried alive as sacrifice at the foot of a tree (the vertical line however looks very little like a tree – but it is certainly some kind of connection between heaven and earth), people ascending, and a large 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. 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) at a few thousand years at least, this reading may be totally inappropriate, the iconological equivalent of a popular etymology.

The identical figure appears (black and white, and schematised) in Garlake 1995: 131, Fig. 157, with discussion p. 130f), where the interpretation is exclusively in terms of trance of the reclining bottom figure – ladder and snake are relegated to mere representations of the trance state. Much as such an emphasis on altered states of consciousness is favoured in current Southern African rock art studies (esp. the work of Lewis-Williams), any one-factor explanation must be distrusted as one-sided, especially if local practices and myths (which after all have been a great inspiration to Lewis-Williams) suggest additional perspectives, as above.

Even if the trance interpretation were in principle correct in the sense that it tallies with the participants' own conscious and explicit interpretation (of which we cannot be sure, considering the age of these paintings and their illiterate cultural environment)

Then the images of trance would still follow a particular cosmology, e.g. one in terms of ascent to heaven or descent into the underworld, and of the existence of anthropomorphic and snake-like beings in heaven.



A string figure in historical times, the Blombos block, and the Janmart plaque, as possible expressions of NC 4: The Lightning Bird

Left: red ochre block discovered in 2002 in Blombos Cave, South Africa, among the older attested human art, c. 70 ka BP; considering the colour and the pattern, this may well be a representation of NC 4, the Lightning Bird – one of only three NCs I have reconstructed to have been part of the original Out-of-Africa package (source: d'Errico et al. 2003).

Middle: the identical pattern displayed in one of several sacred string figures (termed 'Jacob's Ladder' in the comparative literature) managed and transmitted in the Nkoya female puberty rites, Kaoma district, Zambia, 1978. 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. The women managing this knowledge did not explain or name the figures to me, so the interpretation in terms of the lightning bird is my own.

Right: the same string figure produced by an Aboriginal girl in present-day Australia (if the Lightning Bird NR 4 was in Pandora's Box, as I claim, it would have been transmitted to Australia along Route A

Although the specific interpretation in terms of a particular NC remains conjectural, finds like this make it plausible that initiation rites served as a context to preserve the mythical contents of the Out-of-Africa package.

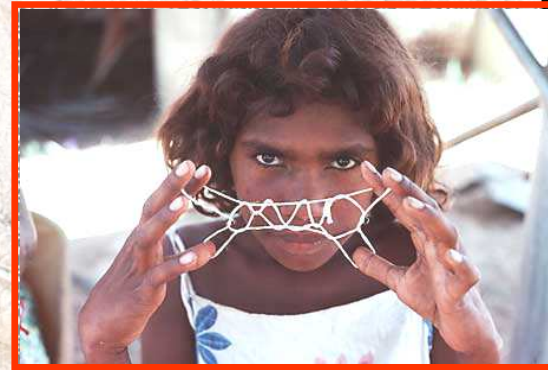
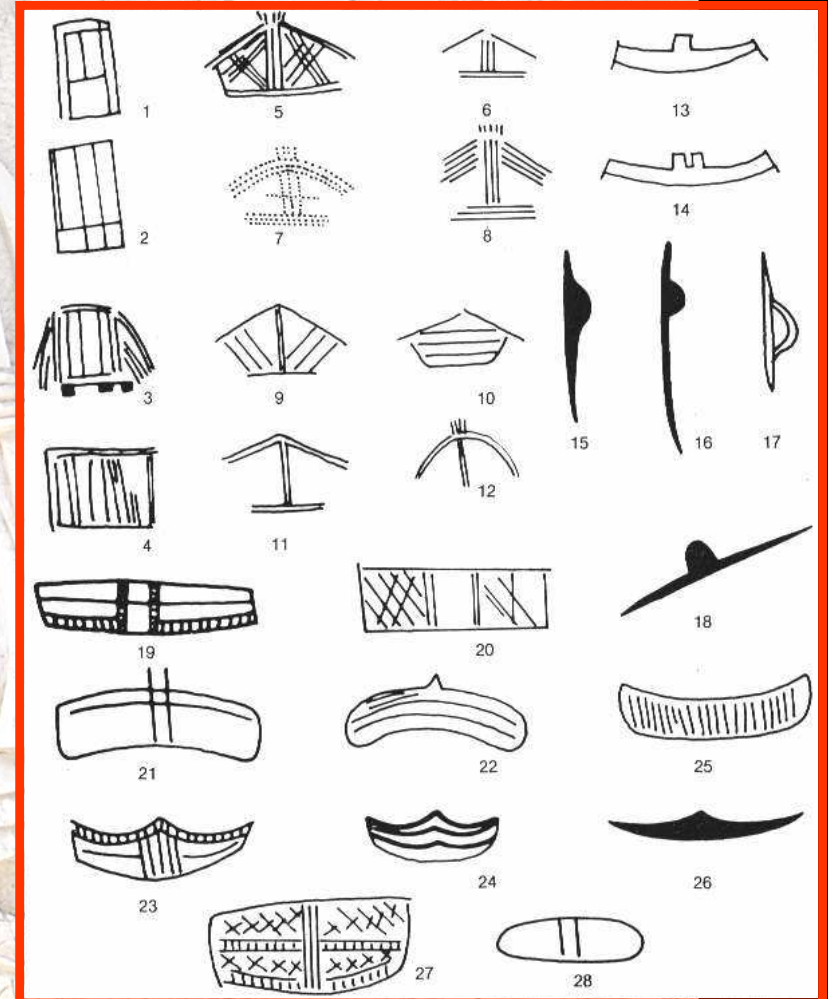


Image: <http://cogweb.ucla.edu/ep/Art/BlombosOchre.jpg>

Left: A Middle Palaeolithic schist stone plaque found in Angola (Janmart 1946: 56); the tectiforme signs are reminiscent of the repertoire of Franco-Cantabrian Upper Palaeolithic art (Leroi-Gourhan, *right*); the zigzag lines may indicate the Lightning Bird (although Janmart offers different, anthropomorphic interpretations)





Further corroboration from Australia?

If the mythological contents of Pandora's Box were transferred to Australia along Route A, and

if the above interpretation of the 'Jacob's Ladder' motif in terms of the Lightning Bird is correct

We would expect traces (in more or less transformed form) of the same connotations to be found in Australia

This appears to be the case, as the following slide indicates

- Not only because of the continuity in string figures
- But also because of the symbolism attached to the 'Jacob's Ladder' pattern in the Australian context in historical times.

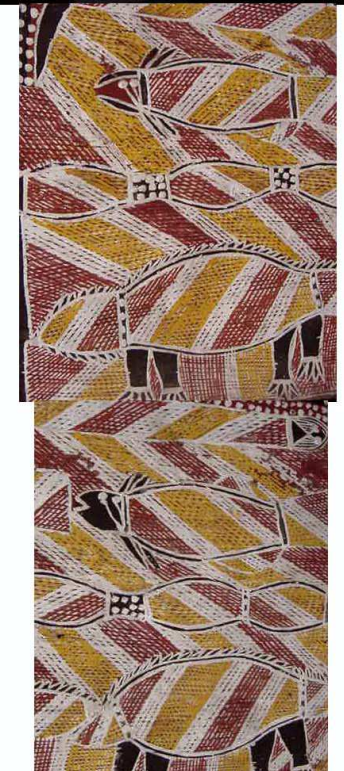


From an Australian perspective (Venbrux; cf. Chaloupka 1993) the Jacob's Ladder pattern would have an obvious interpretation, in the conventionalised *yam* pattern – evoking the creepers of the yam plant (genus *Dioscorea*). This is claimed to have been an art motif in Australia since the Middle Palaeolithic (60,000 BP), i.e. from the arrival of Anatomically Modern Humans there.

This offers interesting possibilities in terms of the wider cosmogonic mythical repertoire (cosmic tree/ world axis/ perch of the cosmogonic Lightning Bird), 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 Venbrux's words)

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

In Africa, the lightning bird is often fowl-like. So there are several indications that the lightning bird association also adheres to the motif in its latterday Australian usage.



Top: Australian Aboriginal bark painting: *Fish; yam; echidnas*. Natural earth pigments on euacalyptus bark. Artist unknown; source:

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

Bottom: *Dioscorea villosa*, photographed in New Zealand; source:

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



Dioscorea villosa
Wild Yam
PHOTO: Mimi Kamp

Further iconographic suggestions of ancient NCs

Even though, inevitably, we lack documentary evidence for the presence of our NCs for nearly the entire span of AMH's history, either inside or outside Africa, there is a wealth of archaeological and iconographic material, e.g. in rock art, that could be read as attestations. I will only give a few examples

1. Shamanism (Nr-Mr tablet, Ancient Egypt Dyn. 0; 5 ka BP); NC 16 ('Shamanism, bones')
2. Tassili, Sahara, 7 ka BP: NC 17 ('Speckledness, the Leopard') or 2 (Luwe, personification of the celestial pole, cf. von Sicard 1968 and van Binsbergen on leopard-skin symbolism)
3. Shrine for Heitsi-Eibib (mantis-shaped culture hero), Namibia, undated: NC 8 ('The Stones'), and 5 ('The Mantis').



4. NR 5 ('The Mantis'), undated rock art, Chad
5. NR 17 ('Speckledness and The leopard'), Apollo 11 Cave, Namibia, 25 ka BP
6. NC 2 ('The connection between Heaven and Earth': Mwendanjangula, personification of the celestial pole, a manifestation of Luwe cf. von Sicard 1968f), Angola, early modern.

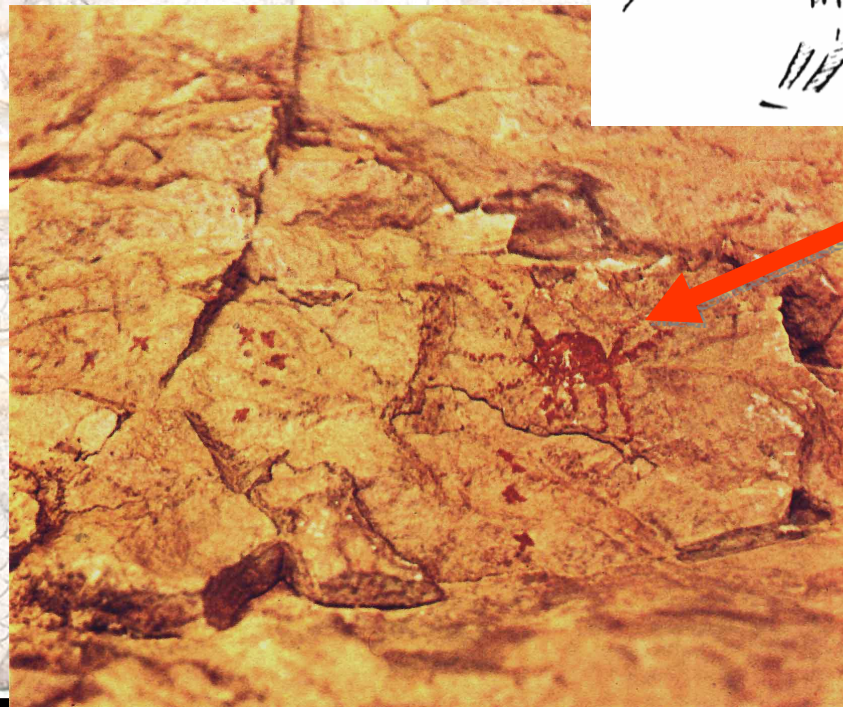
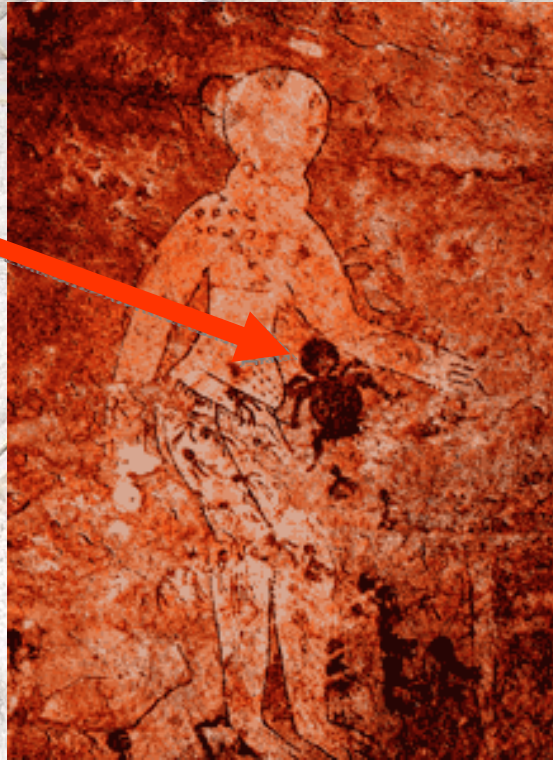


7. NC 15 ('The spider and the feminine arts'), Tassili, Archaic period, 7 ka BP, from:

<http://creativity.bgsu.edu/africanArt/part1/xtassili/T2.html>

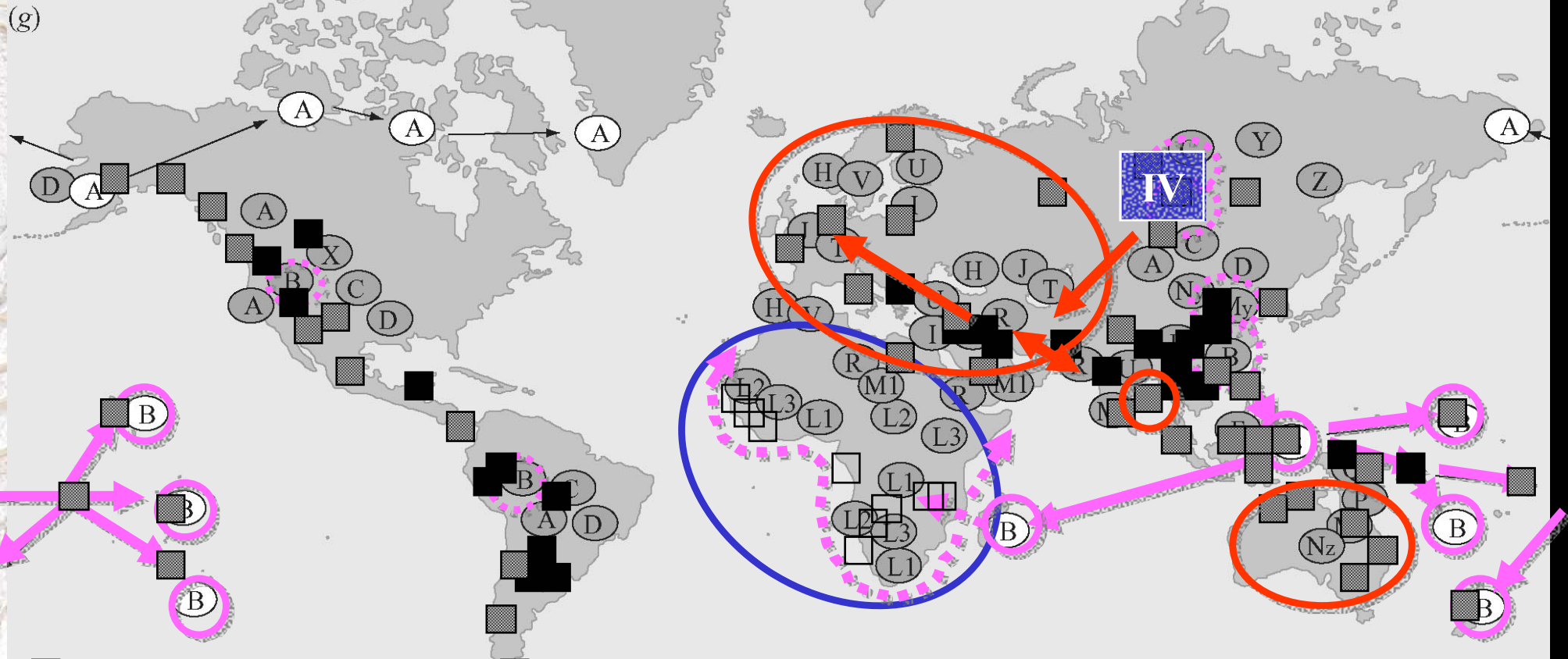
8. NC 15 ('The spider and the feminine arts'), Iberian peninsula, Mesolithic (15 ka BP)

9. NC 17 ('Speckledness and the leopard'); and 16 ('Shamanism, the bones'), Tassili, c. 6 ka BP.



Narrative complex 11 (the Flood), and mtDNA type B (out of type N); type B emerged in Central North Asia, c. 35 ka BP

← Expansion mtDNA type B ← (not in Forster): type B expands via Madagascar into East Africa and circumlittoral Africa in general



■ Flood myth attested Hastings 1909f: Index volume, s.v. 'Deluge')

□ Flood myth attested in Africa (van Binsbergen, in press)

other, more recent attestations: ■

original CITI: ■

○ regions where hypothetical association Flood myth/mtDNA type B is not borne out:
 (1) Europe and Ancient Near East, (2a) Andaman Isl., and (2b) Australia.



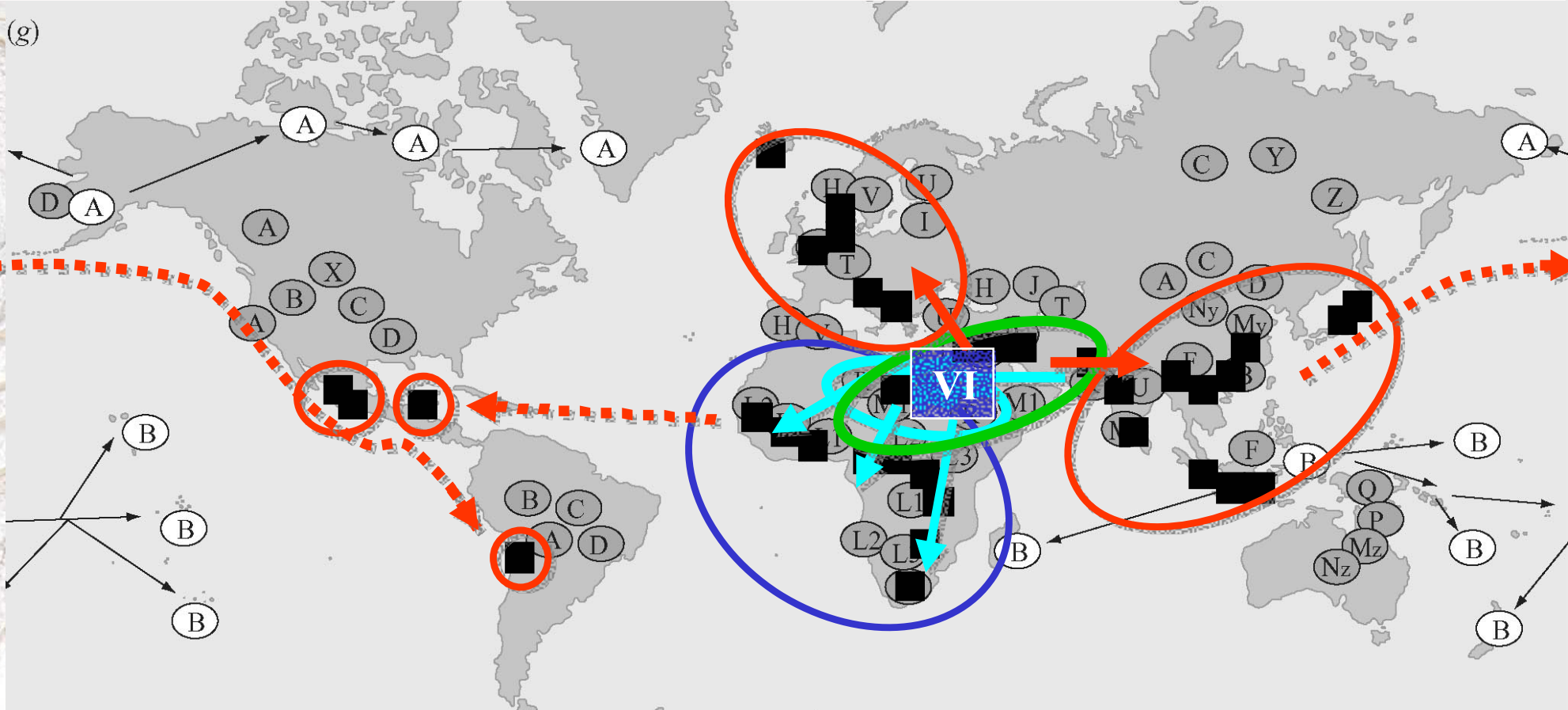
These exceptions may be explained

1. By secondary diffusion → (from NC Asia to ANE – Noah often given NC Asian connotations –, there greatly elaborated, then to Europe; to the Indo-Iranian domain either before or after the ANE; shamanism as vehicle of spread
2. (less convincingly) we may reject the hypothesis and suggest that the Flood myth was already part of Pandora's Box.

So we are reminded as we come nearer to the present, the diffusion of myths may separate from that of detectable genetic markers.

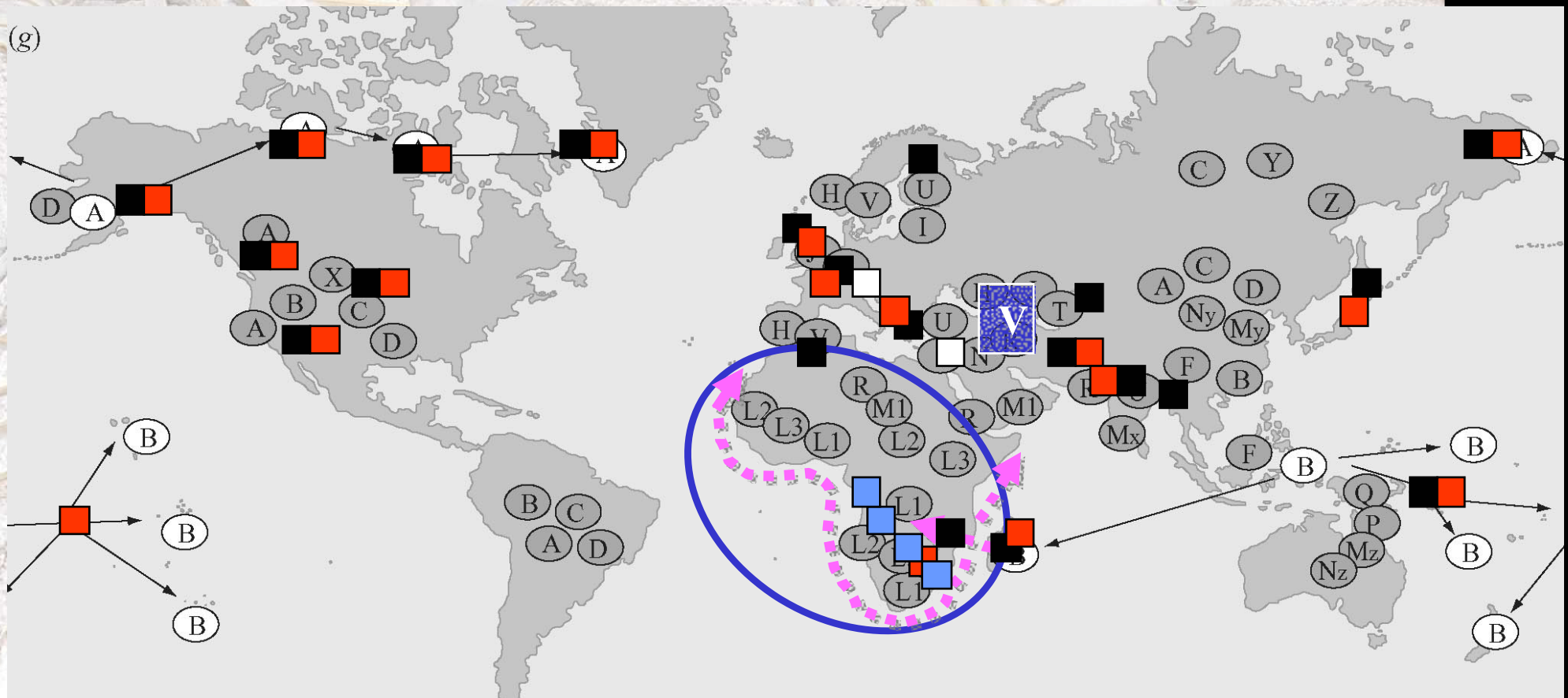
The association of NC 2 ('The Connection of Heaven and Earth') with mtDNA types R and M1

Note that this NC overlaps with that of the Spider (see below), who may be credited with creating the Connection of Heaven and Earth – but without the shamanic, subsequently royal, elaboration



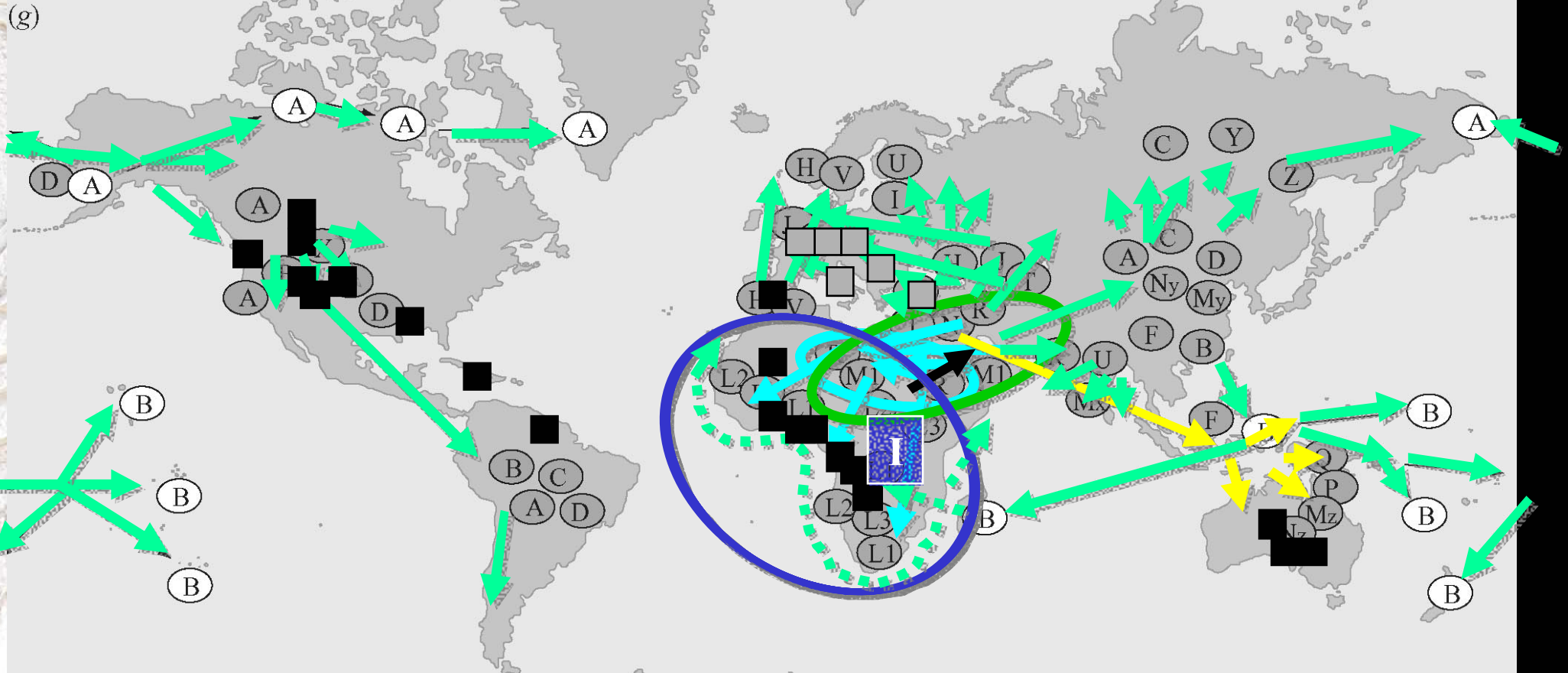
- Attestation of NC 2 ('The Connection between Heaven and Earth')
- ➡ Back-into-Africa movement, from 15 ka BP onwards: mtDNA types R and M1
- Extended proto-Neolithic Fertile Crescent (Sahara-Indus); it is here that NC 2 emerged
- ➡ Secondary cultural diffusion of NC 2, not accompanied by *conspicuous, massive* gene flow of mtDNA types R and M1. In S Asia and in Europe (but not, of course, in E and SE Asia and in the New World) this diffusion is associated with the expansion of Indo-European

Escape from the ogre (NC 6): there is not always an obvious link between NC and mtDNA type



- attestation of the 'ogre is outwitted' variant of this NC (Hastings 1909: 208f)
- attestation of the 'escape from ogre spouse' variant of this NC (ibid.)
- attestation of the 'intended victim replaced by an animal' variant of this NC (ibid.)
- African cosmogonic database attestations of ogre/rescue motif

The association of NC 15 ('The Spider [and Feminine Arts]') with mtDNA type L (L1, L2, L3): Pandora's Box



■ Attestation of NC 15 ('The Spider and Feminine Arts')

■ the Spider prominent in the domain of magic, omens and taboos, but without articulate mythical elaboration any more

→ Back-into-Africa movement, from 15 ka BP onwards: mtDNA types R and M1

○ Extended proto-Neolithic Fertile Crescent (Sahara-Indus); it is here that NC 15 acquired its redefinition in terms of the feminine arts

Once more we notice how Native Americans have retained very ancient traits, of Pandora's Box and Route A, across 80 ka

Tentative situation (with summary argumentation) of NCs in time and space, and with genetic association

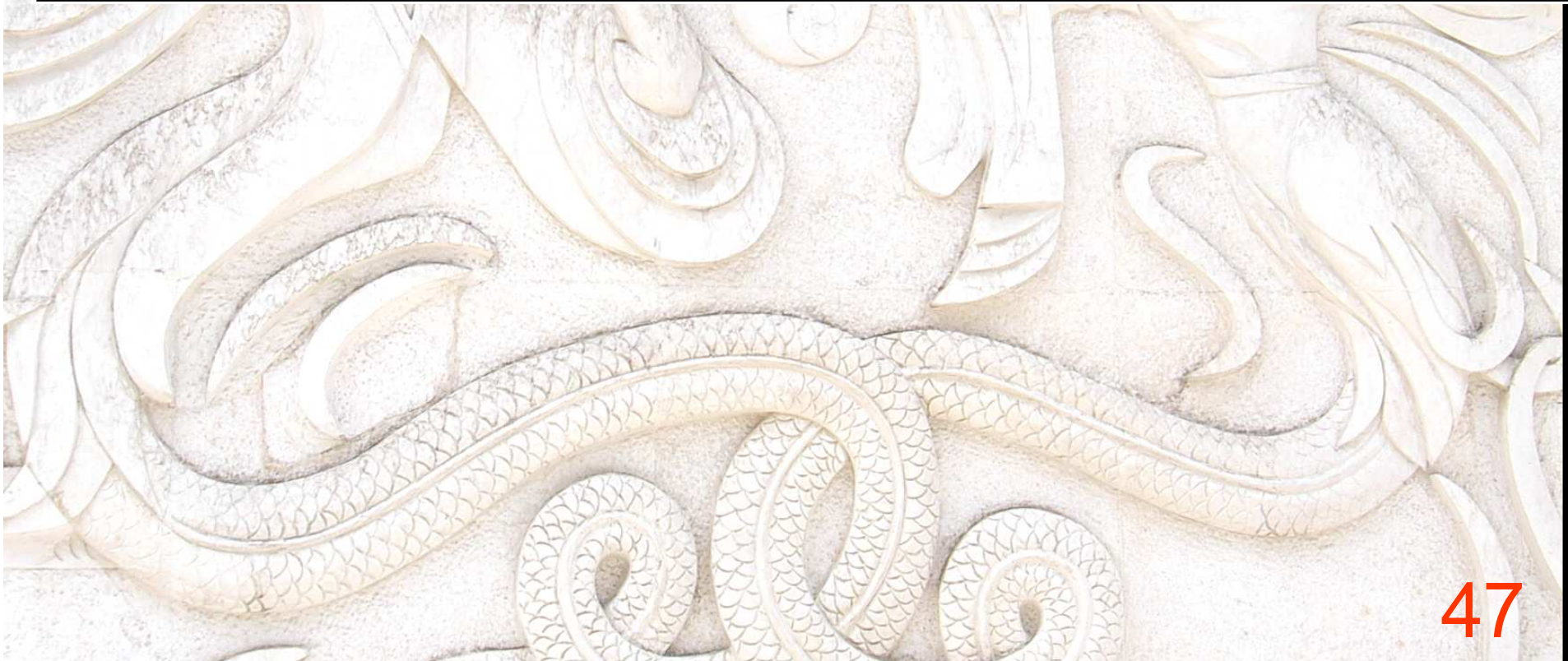
Narrative Complex and primary context	Discussion, including arguments for a <i>highly provisional and tentative</i> situation in space and time; each cell would require an article- or book length argument, and the specific (often deliberately ambiguous) proposals below are merely meant as heuristic and invitations to specific criticism	tentatively proposed origin		associated mtDNA type
		in time	in space	
1. The separation of heaven and earth	Is largely identical to 2, and presupposes 10. <i>Not separately needed</i>	– (see 2)	– (see 2)	
2. The connection between heaven and earth after separation Extended Fertile Crescent	This Narrative Complex is largely a recent transformation of the Spider Complex (15) in its most ancient form, i.e. without the proto-Neolithic elaboration in terms of the feminine arts. Largely identical to 14, developing from 19; shamanic elements (celestial axis, along which the specialist travels); upward gaze; transcendentalism, which distinguishes this Narrative Complex from the immanentism of 4. There are connotations of (the origin of) agriculture, animal husbandry, kingship and perhaps early metallurgy. The celestial axis, which is a central theme in this Narrative Complex, may derive from 12, but mediated through more recent, shamanic elements (16) – which have enshrined astronomical knowledge for which the Upper Palaeolithic fire-bore, and the Neolithic churn or mill with animal traction, are central images; much emphasis on demiurge (< 19), mainly under the form of rain and lightning (cf. 4). This is the central mythical complex, not only of Afro-Asiatic and Indo-European speakers, but also of Niger-Congo speakers encompassing the entire Southern half of Africa. The West and South Asian overtones of this complex suggest that the extensive distribution of this complex in E and SE Asia in historical times, and in the New World (Aztec, Maya, Inca – which I hesitate to consider independent from Asia) derive from secondary diffusion from West and South Asia. These The West and South Asian overtones also constitute another reason to reconsider the extra-African antecedents of Niger-Congo/Bantu.	proto-Neolithic	Extended Fertile Crescent	R and M1
3. What is in heaven	Derives from 4, 13, 19, but in fact largely identical with 2; along with the protagonists of 19 it is the cosmic rainbow snake who (as adversary) inhabits heaven in 2 (and 3) – absorbing the trickster's role <i>Not separately needed</i>	– (see 2)	– (see 2)	
4. The Lightning Bird (and the World Egg) Pandora's Box	Lightning as the central cosmogonic image (both of world making and of latter-day world renewal), the lightning bird and its world egg are very prominent cosmemes in the sub-Saharan African mythical set. Contrary to 2, which is much later, the bird and sky imagery does not imply transcendentalism. The world egg is central to Witzel's (2001) 'Laurasian' mythology, and is likely to be a secondary transformation of 10 ('The earth as primary'), which then – long after the Out of Africa migration – no longer features as an autonomous Complex but instead has been subjugated to the Lightning Bird, and is produced by it. So I take the Lightning Bird as the primary element in this Narrative Complex, and the World Egg as a subsequent internal development as a result of having incorporated 10. 1. It is possible to construe many of the East, South Central, and Southern African attestations of this Narrative Complex as being under South Asian influence. (For instance, the bird mounts of South Asian gods are a subjugated Lightning Bird.) In that case the cosmogonic theme of lightning/world egg, which is truly central to the entire African cosmogonic data set, would not be situated as part of the Out-of-Africa package (African Middle Palaeolithic), but in Middle or Upper Palaeolithic South or South East Asia. 2. Yet the ubiquity and the power of this Narrative Complex persuade me to take the risk and to include this in the Out-of-Africa package. What also argues for this is the prominence of the Lightning, or rather Thunder Bird in North American mythologies, where many very ancient traits appear to be preserved, cf. the Spider Narrative Complex (15)	Pre-Out-of-Africa Middle Palaeolithic	Sub-Saharan Africa	L (L1, L2, L3)
5. The mantis Route A	In historical times, theme especially associated with Khoi-San speakers in Southern Africa. For a long time, these have had 'primordial' connotations, which would tempt us to place this Narrative Complex in Pandora's Box. However, genetic findings since the 1970 have favoured a fairly recent (10 ka BP) W or C Asian rather than S African origin for Khoi-San speakers. This implies the same for the mantis Narrative Complex. Details seems to confirm this: to shoe, moon; paucity of mantis symbolism in Africa except among Khoi-San speakers (but cf. Tumbuka, S.C. Africa). In Ancient Egyptian shamanism (which is closely connected with the emergence of the state, under unmistakable West Asian influences) the shaman's familiars are spider (cf. 15, and 2), <i>mantis</i> , and midge (Helck 1984). There is some mantis symbolism in classical China. Mantis symbolism on Bismarck Islands northeast of New Guinea (Hastings 1909f s.v. 'mantis') make the mantis a candidate theme for early spread along Route A – only fragmentarily preserved in various unconnected peripheries. The trickster theme comes back in 17, and is typical of hunting and gathering as a mode of production – although it was subsequently incorporated in 2 as an aspect of the demiurge (cf. 19)	Middle Palaeolithic	West or South Asia	N and/or M

6. Escape from the ogre not Pandora's Box; not Route A	Rather akin in form and function to 11, but simpler. In combination with 19 it produces the widespread Python vs. Apollo mytheme. Apparently a narrative to explain the rescue of Being out of Non-being. I tend view this Narrative Complex as a secondary transformation of 11. However, its spotty distribution and the apparent absence of New Guinea and Australian attestations suggest it to belong to Route B, much later than 11. Yet the association with 11 is also borne out by the partial coincidence with mtDNA type B, especially in Oceania, the New World, and the Indian Ocean/Africa. In E Asia and the New World, association with A is suggested. Presence in Africa seems to be due to the 'Back-into-Africa' movement. The erratic pattern focussing on Europe and West Asia makes one suspect that the theme could reflect a Neanderthaloid influence; at any rate it is comparable to 16: the shaman is the typical redeemer from distress and non-being.	Upper Palaeolithic?	West Asia?	weak association with B and A
7. From the mouth Extended Fertile Crescent	Masculinising (and transcendentalising) reinterpretation of 19. Late. Cf. Ancient Egyptian forms of male substitution of female reproduction: Atum's masturbation producing the first pair of creatures (Tefnut and Shu), the tears of Re producing humankind, Athena's birth from her father's head, Dionysus' from his father thigh	Neolithic or Bronze Age	Extended Fertile Crescent	too recent and too limited in scope
8. The stones	Not specific to any particular mode of production, which suggests great antiquity. Originally probably part of 10, but reinterpreted in the light of 19 (stones represent demiurge, cf. Greek Hermes, Khoi Heitsi-Eibib) and 2 (stones from heaven = meteorites = iron; in the latter case proto-Neolithic or later); hence: <i>Not separately needed</i>	– (see 2)	– (see 2)	
9. The moon Pandora's Box	Connotations of cosmic egg (4); of rainbow snake (4) of women's cults cf. 10, 19 and 15; of human sacrifice. Incompletely integrated in 2 which seems much younger: aspects of kingship and royal cult (also star cult) including human sacrifice, regicide and <i>suttee</i> . The encroachment of several major other complexes suggests considerable antiquity of this complex. Conus shell lunar or solar ornaments distributed in East and Central Africa and New Guinea, but I would attribute their African presence to relatively recent 'Back-to-Africa' migration. The lunar dominance in the African cosmogonic data set, as well as the elaboration of lunar mythical themes in New Guinean and Australian mythologies, bring me to consider this Narrative Complex as part of Pandora's Box.	Pre-Out-of-Africa Middle Palaeolithic	Sub-Saharan Africa	L (L1, L2, L3)
10. The earth as primary Pandora's Box	Probably associated with puberty rites/ circumcision. Elsewhere I have build an extensive case (cf. van Binsbergen, in preparation) for puberty rites/ circumcision belonging to the original 'Out of Africa' package (= Pandora's Box). In recent millennia this Narrative Complex was largely incorporated in 2, but it is much older – the distinction between upper world and underworld seems more primary, preceding the upward gaze of 2; origin of animals, much later (Neolithic) limited to cattle; in recent millennia, purification after murder has become part of this complex but comparative evidence suggests that such purification is shamanic 16	Pre-Out-of-Africa Middle Palaeolithic, revised (cattle) in Neolithic	Sub-Saharan Africa	L (L1, L2, L3)
11. The primal waters and the flood Route B	Separation of the waters; flood in punishment of murder (no earth-related purification), really discontinuous with 10; incompletely accommodated to 2 (the demiurge, Rain/Lightning, here becomes an agent of destruction; distribution of the flood motif in Africa widespread but mainly along the coast. • This suggests maritime diffusion from South Asia and/or Oceania), in which case comparative evidence suggests (Central /South East/East) Asia Upper Palaeolithic or Mesolithic as place of origin – cf. the global dramatic rise of sea level at the onset of the Holocene. This is the interpretation I favoured in earlier publications and to which I stick now, in view of the specific close association I have been able to argue between Narrative Complex 11 and with mtDNA type B, which we know to have arisen in C N Asia 40 ka BP • On the other hand, the frequent attestation of the Flood theme along the African Atlantic coast might also be interpreted as a 'pristine' element going back to Pandora's Box – spuriously however, in my opinion	Middle Palaeolithic (40 ka BP)	C N Asia	B (out of N)
12. From under the tree Pandora's Box	Not specific to any particular mode of production, which suggests great antiquity (this consideration applies, in principle, to all natural phenomena featuring in my Narrative Complexes). Intercontinental distribution of tree burial (New Guinea, South and South East Asia) compatible with belonging to Out-of-Africa package (=Pandora's Box). Throughout sub-Saharan Africa, trees, shrubs, arboreal poles or branches feature as village shrines and ancestral shrines (van Binsbergen 1979, 1981). Much later, the tree theme became associated with the Tower motif, which has a restrictive distribution in Africa suggestive of West Asian or South Asian origin (van Binsbergen 2005); so does the shamanic connotation of the West African bard, singled out for tree burial – perhaps in that connection, tree burial is an archaizing element.	Middle Palaeolithic	sub-Saharan Africa	L (L1, L2, L3)
13. The cosmic / rainbow snake Pandora's Box	Not specific to any particular mode of production, which suggests great antiquity. There is a link with 10 and 11, and along with the protagonists of 19 it is the cosmic rainbow snake who (as adversary) inhabits heaven in 2 (and 3) – absorbing the trickster's role. Distribution in Australia suggests the Complex to have been part of the Out-of-Africa package.	Pre-Out-of-Africa Middle Palaeolithic	Sub-Saharan Africa	L (L1, L2, L3)

14. Fundamental duality Extended Fertile Crescent	Here the asymmetry between senior cosmogonic virgin and her son/lover has moved towards symmetrical balance, due to male ascendance in modes of production (metallurgy/petty commodity production, hunting, raiding/war) dominated by them. The emphasis on bisexual attributes of gods also should be situated in this Complex. Much of the symbolic elaboration of 2 is in terms of this complex. Late (Baumann 1955).	Neolithic to Iron Age	Extended Fertile Crescent	too recent and too limited in scope; however, cf. expansion of types R, M1 and B
15. The spider (and the feminine arts) Pandora's Box	The spider features in three ways: as trickster (cf. 5, 13, 17, 20); as connection between heaven and earth (cf. 2) and hence, by substitution, as Supreme Being (Nyambi, Anat, Neith, Anahit, Athena etc.); and finally as the patron of weaving. In the proto-Neolithic Extended Fertile Crescent, the martial connotations of these virgin goddesses may be explained by (or may have secondarily inspired the institution of) female warriors, but is more likely a consequence of 14. There is a link with shamanism (see under 5). The concentration in a core area stretching from West Africa to the Indus suggests this to be a relatively late Complex in its feminine elaboration. Along the African Atlantic coast a spider god or goddess with cosmogonic and solar connotations (Nzambi, Nyambi etc.) has been spreading S and E in recent centuries; although this might be interpreted in terms of the Back-into-Africa migration, there are indications (e.g. this is 'pristine' Africa) that we are dealing here with a much older phenomenon. There is distributive evidence (especially from Australia) that the spider occupies much the same position as the mantis. It may appear as 'the Adversary', and then (more or less as a symbol of the Sun) is almost identical with the Rainbow Snake – both are the opposites of Rain. However, while the mantis has hardly any distribution in Africa in historical times (except for the Khoi-San speakers, who are recent immigrants from West Asia), the spider is very prominent in African mythologies. I would therefore include the spider in Pandora's Box, and not make it an early extra-African innovation along Route A (like the mantis). The spider even offers the standard connection between Heaven and Earth, both in Australia and among Native Americans, which strongly suggests that Narrative Complex 2 should be considered a transformation of the Spider Complex.	Middle Palaeolithic (transformed in proto-Neolithic)	sub-Saharan Africa (revised in Extended Fertile Crescent)	L (L1, L2, L3)
16. Shamanism, bones Route B	Shamanic themes abound in the African cosmogonic data set. For me, shamanism is a very precise historical phenomenon, comprising (among others) the following traits: an upward gaze, awareness of the celestial axis and other astronomical phenomena, claims of travelling along the cosmic axis into heaven and into the underworld, the claim of doing battle in these outlying domains for the benefits of humans and the human community, the use of spirit familiars, and the emphasis on death-life boundary crossing through the correct manipulation of bones, skins, and other bodily remains. Such themes must have owed a great deal to 17. Such traits have particularly shaped 2 i.e. contributed to the transformation of 15 into 2 in proto-Neolithic times (ascent and descent along the celestial axis is shamanic). Yet shamanism appears not to be at home in Africa, and I refer to my earlier work (especially on leopard-skin symbolism world-wide) for a complex linguistic, iconographic and archaeological argument to the effect that shamanism emerged in West or Central Asia in the Upper Palaeolithic. I suspect that its emergence was moreover due, in part, to Neanderthaloid influence: a cult of the dead, of bones, therianthropy (specifically, humans ornamentally dressing in leopard skins), and indications of an upward, astronomical gaze, however contentious, were first attested in Neanderthaloids, and these traits constitute important aspects of shamanism. Shamanism has a very wide distribution, in N, E, S and SE Asia, throughout the New World, N Europe, and (as cave art suggests) also W and C Europe during the Last Glaciation. The popularity of shamanism in New Age circles had led to general appropriation and erosion of the term, so that attestations in Australia and New Guinea could be claimed – spuriously, in my opinion; this would also make spurious any claim that shamanism would have been part of Pandora's Box or of Route A; or that it was a relatively recent derivation from Buddhism (Eliade). If shamanism had not extended into Upper Palaeolithic Europe, an association with the earliest phase of mtDNA type B would account for most of the intercontinental distribution. That would bring shamanism close to the Primal Waters and Flood Narrative Complex (mtDNA type B), – not totally surprising, since primal waters, and fish, are often implied in the rock-art iconographies of both Southern Africa and Upper Palaeolithic Europe. However, I believe that we have to go back further than that, and to seek the AMH's genetic cluster that was associated with the emergence of shamanism further down in the cladic tree: plausibly (Cavalli-Sforza) it was type H (associated with the Basquoid westernmost extension of the Dene-Sino-Caucasian linguistic macro-family) that brought shamanism (and pictorial art) to W Europe, after shamanism had been engendered in the mtDNA type N cluster of AMH in West Asia; the same N cluster was soon to produce the A and B types responsible for the further spread of shamanism in E and N Asia, the New World, S Asia, and Back-into-Africa.	Upper Palaeolithic	West or Central Asia	N (H, A, B)
17. Spottedness and the leopard	In the sub-Saharan African mythical material of the historical period, the leopard appears in two fundamentally different forms: (1) as the Exalted Insider (often associated with the sinister sides of kingship, but essentially the trickster, and equally ancient as the latter); (2) as the Sacred Outsider, who as a sign of sacrality and of victory over evil dons a leopard skin. (2) is strongly shamanic, and marks the five principal forms under which shamanism has made inroads into Africa in recent millennia: bard, saints, Nilotic earth priests, kings, and ecstatic healers. However, (1), which I see as the core of this Complex, is a 'pristine' element, very ancient, going back to a fascination for spottedness and for leopard as 'spotted animal' which encompassed the entire Old and New World, and – with the colour triad red/white/black – was probably part of the Out-of-Africa package. As the ultimate trickster, the leopard has combined the qualities of predator with that of distributor of food, in the sense that, long before the emergence of Anatomically Modern Humans, early man may have competed with other scavengers for portions of the predator's kill. However, all the, all the ingredients of the leopard/spottedness complex are in fact implied in the combination of Narrative Complexes 10-4-13, which together I take as the original Out-of-Africa mythical package. Much as I am partial to the leopard and spottedness theme, which has dominated my long-range research for the past few years and has yielded many of the insights (for whatever they are worth) of the present analysis, I now believe that we do not need the leopard as a separate Narrative Complex. <i>Not separately needed</i>	– (Pre-Out-of-Africa Lower Palaeolithic)	– (Sub-Saharan Africa)	



18. Honey and honey-beer	References to honey are rare in the African cosmogonic data set, and difficult to classify. They form a loose end. Occasional collecting of wild honey is considered a constant from the Lower Palaeolithic, while sophisticated techniques and equipment are depicted from the Mesolithic. There is a link with the kingship, in Hatti (Anatolia), Egypt, Madagascar (with South East Asian connotations), and South Central Africa. The bee represents not only heaven (it descends along the celestial axis, its wings shimmer in celestial/rainbow colours) – but also the underworld (as the bee’s favourite dwelling, besides trees). The symbolic elaboration is therefore largely 2, but in fact this Complex is: <i>Not separately needed</i>	–		–
19. The cosmogonic virgin and her son/ lover Extended Fertile Crescent	How does one reconcile the idea of radical origin with the observational facts of procreation? Virgin birth may be considered a cosmogony based on rational causal analysis and sense of time – such as one would expect in a society with established social inequality, charters justifying privilege, and basic practical biological knowledge applied and sustained in agriculture and animal husbandry (the cosmogonic virgin presupposes knowledge of sexual causality; moreover, she appears as celestial cow). The idea of virgin birth is often secondarily elaborated with the notion of the child becoming his virgin mother’s lover. In addition to its dominance in the African cosmogonic data set, this Complex constitutes the dominant theme of religion in the Ancient Near East including Ancient Egypt, and the implied theme in much Graeco-Roman and Northern European mythology.	proto-Neolithic	Extended Fertile Crescent	R and M1
20. Contradictory messengers bring death	The most popular theme in the African cosmogonic data set. Links with 10, and with the trickster elements in 5 and 17, yet so effectively incorporated into 2 (the connection between heaven and earth after their separation) that no special Complex seems required. <i>Not separately needed</i>	–		–



Contexts of Intensified Transformation and Innovation (CITIs)

Contrary to my initial hypothesis underlying earlier versions, the unfolding of world mythology turns out *not* to be a gradual process evenly spaced out along the migration routes of AMH.

On the contrary, a limited number of Contexts of Intensified Transformation and Innovation (CITI) can be discerned, in which specific new NCs emerge, in a spasmodic and far from mechanical or unilineal process.

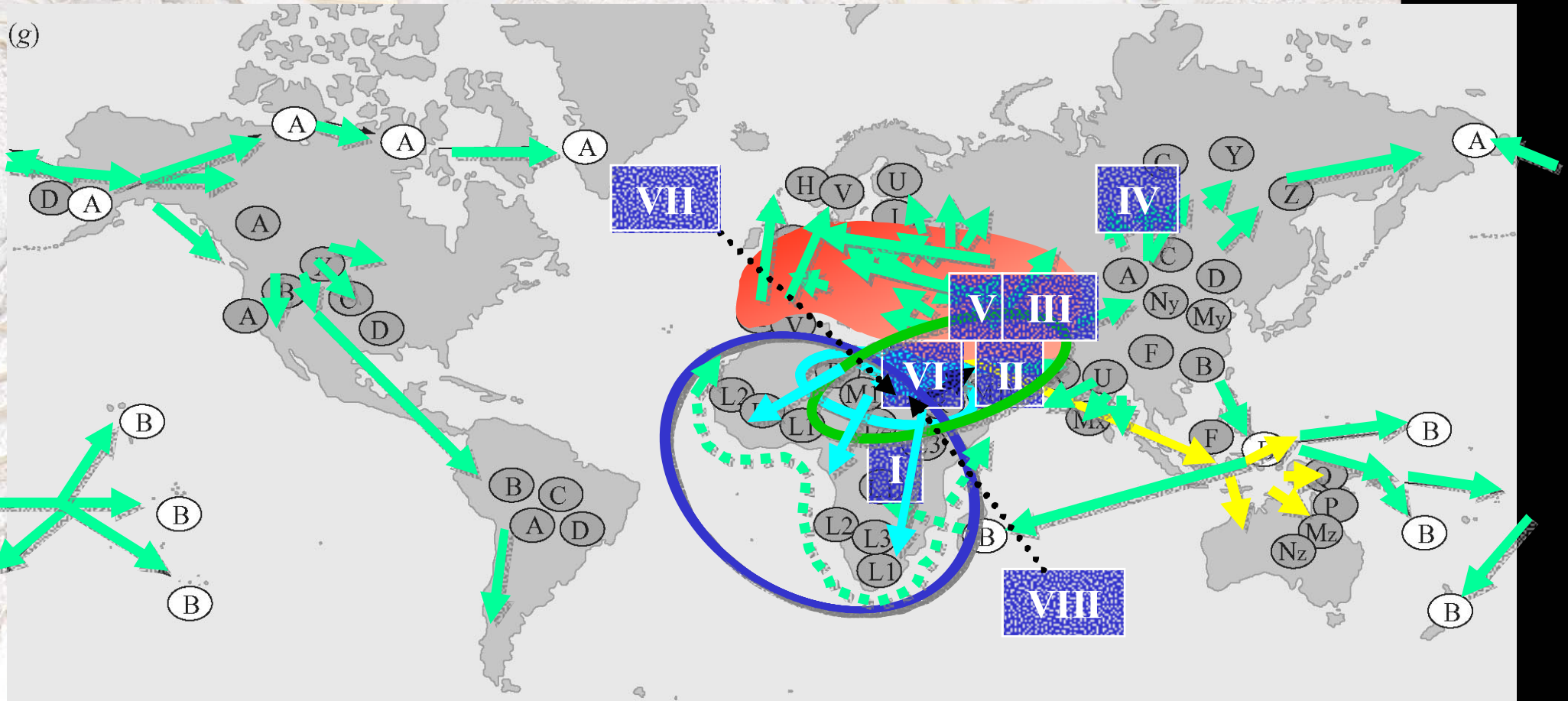
Some of these CITI may be associated with the emergence of new modes of production (e.g. CITI VI, with the emergence of Neolithic food production)

By and large, these CITI coincide with the contexts in which significant new linguistic families have arisen (among others, proto-Khoi-San, proto-Dene-Sino-Caucasian, and proto-(Mega-)Nostratic (Kaiser & Shevoroshkin 1988), and the further differentiation of the latter into, among others, proto-Indo-European, proto-Afro-Asiatic, proto-Niger-Congo, and proto-Nilo-Saharan. (Of course, the latter three languages together with Khoi-San sum up the language map of Africa in historical times.)

Summing up: CITIs in world mythology

Contexts of Intensified Transformation and Innovation (CITI)		Narrative Complex (no. and description)	mtDNA type of AMH community launching this Narrative Complex	Proposed trigger (much further reflection needed)	tentative linguistic context
in time	in space				
I. Pre-Out-of-Africa Middle Palaeolithic 80,000 BP and earlier	Sub-Saharan Africa	‘Pandora’s Box’: the original mythical package, perhaps containing: 4. The Lightning Bird (and the World Egg) 9. The Moon 10. The Earth as primary (10 was subsequently revised towards cattle, in the Neolithic) 12. From under the Tree 13. The Cosmic / Rainbow Snake 15. The Spider (and the feminine arts, a subsequent revision in the proto-Neolithic)	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 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 If this last point is plausible, then the earliest phase in the overall process is in itself myth-driven	Proto-Human
II. Middle Palaeolithic, c. 70,000 BP, Route A	West or South Asia	5. The Mantis	N and/or M	venturing along the Indian Ocean coast from Africa to SE Asia is likely to have produced new challenges and to have given access to new opportunities, e.g. new and more sophisticated tools	Proto-Khoi-San
III. Middle Palaeolithic, c. 40,000 BP, Route B	W or C Asia	16. Shamanism, bones	N (H, A, B)	shamanism is associated with detailed naked-eye astronomy which was an asset to hunters (orientation away from home, seasonality) even before it became an asset to agriculturalists. More important probably was that the vertical worldview of shamanism, with the shaman’s privileged (belief of) travelling along the celestial axis to underworld and upper world, created (the idea of) a politico-religious social hierarchy on which more effective forms of socio-political organisation could be based. One of the triggers may have been Neanderthaloid influence in SW Asia	Proto-Dene-Sino-Caucasian?
IV. Middle Palaeolithic, c. 35,000 BP, Route B	C N Asia	11. The Primal Waters and the Flood	B (out of N)	perhaps a historical inundation catastrophe? (temperatures had been slowly declining since ca. 150 ka BP therefore rise of sea level due to melting polar caps (as in early Holocene, 10 ka BP) not applicable); perhaps here again Neanderthal influence?	?
V. Middle Palaeolithic, c. 35,000 BP, Route B	West Asia?	6. Escape from the Ogre	weak association with B and A	Neanderthaloid influence?	?
VI. proto-Neolithic c. 10,000 BP	Extended Fertile Crescent	2. The Connection between Heaven and Earth (after separation) 19. The Cosmogonic Virgin and her Son/lover	R and M1	Well-established Neolithic food production through agriculture and animal husbandry; Neolithic arts and crafts such as pottery, spinning, weaving; male ascendancy; complex society, the emergence of writing, the state, organised religion, and science; incipient metallurgy	Proto-(Mega-)Nostratic
VII. Neolithic or Bronze Age c. 5,000 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	(proto-)Afro-Asiatic, Indo-European, Niger-Congo (Bantu), Nilo-Saharan
VIII. Neolithic to Iron Age c. 3,000 BP	Extended Fertile Crescent	14. Fundamental Duality		?	(AA and IE, cf. genus in language)

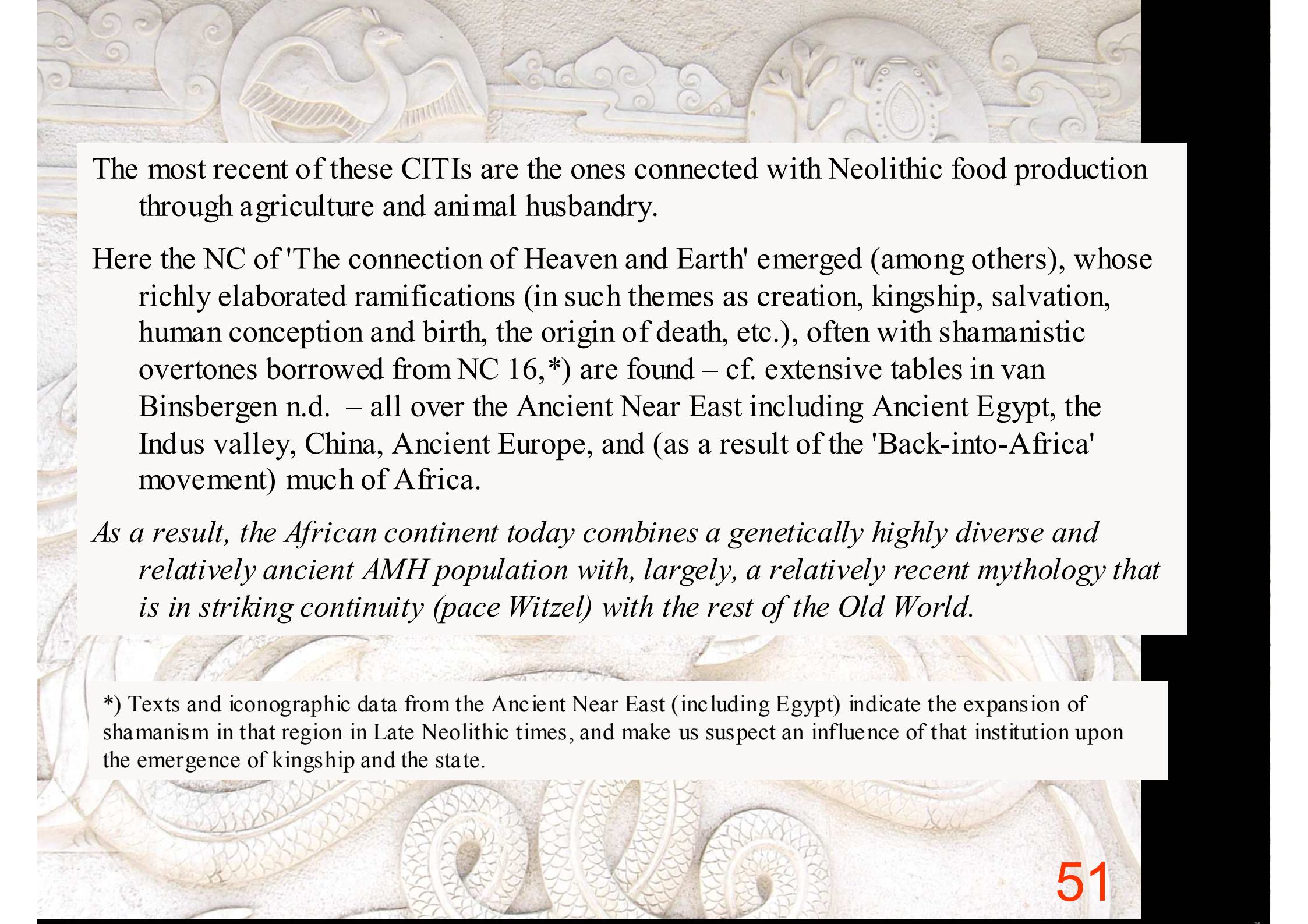
Synthesis: CITIs in AMH's history of world mythology



I Context of Intensified Transformation and Innovation (see the table in the previous slide); VII and VIII could not be drawn in proper location, i.e. Extended Fertile Crescent, hence the dotted arrows

○ Extended Fertile Crescent

other symbols used are in line with the previous diagrams, and explained there



The most recent of these CITIs are the ones connected with Neolithic food production through agriculture and animal husbandry.

Here the NC of 'The connection of Heaven and Earth' emerged (among others), whose richly elaborated ramifications (in such themes as creation, kingship, salvation, human conception and birth, the origin of death, etc.), often with shamanistic overtones borrowed from NC 16,*) are found – cf. extensive tables in van Binsbergen n.d. – all over the Ancient Near East including Ancient Egypt, the Indus valley, China, Ancient Europe, and (as a result of the 'Back-into-Africa' movement) much of Africa.

As a result, the African continent today combines a genetically highly diverse and relatively ancient AMH population with, largely, a relatively recent mythology that is in striking continuity (pace Witzel) with the rest of the Old World.

*) Texts and iconographic data from the Ancient Near East (including Egypt) indicate the expansion of shamanism in that region in Late Neolithic times, and make us suspect an influence of that institution upon the emergence of kingship and the state.

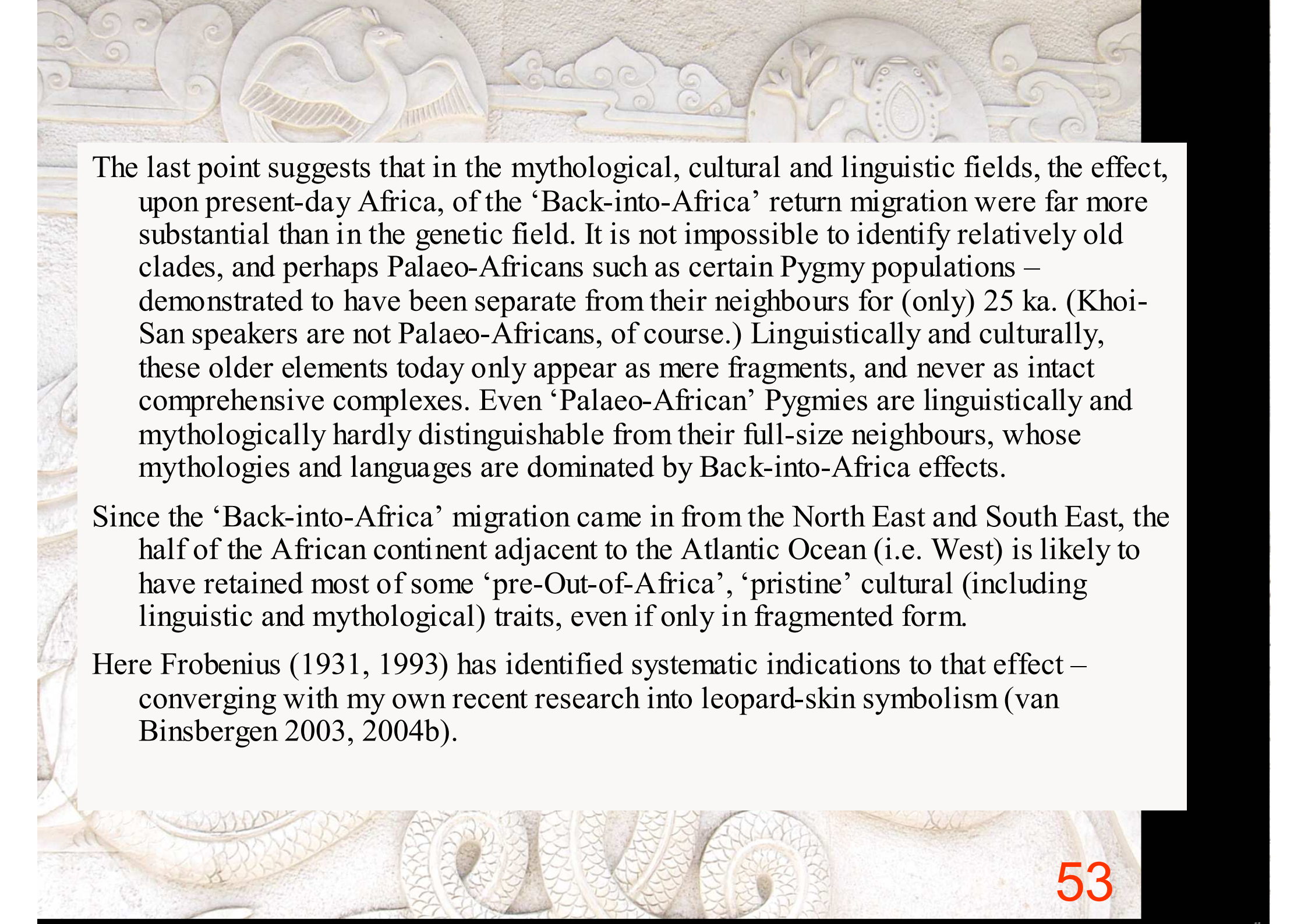


Sub-Saharan Africa in historical times: *relatively ancient genes, relatively modern mythology*

Genetically, the 'Back-into-Africa' return migration as from c. 15 ka BP was superimposed upon the populations that had remained in Africa and had greatly diversified there.

By the same token, we may assume that, in the course of the 'Back-into-Africa' return migration, mythological (as well and more general cultural and linguistic) transformations and innovations from Asia were fed back into the African mythological etc. scene.

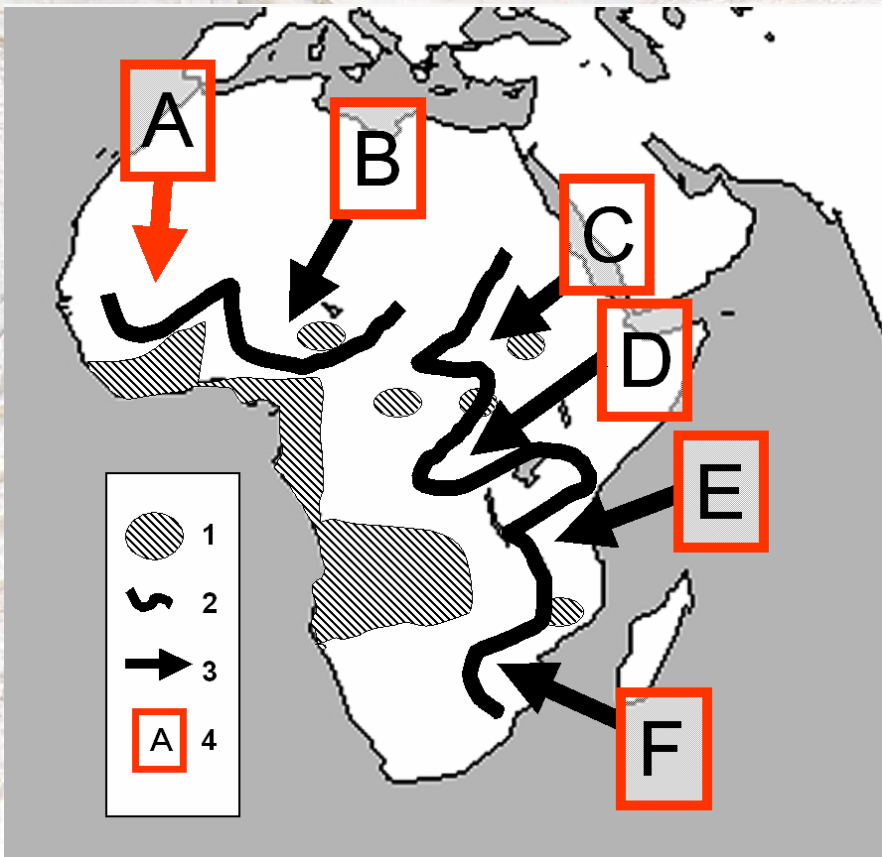
The extensive inroads, into Africa, of more general Old World later NCs in the wake of the 'Back-into-Africa' return migration, are associated with all four African linguistic families without exception (including the Khoi-San speakers, whose ancestors Cavalli-Sforza has convincingly traced to Central or West Asia, 10 ka BP).



The last point suggests that in the mythological, cultural and linguistic fields, the effect, upon present-day Africa, of the 'Back-into-Africa' return migration were far more substantial than in the genetic field. It is not impossible to identify relatively old clades, and perhaps Palaeo-Africans such as certain Pygmy populations – demonstrated to have been separate from their neighbours for (only) 25 ka. (Khoi-San speakers are not Palaeo-Africans, of course.) Linguistically and culturally, these older elements today only appear as mere fragments, and never as intact comprehensive complexes. Even 'Palaeo-African' Pygmies are linguistically and mythologically hardly distinguishable from their full-size neighbours, whose mythologies and languages are dominated by Back-into-Africa effects.

Since the 'Back-into-Africa' migration came in from the North East and South East, the half of the African continent adjacent to the Atlantic Ocean (i.e. West) is likely to have retained most of some 'pre-Out-of-Africa', 'pristine' cultural (including linguistic and mythological) traits, even if only in fragmented form.

Here Frobenius (1931, 1993) has identified systematic indications to that effect – converging with my own recent research into leopard-skin symbolism (van Binsbergen 2003, 2004b).



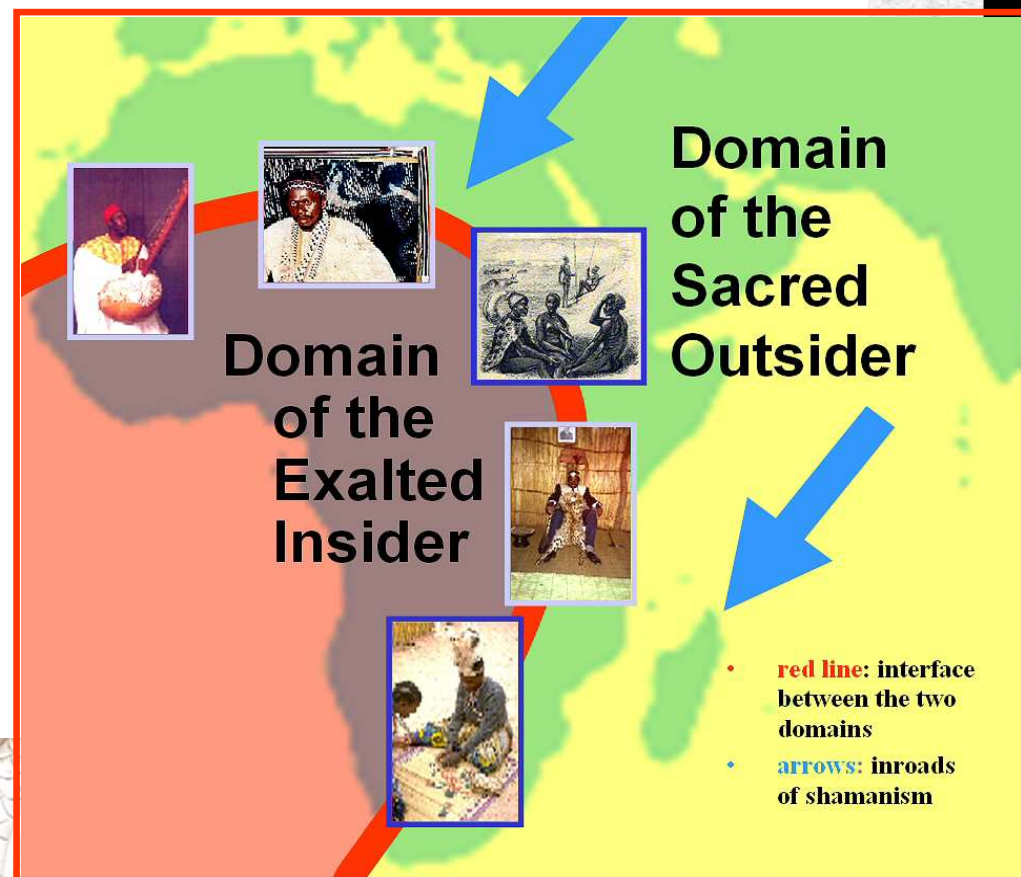
1. Main areas of figurative and plastic arts in Africa	2. Frontier of advance of ecstatic cults	3. Inroads of shamanism according to Frobenius
4. specific ecstatic cults entering in historical times:		
A. Jegu	C. Zar	E. Pepo
B. Bori	D. Mandva	F. Shave

West Africa as relatively pristine: Map rendering Frobenius' ideas concerning the inroads of named shamanistic cults (white arrows) and the main regions of representative art in (later second millennium CE) Africa.

In my recent comparative historical analysis of leopard-skin symbolism I found similar evidence of an archaic complex surviving in Western Africa (where the leopard symbolises the Exalted Insider, i.e. the sorcerer-king) in the face of the inroads of Asian, ultimately shamanism-related, politico-religious institutions, marked (from left to right and top to bottom) by

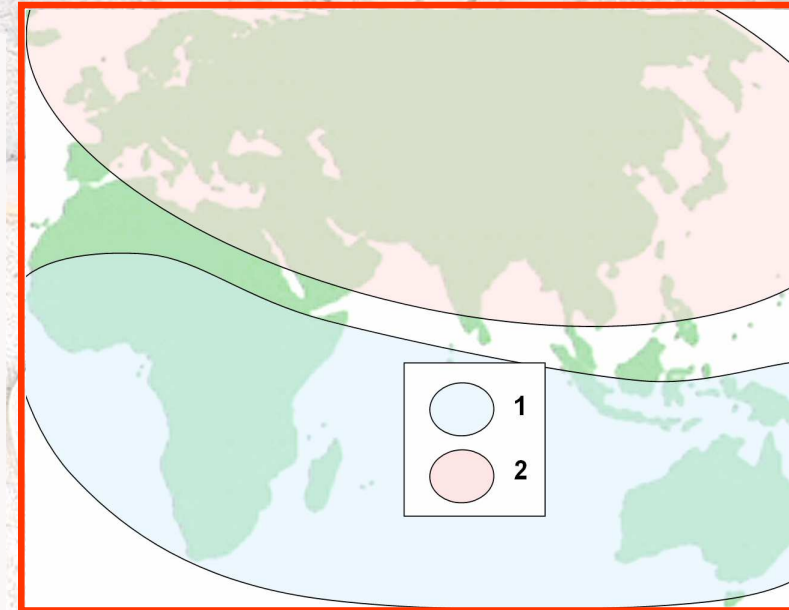
- West African bards;
 - marabouts;
 - Nilotic leopard-skin chiefs;
 - kings; and
 - spirit mediums,
- all of which manifest Asian continuities, and stress the sacred outsidership of leopard-skin connotations.

For years I was at a loss as to how to explain the continuity between sub-Saharan Africa and the Ancient Near East in this connection, but the work of Dierk Lange has convincingly solved this puzzle, e.g. by bringing out the Assyrian connection of mass deportation into West Africa



All this implies very considerable mythological continuity between sub-Saharan Africa and the rest of the Old World (*pace* common geopolitical wisdom)

This diagram depicts Michael Witzel's 2001 proposal for absolute discontinuity in comparative world mythology, lumping sub-Saharan Africa with New Guinea and Australia ('Gondwana'); and distinguishing this absolutely from the rest of the Old World and the New World ('Laurasia')



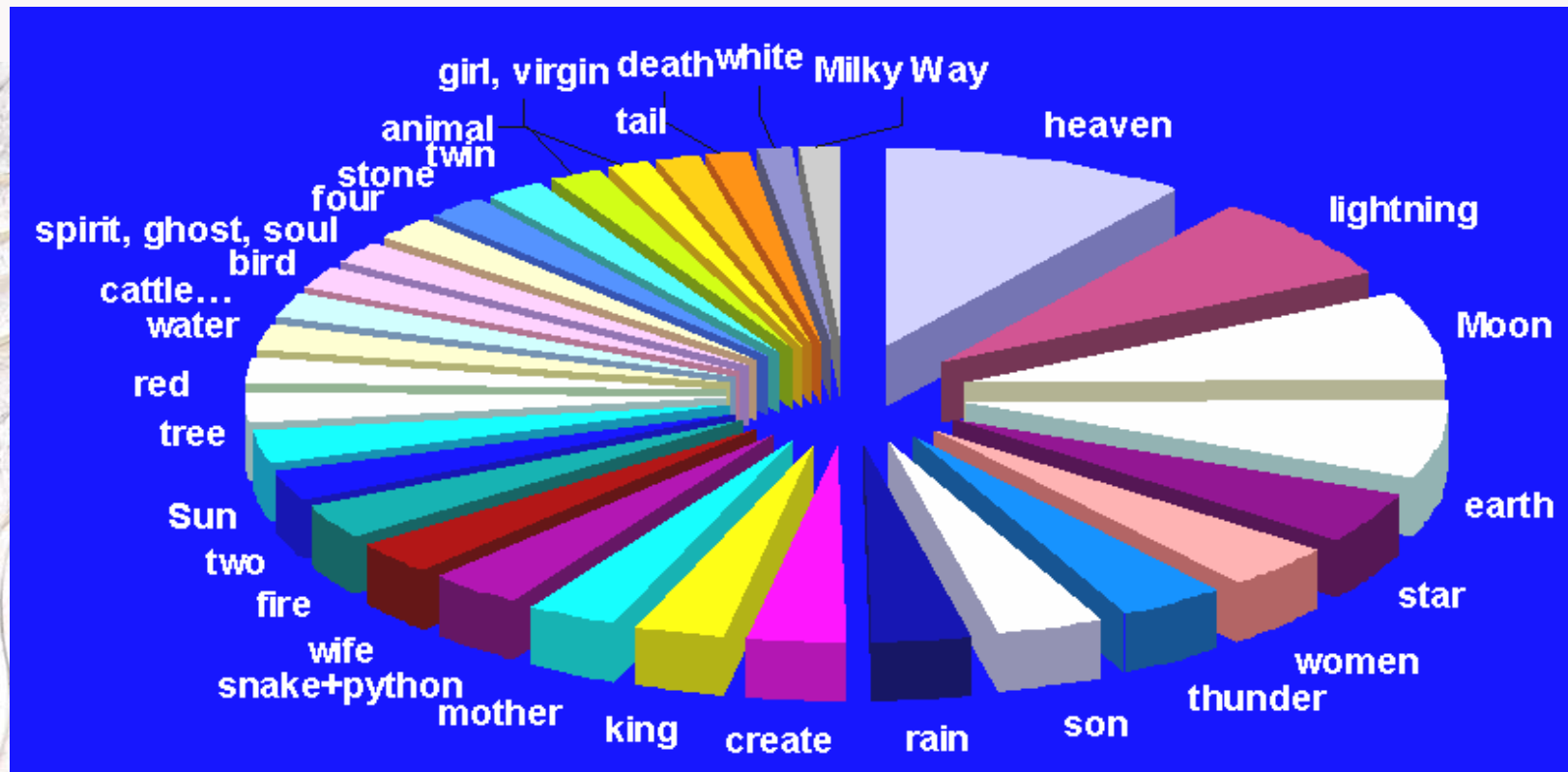
1. 'Gondwana' mythologies

- No true cosmogony or anthropogony
- From tree
- Other Laurasian traits may be absent, e.g. no Flood myths
- History as cyclical

2. 'Laurasia' mythologies

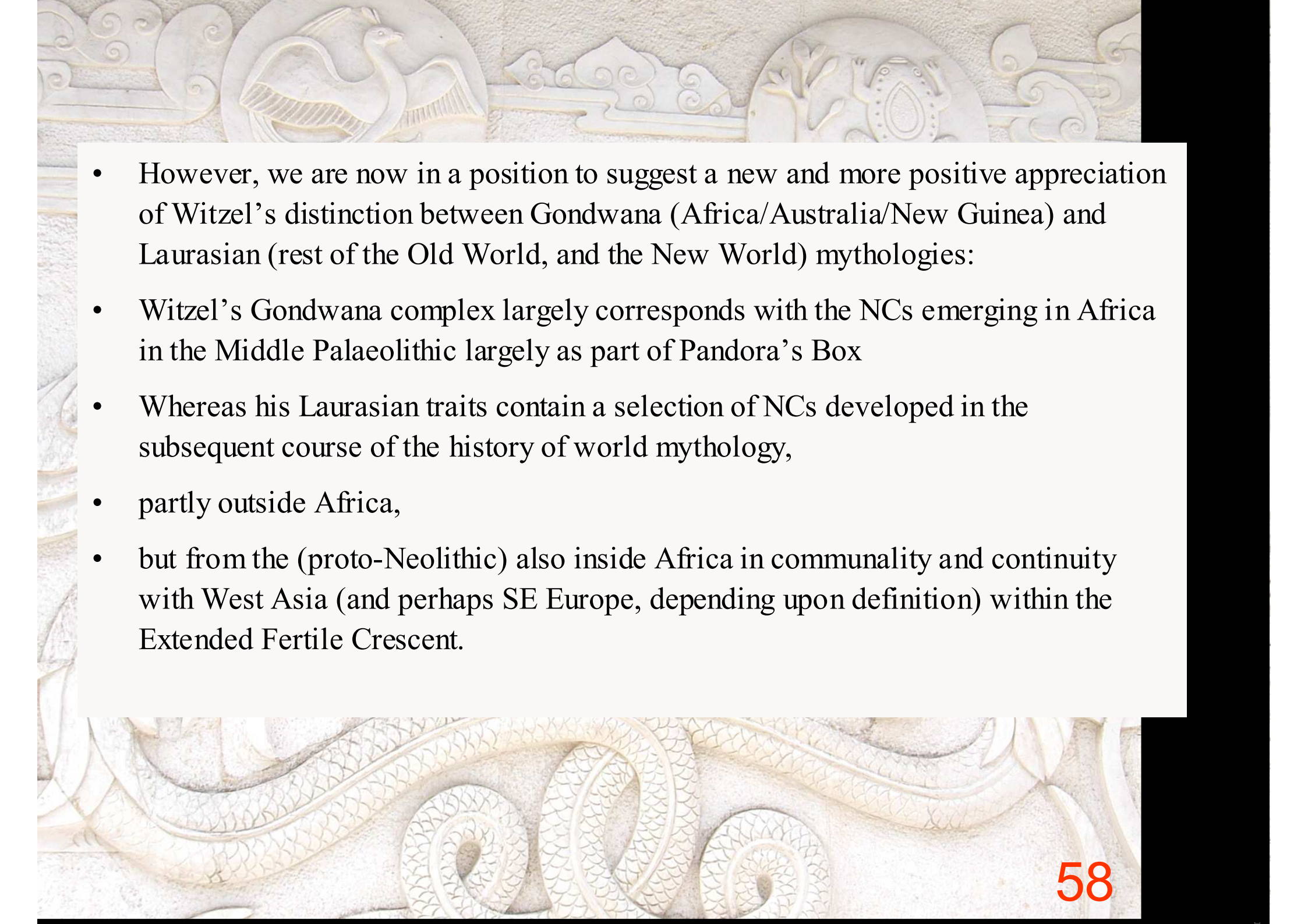
- True cosmogony and anthropogony
- Cosmic egg
- Father Heaven/ Mother Earth
- History as epic/linear
- Flood myths
- Kings and Heroes.

- This continuity could be argued in detail, by applying the NCs of the sub-Saharan African mythological data set onto Egyptian, Greek, Biblical/Mesopotamian, Indo-Iranian and Northern European mythologies (cf. van Binsbergen, n.d.)
- This continuity is already apparent from a contents analysis of our corpus of cosmogonic myths from sub-Saharan Africa in historical times: the key words are highly reminiscent of Asian and European mythology



Graphical summary of relative frequency of the most frequent key words in our data set.

Although other numbers have been analysed, the word 'one' is ignored in this analysis because its frequency in the data set cannot be determined with precision: in English translations it often has a syntactic function that has nothing to do with counting, e.g. 'the red one', etc.

- 
- However, we are now in a position to suggest a new and more positive appreciation of Witzel's distinction between Gondwana (Africa/Australia/New Guinea) and Laurasian (rest of the Old World, and the New World) mythologies:
 - Witzel's Gondwana complex largely corresponds with the NCs emerging in Africa in the Middle Palaeolithic largely as part of Pandora's Box
 - Whereas his Laurasian traits contain a selection of NCs developed in the subsequent course of the history of world mythology,
 - partly outside Africa,
 - but from the (proto-Neolithic) also inside Africa in communality and continuity with West Asia (and perhaps SE Europe, depending upon definition) within the Extended Fertile Crescent.

Merits of the proposed theory

The resulting *aggregative diachronic approach to world mythology* might appear to be a mere house of cards – a myth, perhaps, in its own right.

However, its claims to scholarly merit are far from negligible.

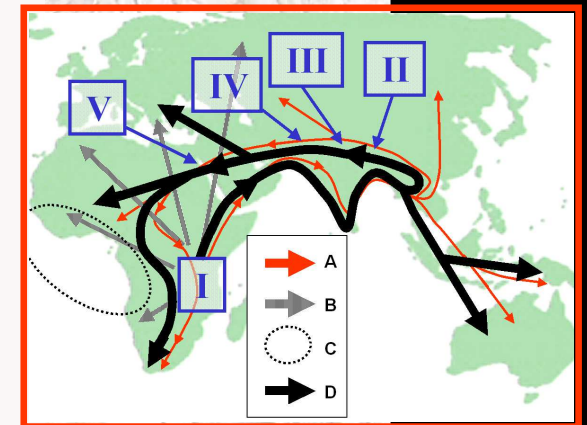
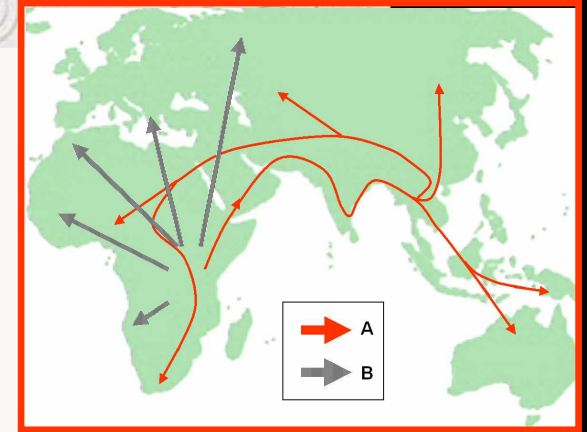
- It does take into account much comparative state-of-the-art evidence from a variety of disciplines.
- It throws light onto hitherto unexplained continuities and affinities within and across continents, even if this goes against inveterate geopolitical stereotypes.
 - Such as the assumption that the African continent has always been peripheral to, or even (Hegel) excluded from, global cultural history
 - Or the conviction that E and SE Asian cultures including mythologies could not have left substantial traces on present-day sub-Saharan Africa, especially on the circumlittoral regions
- Contrary to a house of cards, it is internally coherent and will not collapse as soon as one constituent element is replaced or removed; the latter is demonstrated by the considerable changes that had to be made in the model's details since it was first formulated in 2005.
- And most importantly, the model suggests fascinating paths for further research, which will surely enhance our insight even at the cost of discarding the present model that has prompted them.



Revision of the theory as compared to earlier versions

In earlier attempts, I already distinguished two routes for the Out-of-Africa expansion of AMH, carrying their 'Pandora's Box' including these three mythical complexes:

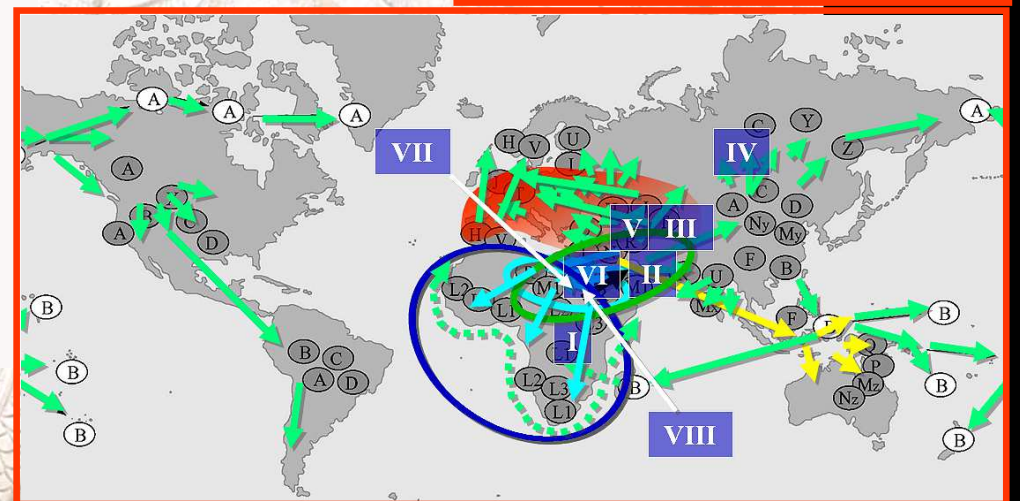
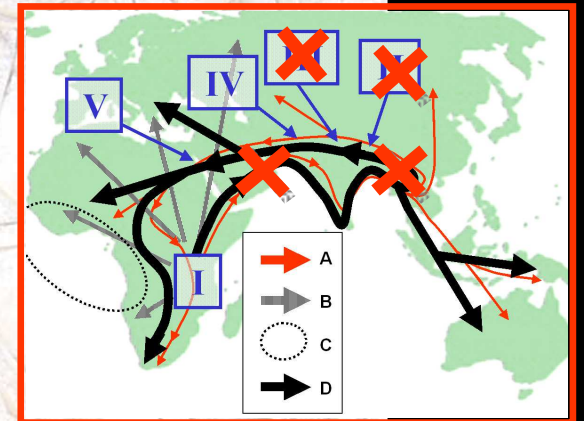
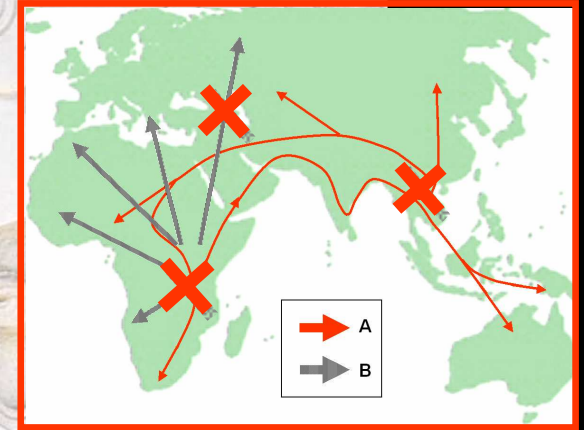
- I postulated that, as long ago as 140 ka, the early eastbound trajectory (Route A) along the Indian Ocean, having led to Australia and New Guinea, then curved westward hairpin-fashion, and whilst populating Asia, the rest of the Old World, and the New World, ended in the 'Back-to-Africa' return migration;
- in addition, a Route B was thought to have led, northbound, directly into West Asia, but with a delay of as much as 100 ka as compared to Route A.
- I projected the unfolding of NCs largely onto Route A, which was taken to constitute a crude time axis, along which I situated the various CITIs, each with their specific NCs as I then understood them.



However, further reflection on the contradictory empirical implications of this model, and more extensive perusal of the genetic and archaeological literature, now leads to extensive revision.

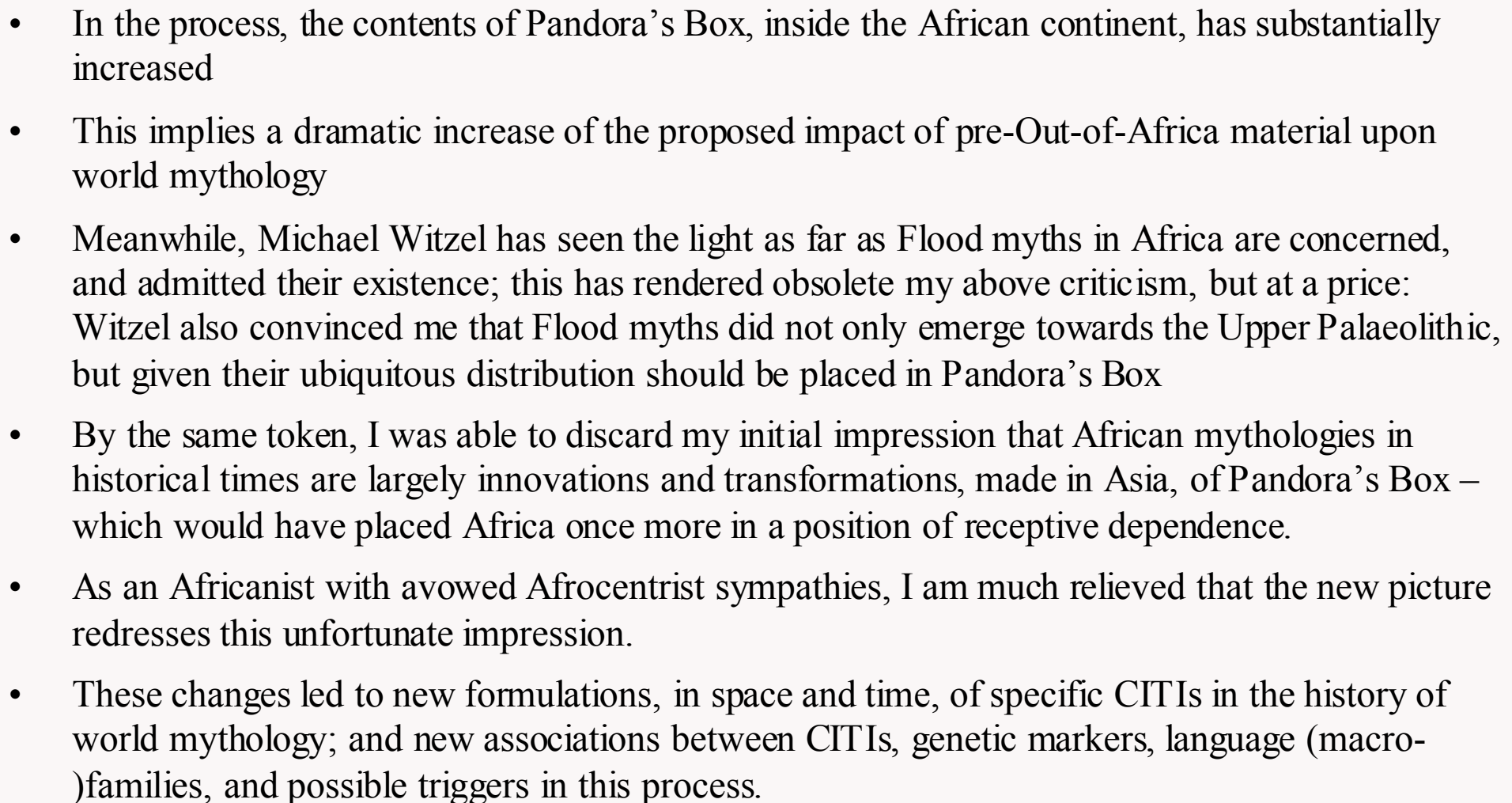
The early Route A ended in a dead end: Australia and New Guinea, and was *not* continued from there, westward and northward into Asia, the New World, Europe, and 'Back-into-Africa'.


Instead, most of the unfolding of world mythology now turns out of have taken place along the 15 ka later Route B, which also has New World ramifications starting in Central Asia.





- Initially I restricted the pre-Out-of-Africa mythological package to very few elements, between which a narrow logical connection could be argued, the Threesome (Trinity) :
 - The Earth,
 - the Lightning Bird (and its Egg)/Rain,
 - and the latter's adversary, the Cosmic / Rainbow Snake
- Further scrutiny and adduction of intercontinental comparative material suggests that Pandora's Box may be considered as more extensive and more heterogeneous, also comprising:
 - From under the Tree
 - The Moon
 - The Spider
- Another correction is that the time scale of the Out-of-Africa migration, turns out to be substantially compressed (from 140 ka to 80 ka), as is the temporal distance between Route A and B (from 100 ka to a mere 15 ka)
- 'The Mantis', initially considered a very recent theme situated at the moment of Khoi-San immigration into Africa from West Asia (10 ka BP), is restored to a position of high antiquity, as part of Route A
- 'Primal Waters and the Flood' could be more precisely and convincingly situated in time and space, revealing a much older, and more northerly origin
- Also, the link between detailed genetic history of AMHs, and the history of specific NCs (= coherent groups of mythemes) has now become much more clear and convincing.

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- In the process, the contents of Pandora's Box, inside the African continent, has substantially increased
 - This implies a dramatic increase of the proposed impact of pre-Out-of-Africa material upon world mythology
 - Meanwhile, Michael Witzel has seen the light as far as Flood myths in Africa are concerned, and admitted their existence; this has rendered obsolete my above criticism, but at a price: Witzel also convinced me that Flood myths did not only emerge towards the Upper Palaeolithic, but given their ubiquitous distribution should be placed in Pandora's Box
 - By the same token, I was able to discard my initial impression that African mythologies in historical times are largely innovations and transformations, made in Asia, of Pandora's Box – which would have placed Africa once more in a position of receptive dependence.
 - As an Africanist with avowed Afrocentrist sympathies, I am much relieved that the new picture redresses this unfortunate impression.
 - These changes led to new formulations, in space and time, of specific CITIs in the history of world mythology; and new associations between CITIs, genetic markers, language (macro-)families, and possible triggers in this process.

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- Another alteration in the model is that now it is less unilineal and mechanical. In the earlier version the whole of mythical history was forced into the straightjacket of one, recursive (hairpin-like) movement, Route A. The new version is much more truly historical, in that movement is multi-directional, spasmodic, and multi-factored. Thus it is only by accident and through devious ways that an originally North Central Asian NC ('The Primal Waters and the Flood') ends up in sub-Saharan Africa, etc.
 - Of course, it has been the extremely ambitious conception of my project in scope (200 ka, global, not just isolated mythological themes but the whole of mythology) which has necessitated substantial revisions immediately after the model's first formulation; the earlier versions were premature, but the present, hopefully more balanced version could only be formulated once the earlier ones had been made explicit, and had found initial peer and institutional support.



A selection from the many remaining questions

- *Why did Route A become abortive after reaching Australia and New Guinea?*
- *Why was there a considerable delay (15 ka) before Route B successfully made inroads into Asia?*
- *Why was Route B so successful and so richly elaborated, both demographically and mythologically? For it is along this Route that AMH succeeded in conquering the entire world*
- *Why did the mythological elaboration along Route B take the form it did?*

The present paper has begun to answer some of these questions, leaving the rest for further research and for specialists.

'Windows of opportunity' ?

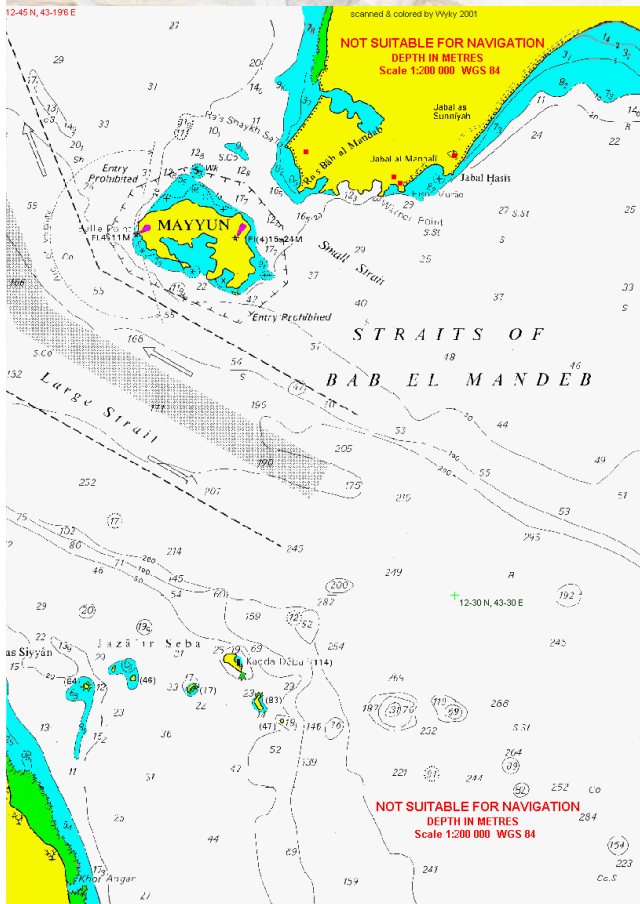
Current wisdom seeks the answer to this kind of questions by reference to 'windows of opportunity' at least partly dictated by fluctuations in sea-levels and climatic conditions', while stressing the intensive and transformative intra-Africa percolation of AMH during the first 100 ka after their emergence (Forster 2004).

Such 'windows of opportunity' are intuitively relevant for Route A: on their first sally Out-of-Africa, AMH apparently stuck to a littoral tropical climate familiar from East Africa

Presumably, AMH crossed significant sea straits only when the opportunity arose – notably, when glaciation heights at the poles produced low sea levels

The latter, incidentally, suggests a well established time frame for such crosses: 155 ka (penultimate Glacial) or 18 ka (last Glacial) – very different from 80 ka for the Bab al-Mandhad (Red Sea), and 60 ka for the Australian Sea, as implied by Forster's 2004 reconstruction; perhaps we need to revise the entire time scale of AMH expansion

However, Route B is largely or entirely overland, across a considerable variety of (palaeo-) climatic zones. Therefore less mechanical, less natural factors need to be invoked to explain both the demographic and the mythological processes that characterise it.



The Neanderthal connection

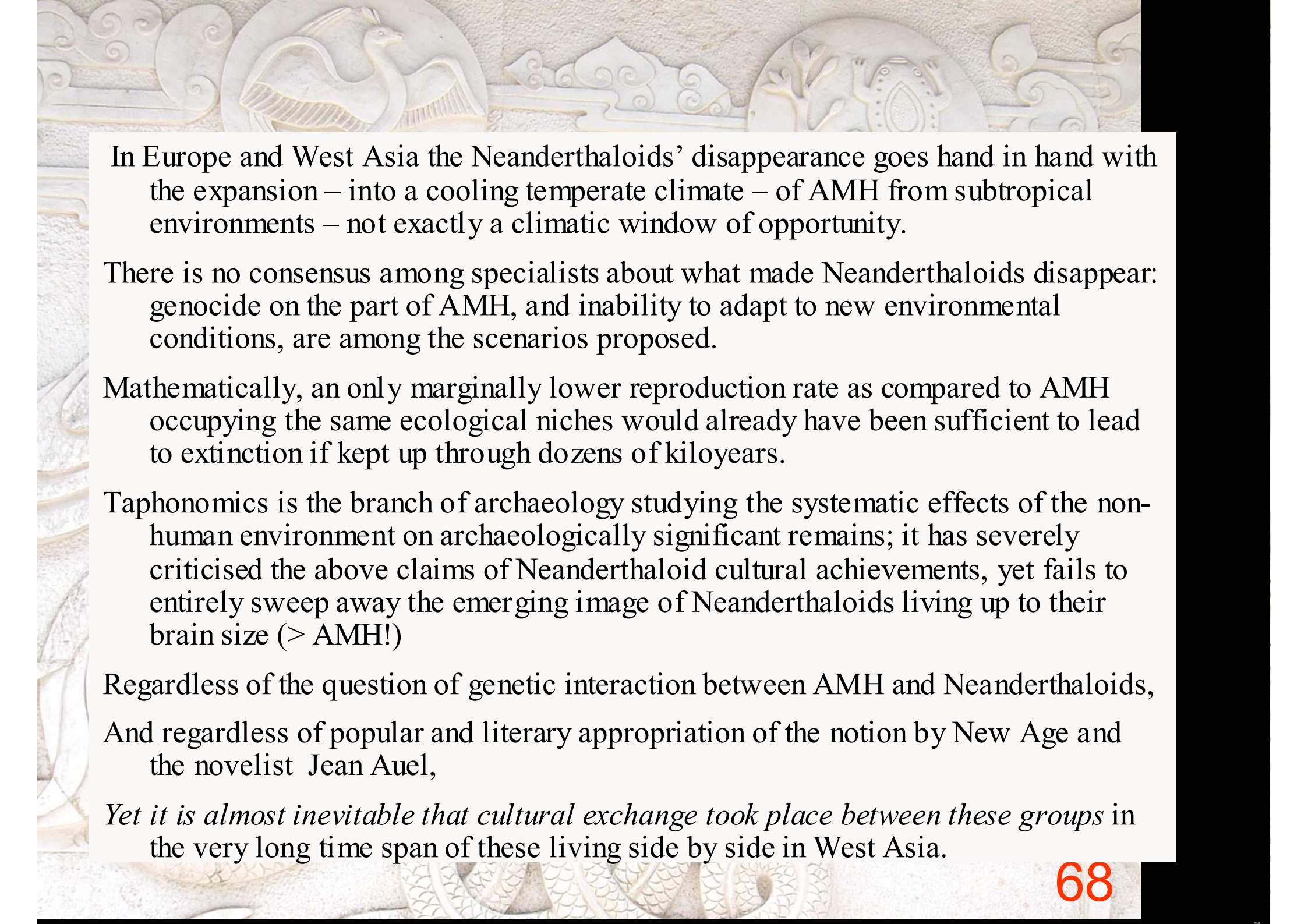
In this connection, we may point to a cultural and demographic 'window of opportunity' that is recently being rescued from the realm of science fiction, and ushered into the realm of empirical science: *the Neanderthal connection*.

In my above maps of the historical development of mtDNA types in association with mythological NCs, I have already taken this factor into account.

For nearly 100 ka, until about the time when AMH set out on Route B, AMH and Neanderthaloids lived side by side in the Levant.

Despite geneticists' claims that they constitute two independent branches of *Homo sapiens*, palaeoanthropologists point to intermediate forms.

In recent decades (e.g. d'Errico *et al.* 1998; d'Errico *et al.* 2003) there has been increasing appreciation of the cultural achievements of Neanderthaloids, ranging from burial to flute music, from flower symbolism to bear-cult ritual, from sculptural representation to stellar maps, from clothing to articulate speech. In that connection, the question of possible cultural exchange between AMH and Neanderthaloids has been reconsidered.



In Europe and West Asia the Neanderthaloids' disappearance goes hand in hand with the expansion – into a cooling temperate climate – of AMH from subtropical environments – not exactly a climatic window of opportunity.

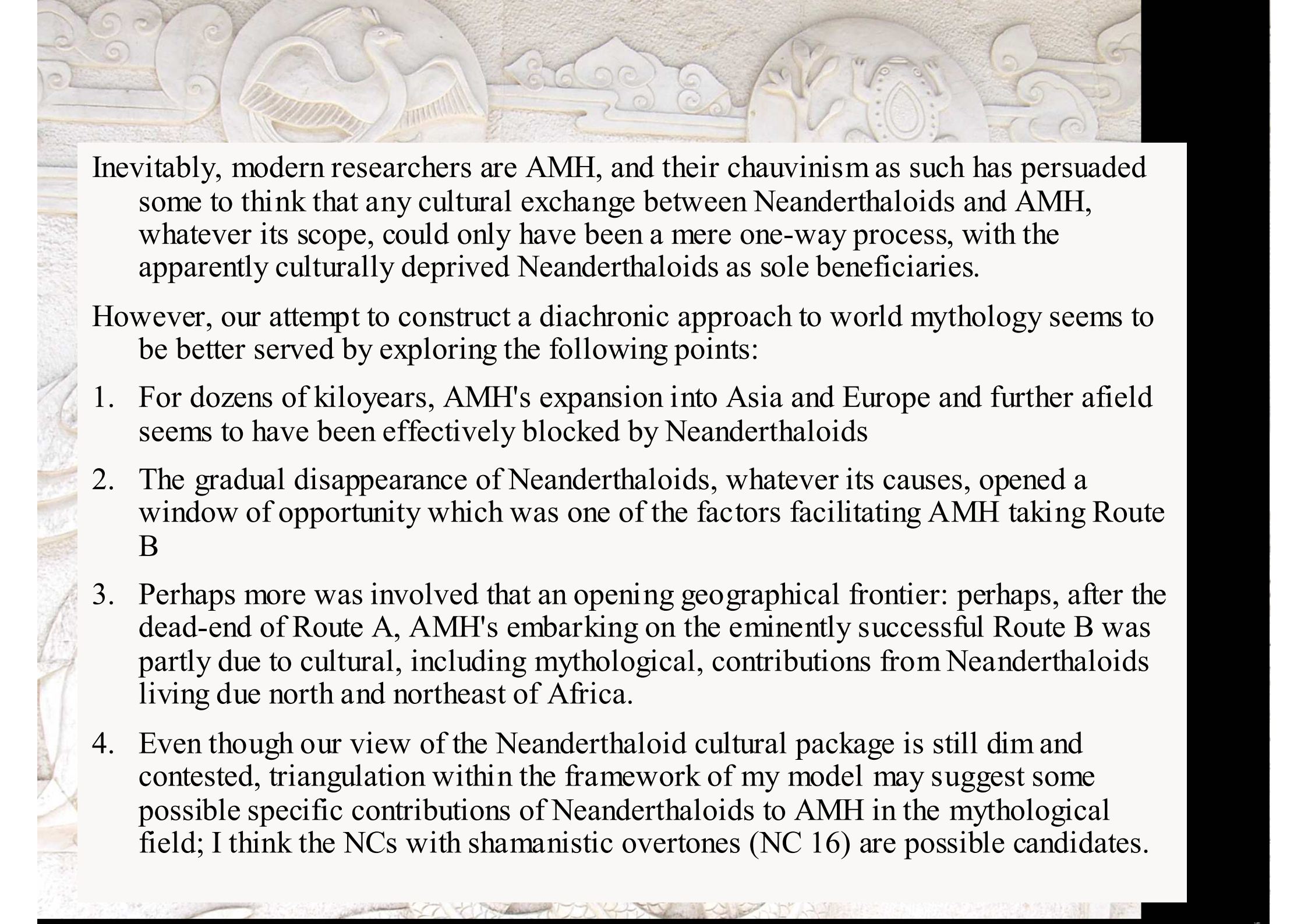
There is no consensus among specialists about what made Neanderthaloids disappear: genocide on the part of AMH, and inability to adapt to new environmental conditions, are among the scenarios proposed.

Mathematically, an only marginally lower reproduction rate as compared to AMH occupying the same ecological niches would already have been sufficient to lead to extinction if kept up through dozens of kiloyears.

Taphonomics is the branch of archaeology studying the systematic effects of the non-human environment on archaeologically significant remains; it has severely criticised the above claims of Neanderthaloid cultural achievements, yet fails to entirely sweep away the emerging image of Neanderthaloids living up to their brain size (> AMH!)

Regardless of the question of genetic interaction between AMH and Neanderthaloids, And regardless of popular and literary appropriation of the notion by New Age and the novelist Jean Auel,


Yet it is almost inevitable that cultural exchange took place between these groups in the very long time span of these living side by side in West Asia.



Inevitably, modern researchers are AMH, and their chauvinism as such has persuaded some to think that any cultural exchange between Neanderthaloids and AMH, whatever its scope, could only have been a mere one-way process, with the apparently culturally deprived Neanderthaloids as sole beneficiaries.

However, our attempt to construct a diachronic approach to world mythology seems to be better served by exploring the following points:


1. For dozens of kiloyears, AMH's expansion into Asia and Europe and further afield seems to have been effectively blocked by Neanderthaloids
2. The gradual disappearance of Neanderthaloids, whatever its causes, opened a window of opportunity which was one of the factors facilitating AMH taking Route B
3. Perhaps more was involved than an opening geographical frontier: perhaps, after the dead-end of Route A, AMH's embarking on the eminently successful Route B was partly due to cultural, including mythological, contributions from Neanderthaloids living due north and northeast of Africa.
4. Even though our view of the Neanderthaloid cultural package is still dim and contested, triangulation within the framework of my model may suggest some possible specific contributions of Neanderthaloids to AMH in the mythological field; I think the NCs with shamanistic overtones (NC 16) are possible candidates.



5. Above, we have also seen Neanderthaloid expressions that could be interpreted in terms of NC 4 (Lightning Bird) and 17 (Speckledness and the Leopard), although these NCs are likely to have a long history among AMHs inside Africa *prior to* AMH and Neanderthaloids living side by side in the Levant. So it looks as if not all NCs were AMH inventions – as if part of the contents of Pandora’s Box may have derived from non-AMH, -- from Neanderthaloids! Of course, Neanderthaloids in a more general sense were not confined to Europe and West Asia but have also been attested in Africa, e.g. Broken Hill/Kabwe, Zambia, in the Lower Middle Palaeolithic.

Conclusions

1. First a disclaimer: as an Africanist, I have only a limited comparative grasp of world mythology, on the basis of obsolete data. This partly accounts for many omissions and for much one-sidedness, which the present paper no doubt displays and which regional specialists on other continents are invited to spot and redress
2. *Yet it appears possible to design a coherent aggregative diachronic approach to world mythology*
3. – an approach that is, moreover, in line with more or less state-of-the-art genetics, linguistics and archaeology/palaeoanthropology; yet here again, my amateurist appropriations need the critical input from experts in these respective fields
4. In the genetic field, a possible confusion must be avoided: if I (and others before me, e.g. Villems; and by general implication, Witzel) link mythical themes to genes (mtDNA types), we are not saying that mythical content is enshrined in genes instead of culture; all we say is that a specific human community, identifiable by specific genes, is postulated as the original owner and transmitter of that specific myth.

- 
5. Yet we must look again at long-range mechanisms (perhaps including biological mechanisms) of cultural inertia and retention, in order to explain a chief finding of my approach: *the persistence of mythical themes across tens of ka*; neither our own cultural experience today, nor standard anthropological theory, has prepared us for this finding
 6. We must also keep in mind that not all aspects of even quite early history of world mythology may be traced by genetic markers of the owners and transmitters of myths (e.g. diffusion of Flood myths to the Ancient Near East, Europe, and the Indo-Iranian region, where the obvious bearers of that myth, marked by mtDNA B, are inconspicuous)
 7. The approach nicely brings out a point that in the conflict-torn, globalising world today may prove to have unique and indispensable survival value: the cultural unity and shared cultural history of us, AMH
 8. This topical relevance may be the approach's saving grace, but of course may also be construed to be a disqualifying ideological slant.


Afrocentrism?

9. A similar ideological criticism may be brought (and has been brought) against the privileged place the African continent occupies in this approach. This can be riposted in a number of ways:

- a. the approach is based on state-of-the-art, world-wide interdisciplinary research, in which – by and large – the contribution from Afrocentrist scholars has been minimal
- b. My own sympathies for Afrocentrism are no secret, yet the selection I have made of (a) is mainstream, and far from Afrocentristically slanted
- c. the approach amounts to a deconstruction, instead of an affirmation, of African identity:
 - In view of the Out-of-Africa model, all AMH today, in whatever continent, are nominally Africans – but in a sense that deprives that term of its (sub-total, distinctive) historical meaning – a meaning that refers to modern Africans' (and their descendants) collective experience in the past few centuries
 - The Back-into-Africa migration, which has profoundly affected all four African language families, makes nonsense of any essentialising of 'primordial' African culture: for the past dozen or so millennia, anything African is likely to have a strong admixture of cultural and linguistic elements from the Asian continent
 - So instead of ideologically essentialising Africa and setting it apart, this approach stresses (and here Afrocentrists do have a point!) how Africa has always been an especially important part of the wider world of AMH.


For the specific field of comparative mythology, this approach has a number of obvious implications:

10. Perhaps NCs are older than AMH, as is suggested by some of our Lower and Middle Palaeolithic visual material above
11. Much light is cast on parallels and continuities which more local or regional, and more presentist approaches to comparative mythology would be unable to explain, e.g.
 - a. The close parallels between African and North American mythology, especially in regard of the themes that I have identified as part of ‘Pandora’s Box’: the initial mythical repertoire of AMH before setting forth ‘Out-of-Africa’
 - b. The amazingly wide, yet far from global, distribution of Flood myths, whose place and time of origin I could rather precisely identify (North Central Asia, 35 ka BP), and the paths and mechanism of whose subsequent spread I could spell out in a way that accounts very well for the distribution – however capricious – of this mythical complex in historical times
 - c. The near-ubiquitous themes of ‘the Adversary’ and of ‘the Threesome (the Trinity!)’, which (as stories conveying basic logical operations) appear to go back to Pandora’s Box
 - d. The extensive continuities between the mythologies of the Ancient Near East, Ancient Egypt, Graeco-Roman Antiquity, the Indo-Iranian region, Ancient Northern Europe, and (as uninvited guest in most world mythology) sub-Saharan Africa – communalities that are adequately explained by
 - The *accumulative* effects of world mythology development between the Out-of-Africa Exodus and the Neolithic in West Asia
 - The Back-into-Africa migration
 - The seething of cultural (including mythological) innovation across a vast region, extending from the Indus to the fertile Sahara, in the proto-Neolithic
 - The subsequent diffusion of these innovations, concomitant with the spread of Afro-Asiatic, Indo-European, Niger-Congo, Nilo-Saharan, and Khoi-San.



11. The emerging long-range perspective with its obvious explanatory power adds an indispensable extra dimension to merely local/regional and presentist or a-historical approaches.

- a. We will no longer be so thrilled by approaches (common, e.g., in Africanist mythological studies and in religious anthropology) seeking to explain a particular myth by reference to local, present social and religious organisation alone
- b. For the formal comparison of myths, Lévi-Straussian structuralism continues to offer essential tools. Also, instead of denouncing his ‘empty’ rationalism, we are aware of the logical operations implied in, e.g., the mythical Pandora’s Box. However, the present approach offers a coherent and elaborate historical model that may liberate structuralism from its timelessness, and that allows the content implications of specific, enduring NCs to set limits to (as Lévi-Strauss has it) the free play of some timeless human ratio
- c. By the same token, this approach adds a grounded and detailed, long-range historical corrective to the tendency, among historians of religion, to a-historically jump from concrete religious (including mythical) phenomena to timeless (near-) universals.



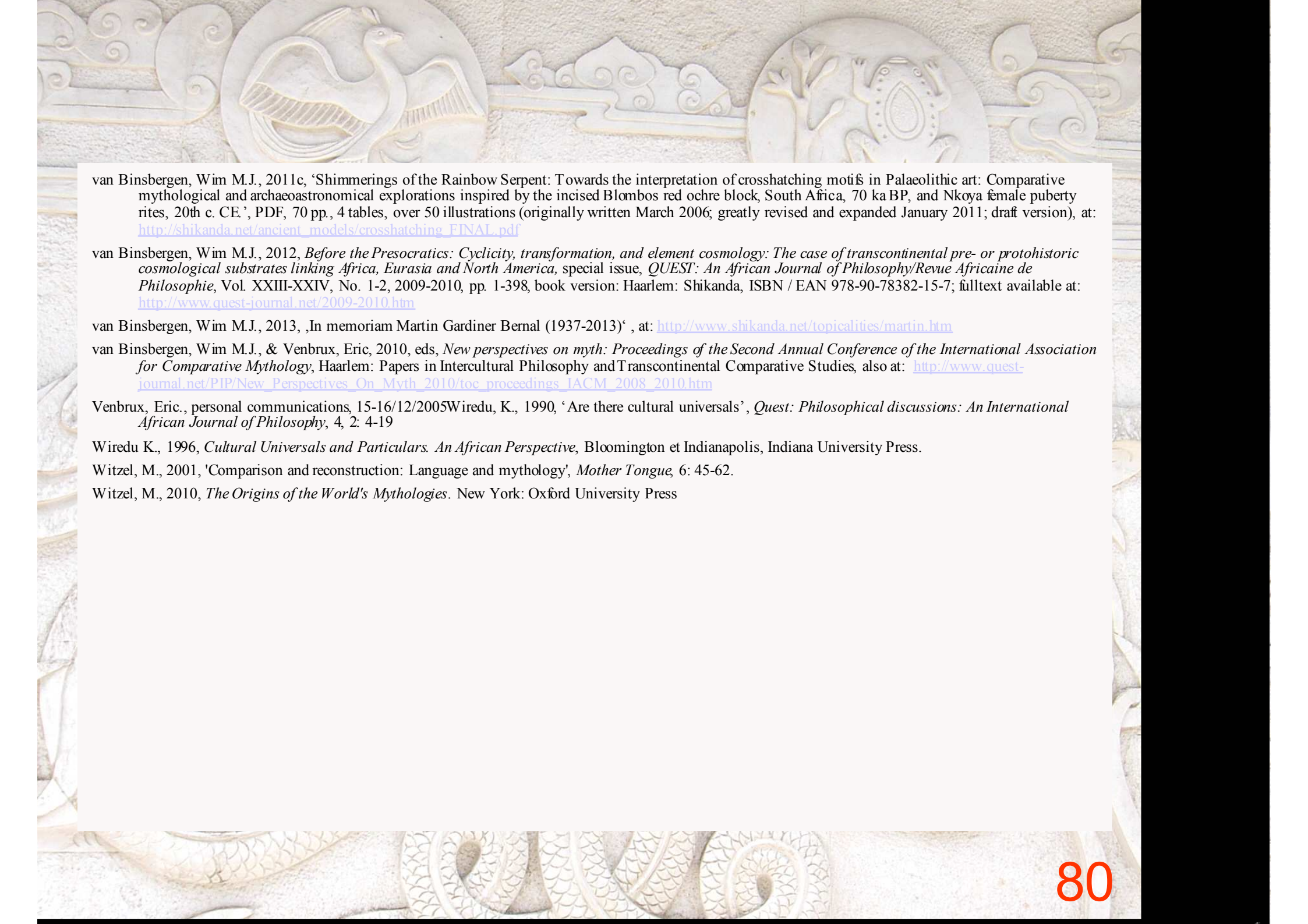
d. Martin Bernal's *Black Athena* thesis (1987) posits a model of Aegean dependence (also mythologically) from Ancient Egypt, within the limited time frame of the Late Bronze Age, and the regional frame of the Eastern Mediterranean. It converges with other Afrocentrist approaches (e.g. Diop), which substitute 'sub-Saharan Africa' for Ancient Egypt, and 'Europe' for 'Ancient Greece, and hence claim decisive cultural dependence of European (by extension North Atlantic, and global) culture from post-Neolithic Africa. Laudable (van Binsbergen 1997 / 2011, 2013) as a pioneering critique of Eurocentrist scholarship, yet Bernal's model must be faulted as myopic in space and time, as Egyptocentric, and as monodirectional and monocausal. Rather than being directly dependent from one another in the mythological field, Greece, Egypt, and sub-Saharan Africa all participated in and benefitted from the extensive transcontinental communalities on which my research in progress has focussed over the last ten years; these communalities informed the entire Extended Fertile Crescent (Sahara to Indus), and had been building up over a dozen of ka, against the background of the entire cultural (including mythological) history of AMH.

References cited (very incomplete)

- Aitchison, J., 1989, 'Hidden treasure: the search for language universals'. In J. Montangero & A. Tryphon (eds.). *Language and cognition* (vol. X). Geneva: Fondation Archives Jean Piaget.
- Auel, J., 1980, *The Clan of the Cave Bear*. New York: Bantam Books, 1980.
- Bednarik, Robert G., 1995, 'Concept-mediated marking in the Lower Palaeolithic', *Current Anthropology*, 36, 4: 605-34.
- Brown, D.E., 1991. *Human universals*. New York: McGraw-Hill
- Bernal, Martin Gardiner, 1987, *Black Athena: The Afroasiatic Roots of Classical Civilization, Vol. I, The Fabrication of Ancient Greece 1787- 1987; II, The Archaeological and Documentary Evidence. III, The linguistic evidence*, London: Free Association Books / New Brunswick: Rutgers University Press
- Brown, D.E., 2000. Human universals and their implications. In N. Roughley (Ed.) *Being humans: Anthropological universality and particularity in transdisciplinary perspectives*. New York: Walter de Gruyter.
- Cassirer, E., 1946, *Language and Myth*, trans. S. K. Langer of *Sprache und Mythos*, Berlin, 1925, New York, .
- Cassirer, E., 1953-1957, *The philosophy of symbolic forms*, 3 vols., New Haven: Yale University Press, English translation by R. Mannheim, of *Philosophie der symbolischen Formen*, Berlin: Cassirer, 1923-1929
- Chaloupka, G., 1993. *Journey in Time*. Sydney: Reed Books
- Décsy, Gyula. 1988. *A Select Catalog of Language Universals*. Bibliotheca Nostratica, Vol. 8. Bloomington: Eurolingua.
- d'Errico, Francesco ; Joao Zilhao; Michele Julien; Dominique Baffier; Jacques Pelegrin , 1998, 'Neanderthal Acculturation in Western Europe?: A Critical Review of the Evidence and Its Interpretation ' *Current Anthropology*, Vol. 39, No. 2, *Supplement: Special Issue: The Neanderthal Problem and the Evolution of Human Behavior*. (Jun., 1998), pp. S1-S44.
- d'Errico, F., C. Henshilwood, G. Lawson, M. Vanhaeren, 2003, 'Archaeological Evidence for the Emergence of Language, Symbolism, and Music – An Alternative', *Journal of World Prehistory*, 17, 1: 1-70.
- Donald, M., 1991, *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*, Cambridge, MA, Harvard University Press.
- Fleming, Harold Crane, 1991, 'A new taxonomic hypothesis: Borean or Boralean', *Mother Tongue*, 14, Newsletter ASLIP, 16 pp.
- Forster, Peter., 2004, Ice Ages and the mitochondrial DNA chronology of human dispersals: a review -- One contribution of 14 to a Discussion Meeting Issue 'The evolutionary legacy of the Ice Ages', *Philosophical Transactions of the Royal Society B: Biological Sciences*, Volume 359, Number 1442 / February 29, 2004, Pages: 255 - 264
- Frazer, James G., 1918, *Folklore in the Old Testament: Studies in comparative religion, legend, and law*. London: Macmillan
- Frobenius, Leo, 1931, *Erythräa: Länder und Zeiten des heiligen Königsmordes*, Berlin/Zürich: Atlantis-Verlag.
- Frobenius, Leo., 1993, *Kulturgeschichte Afrikas: Prolegomena zu einer historischen Gestaltlehre. Mit einem Bildanhang*. (Reprint nach der Ausgabe von 1954 des Phaidon-Verlages, Zürich). Wuppertal: Peter Hammer Verlag gemeinsam mit dem Frobenius-Institut, Frankfurt.
- Garlake, Peter S., 1995, *The Hunter's Visior: The Prehistoric Art of Zimbabwe*, London: British Museum Press / Seattle: University of Washington Press
- Gellner, E.A., 1990, 'Relativism and universals', in: Gellner, E.A., *Relativism and the social sciences*, Cambridge: CUP. pp. 83-100.
- Greenberg, J., 1963, *Universals of Language*. Cambridge: M.I.T. Press.
- Hastings 1909f Index volume, s.v. 'Deluge'
- Hawkins, J.A., 1988, ed., *Explaining language universals*. Oxford: Blackwell.
- Henshilwood, C.S., d'Errico, F., Marean, C.W., Milo, R.G., & Royden Yates, R., 2001, 'An early bone tool industry from the Middle Stone Age at Blombos Cave, South Africa: Implications for the origins of modern human behaviour, symbolism and language', *Journal of Human Evolution*, 41, 6: 631-678.
- Janmart, J., 1946, 'Les stations paléolithiques de l'Angola Nord-Est', *Diamang: Publicações Culturais (Companhia de Diamantes de Angola (Diamang))*, no. 5, Museu de Dundo, Lisbon, pp. 11-65

- Kaiser, M. & Shevoroshkin, V., 1988, 'Nostratic', *Annual Review of Archaeology*, 17, 309-329.
- Lange, Dierk, 2004, *Ancient Kingdoms of West Africa: Africa-Centred and Canaanite-Israelite Perspectives: A collection of published and unpublished studies in English and French*, Dettelbach: Röhl
- Leroi-Gourhan, A., 1958, 'La fonction des signes dans les sanctuaires paléolithiques', *Bulletin de la Société Préhistorique Française*, t. LV, no. 5-6: 307-321
- Lommel, A., 1976, *Prehistoric and primitive man*, London etc.: Hamlyn, first published 1966
- Roheim, Geza., 1952. "The Flood Myth as Vesical Dream", reprinted in Dundes, Alan (ed.) *The Flood Myth*, University of California Press, Berkeley and London, 1988.
- Starostin, Sergei A., 1999, 'Methodology of long-range comparison', in: Shevoroshkin, Vitaly, & Sidwell, Paul J., eds, *Historical linguistics & lexicostatistics*, Melbourne: Association for the History of Language, pp. 61-66.
- 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>.
- Stringer, C. B. & Gamble, C., 1993, *In search of the Neanderthals*. London: Thames and Hudson.
- van Binsbergen, Wim M.J., 1997a ed., *Black Athena: Ten Years After*, Hoofddorp: Dutch Archaeological and Historical Society, special issue, *Talanta: Proceedings of the Dutch Archaeological and Historical Society*, vols. 28-29, 1996-97; updated and expanded version: van Binsbergen, Wim M.J., 2011, ed., *Black Athena comes of age: Towards a constructive re-assessment*, Berlin / Boston / Munster: LIT; fulltext of selected chapters at: http://shikanda.net/topicalities/chapter_12_Black%20Athena_COMES_OF_AGE_.pdf
- van Binsbergen, Wim M.J., 2003 / 2009, 'Rupture and Fusion in the Approach to Myth: Situating Myth Analysis Between Philosophy, Poetics and Long-Range Historical Reconstruction', *Religion Compass*, 3 (2009): 1-34; full text at: http://shikanda.net/topicalities/RECO_128_def.pdf, paper presented 2003
- van Binsbergen, Wim M.J., 2004a, 'Long -range mythical continuities across Africa and Asia: Iconographic and linguistic 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
- van Binsbergen, Wim M.J., 2004b, 'The contemporary manifestation of Deep Structure in Africa', paper read at: *The Concept of Agency in African History: A workshop on structure and agency in African history*, 27 – 28 May 2004, Leiden, African Studies Centre, Leiden; convenor: Jan-Bart Gewald; at: http://www.shikanda.net/ancient_models/agency_webpage/agency_www.htm
- van Binsbergen, Wim M.J., 2004c, 'The Leopard in the Garden of Eating: From food for thought to thought for food – towards a world history of difference', paper read at, *The Garden of Eating: Experiencing the thought of Gilles Deleuze in cultural practices*, 29 May 2004, Rotterdam: Faculties of Philosophy / History and Art; convenor: Rick Dolphijn; at: http://www.shikanda.net/general/webpage_deleuze/deleuze_leopard_www.htm
- 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 [Research Institute for Humanity and Nature] and 7th ESCA [Ethnogenesis in South and Central Asia] 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; also, with a new postscript on Afrocentrist ideology, February 2006, at: http://www.shikanda.net/ancient_models/mythical_archaeology/kyoto_paper_final_2-2006.pdf
- 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

- 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
- van Binsbergen, Wim M.J., 2007, Extensive table of Old World mythological continuities, classified on the basis of 20 Narrative Complexes (NCs) as found in a corpus of sub-Saharan African cosmogonic myths collected in historic times: including mythologies from Ancient Egypt, Graeco-Roman Antiquity, the Bible, and selected other literate civilisations of the Old World, outside sub-Saharan Africa. at: http://www.shikanda.net/ancient_models/Mythological%20continuities%20def.pdf
- van Binsbergen, Wim M.J., 2007, 'Out of Sundaland? A constructive assessment of Oppenheimer's thesis claiming decisive Indonesian prehistoric cultural influence on West Asia, Africa and Europe, specifically on the core mythologies of the Ancient Near East and the Bible', Paper, joint conference 'The Deep History of Stories', organised by The International Association for Comparative Mythology and The Traditional Cosmology Society, Edinburgh, Scotland, United Kingdom, 28-30 August 2007; available at: http://www.shikanda.net/topicalities/edinburgh_best_web/edinburgh_BEST_files/frame.htm ; published as: van Binsbergen, Wim M.J., in collaboration with 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.
- van Binsbergen, Wim M.J., 2009a, 'Giving birth to Fire: Evidence for a widespread cosmology revolving on an elemental transformative cycle, in Japan, throughout the Old World, and in the New World', paper presented at the Third Annual Meeting of the International Association for Comparative Mythology, Tokyo, Japan, 23-24 May 2009; at: http://www.shikanda.net/topicalities/paper_Japan_final.pdf; cf van Binsbergen 2010b .
- 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: van Binsbergen, Wim M.J., & Venbrux, Eric, 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*, 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., 2010, 'The heroes in Flood myths worldwide; Seeking to capture prehistoric modes of thought by means of quantitative contents analysis' (70 pp.), paper delivered at the 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
- van Binsbergen, Wim M.J., 2011a, 'Cosmic egg and Pelasgian realm: A distributional study in Comparative Mythology', at: <http://shikanda.net/topicalities/Cosmic%20egg%20by%20Wim%20van%20Binsbergen%202011.pdf>
- van Binsbergen, Wim M.J., 2011b, 'Matthew Schoffeleers on Malawian suitor stories: A perspective from Comparative Mythology', in: Nthenda, Louis, & Mphande, Lupenga, Eds, *The Society of Malawi Journal*, Special Memorial Edition, 64, 3 (supplementary electronic edition), 2011: A Tribute to the Life of Fr. Matthew Schoffeleers (1928 — 2011): Malawianist, Renaissance man and free-thinker, pp. 76-94; at: www.societyofmalawi.org/Matthew%20Schoffeleers%20Memorial%20Edition.pdf

- 
- van Binsbergen, Wim M.J., 2011c, '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.', PDF, 70 pp., 4 tables, over 50 illustrations (originally written March 2006; greatly revised and expanded January 2011; draft version), at: http://shikanda.net/ancient_models/crosshatching_FINAL.pdf
- van Binsbergen, Wim M.J., 2012, *Before the Presocratics: Cyclicity, transformation, and element cosmology: The case of transcontinental pre- or protohistoric cosmological substrates linking Africa, Eurasia and North America*, special issue, *QUEST: An African Journal of Philosophy/Revue Africaine de Philosophie*, Vol. XXIII-XXIV, No. 1-2, 2009-2010, pp. 1-398, book version: Haarlem: Shikanda, ISBN / EAN 978-90-78382-15-7; fulltext available at: <http://www.quest-journal.net/2009-2010.htm>
- van Binsbergen, Wim M.J., 2013, 'In memoriam Martin Gardiner Bernal (1937-2013)', at: <http://www.shikanda.net/topicalities/martin.htm>
- van Binsbergen, Wim M.J., & Venbrux, Eric, 2010, eds, *New perspectives on myth: Proceedings of the Second Annual Conference of the International Association for Comparative Mythology*, Haarlem: Papers in Intercultural Philosophy and Transcontinental Comparative Studies, also at: http://www.quest-journal.net/PIP/New_Perspectives_On_Myth_2010/toc_proceedings_IACM_2008_2010.htm
- Venbrux, Eric., personal communications, 15-16/12/2005
- Wiredu, K., 1990, 'Are there cultural universals', *Quest: Philosophical discussions: An International African Journal of Philosophy*, 4, 2: 4-19
- Wiredu K., 1996, *Cultural Universals and Particulars. An African Perspective*, Bloomington et Indianapolis, Indiana University Press.
- Witzel, M., 2001, 'Comparison and reconstruction: Language and mythology', *Mother Tongue*, 6: 45-62.
- Witzel, M., 2010, *The Origins of the World's Mythologies*. New York: Oxford University Press