

# Mythological archaeology

## Situating sub-Saharan African cosmogonic myths within a long-range intercontinental comparative perspective

by Wim van Binsbergen

African Studies Centre, Leiden / Chair of Intercultural Philosophy, Rotterdam  
binsbergen@ascleiden.nl

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**ABSTRACT.** The present argument reflects an attempt to write a coherent world history of mythology along strict methodological lines of empirical enquiry. Point of departure is the Out-of-Africa hypothesis. The argument seeks to identify the mythological content, if any, of the Out-of-Africa package (140,000 BP). For this purpose a corpus of c. 200 mythemes is constructed from sub-Saharan African cosmogonic myths as attested in historical times. The corpus is then subsumed under 20 Narrative Complexes, whose number is further reduced because some turn out to be implied in others. The Narrative Complexes are subjected to elaborate methodologies of absolute and relative dating, based on considerations from the fields of astronomy, genetics, archaeology, modes-of-production analysis, distributional analysis, and hermeneutics; these are also argued to offer clues as to the location of origin of each Narrative Complex. It turns out that, as an abstract model with mainly heuristic claims, all Narrative Complexes may be situated, in space and time, along a sustained global mainstream process of mythological development. This starts out in South East Africa with a pre-Out-of-Africa package, subsequently follows the recursive path (first eastward, then westward) of Anatomically Modern Humans across the Old World, finally to be fed back, secondarily, into Africa. In the process, the successive Narrative Complexes emerge, spread, and interact, in argued relation with innovations in the fields of modes of production, socio-political organisation, and languages. In this way a small original pre-Out-of-Africa mythical package is identified, revolving on the themes of the earth, the eminently cosmogonic lightning bird, and the rainbow. All the other Narrative Themes in the recent African data set are continuous with Asian material and are argued to have originated on Asian soil, or (in the case of the most recent Narrative Complex) to originate in the Neolithic Extended Fertile Crescent ranging from West Asia to North-eastern Africa including the Sahara. From the Upper Palaeolithic onward, the mainstream east-west recursive movement interacted with a direct northbound diffusion of pre-Out-of-Africa material (earth-lightning-rainbow) into North Africa, Europe and Asia, provided Anatomically Modern Humans had already arrived there; this has resulted in a substratum (in myth, ritual and folklore) that complements the otherwise prevailing Asian antecedents. Thus, sub-Saharan African mythology finally sheds its habitual isolation from world mythology, and turns out to be, in its own right, world mythology *par excellence*. Extensive continuities between African, West and South Asian, and European mythologies are revealed and explained. While predicated on Witzel's seminal long-range approach to world mythology, his Laurasian/Gondwana dichotomy is replaced by a systematically argued combination of continuity, transformation, interaction, and feedback.

'There is all Africa and her prodigies in us' (Browne 1642: I, 15; cf. Shreeve 1996: 57)

### 1. Introduction

#### 1.1. The problem

Based on the analysis of a corpus of African cosmogonic ('creation') myth as attested in historical times, the present argument is an attempt to write a coherent world history of mythology along strict methodological lines of empirical enquiry.<sup>12</sup>

Subsaharan Africa has usually been left out from comprehensive intercontinental myth comparisons,<sup>3</sup> for a number of practical scholarly reasons (to which we might add another likely reason, notably the hegemonic ethnocentrism of the North Atlantic region). Deriving from practically illiterate traditions, the construction of an African mythological corpus appears highly artificial – especially since dominant approaches to African religion have stressed ritual's praxeological microdramatics over the *in vitro* logocentric verbiage of myth. The available African material tends to be fragmentary, heterogeneous, often poorly collected and poorly published, and

rather inaccessible to non-Africanists. It often appears to be contaminated with Islamic, Christian, and general West- or South Asian influences, which may be held to obscure what may be assumed to be older, presumably more original and local layers. Africanists have gone on to concentrate on more topical subjects, seeking to debunk modern myths with their respective disciplines' North Atlantic rationality rather than studying old myths whose logic leaves them confused – confronting them with forms of African pre-modernity which political correctness has a problem appreciating. It is mainly in certain domains, widely apart, that African myths still manage to captivate Africanist researchers: political history and legitimation (see below), African literature, the analysis of cosmologies informing present-day daily and ceremonial life, African philosophy, and rock art studies. A number of salient themes have been recognised in African myths, such as stories on the origin of death, and more in general cosmogonic or creation stories, on which the present study will concentrate.

Now that the past two decades' concerted efforts (by geneticists, linguists, archaeologists, anthropological comparativists, and myth analysts) is beginning to yield an increasingly coherent and convincing long-range picture of intercontinental population movements, cultural flows, exchanges and feed-backs with a time depth of tens of thousands of years and more, it is time that Africa's myths are reconsidered from this perspective. All the more so, because the African continent plays a pivotal role in the geneticists' reconstructions, not only as the original cradle of humankind perhaps 4 million years ago, but as the cradle of Anatomically Modern Humans (subsequently spread across the globe as a result of the 'Out of Africa' movement, ca. 140,000 BP), and as the scene of considerable re-immigration from Asia in far more recent periods.

*Was there really any original 'Out of Africa' package to spread across the world, and did it contain any detectable mythical material?* Only a few years ago such a question would be dismissed to the realm of science fiction. Yet it is with this kind of questions in mind – ultimately leading us to identify mankind's oldest stories – that Michael Witzel (2001) proposed a radical distinction between the 'Laurasian' (Asia-North America) and 'Gondwana' (sub-Saharan African, cf. Australia and New Guinea) mythical complexes, to be compared not so much by individual traits but as wholes.

<sup>1</sup> This is a revised revised version of a paper for the comparative myth section of the Research Institute for Humanity and Nature (RIHN) Pre-Symposium / 7<sup>th</sup> ESCA Harvard-Kyoto Roundtable on 'Ethnogenesis of South and Central Asia', organised by RIHN, NIHU / Harvard University, the Department of Sanskrit and Indian Studies, Kyoto, Japan, 6-8 June, 2005. I wish to acknowledge my gratitude: to the Research Institute for Humanity and Nature (RIHN), and to Harvard University (the Department of Sanskrit and Indian Studies), for inviting me to this exciting intercontinental intellectual event; to the conference participants for their stimulating discussions; to Michael Witzel for seminally offering a new framework for my long-standing passion for myth; to the African Studies Centre, Leiden, for creating a stimulating environment in which the present, and related, research is being conducted; and to Patricia Saegerman for sharing with me, as usual, the excitement and the frustrations of the present research, and being my sparring partner at all stages of the project.

<sup>2</sup> In this article, I must concentrate on results and can only cursorily indicate my methodologies even though these largely determine the merits of this exercise; the same applies to bibliography. Book-length treatment will be given in van Binsbergen, in preparation, available in draft at: [http://www.shikanda.net/ancient\\_models/mythical\\_archaeology/mytholog.htm](http://www.shikanda.net/ancient_models/mythical_archaeology/mytholog.htm).

<sup>3</sup> E.g. Eliade 1949, 1960, 1963, 1968, 1969; Fontenrose 1980; Ginzburg 1966, 1989, 1992.

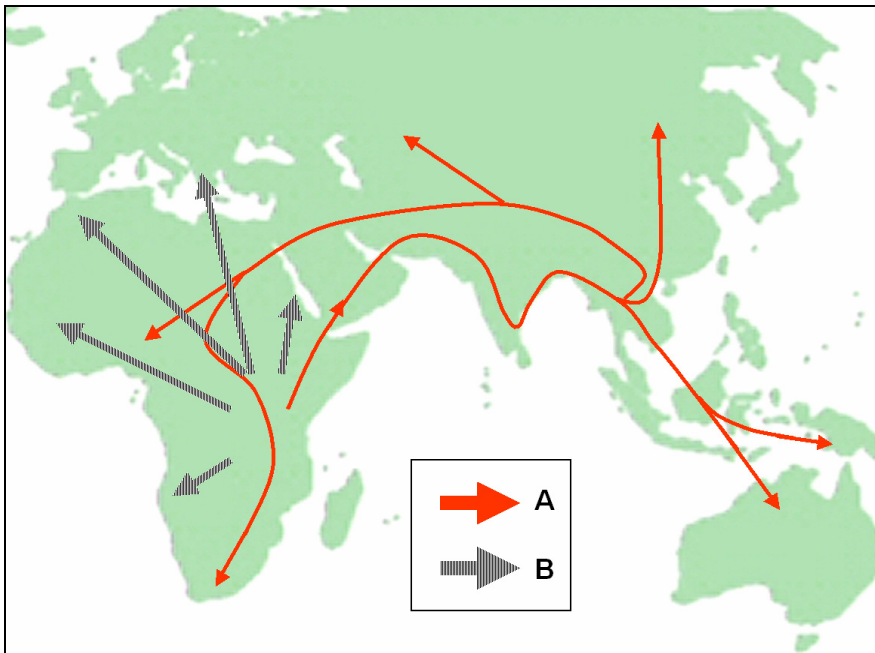


Figure 1. Simplified model of the Out-of-Africa migration (c. 140,000 BP) and the Back-to-Africa return migration (from c. 20,000 BP)

A. Out-of-Africa migration and subsequent major migrations of Anatomically Modern Man  
 B. Local spread of the pre-Out of Africa cultural package in order to highlight the basic west-east-west movement, secondary spread and feedback effects have largely been ignored.

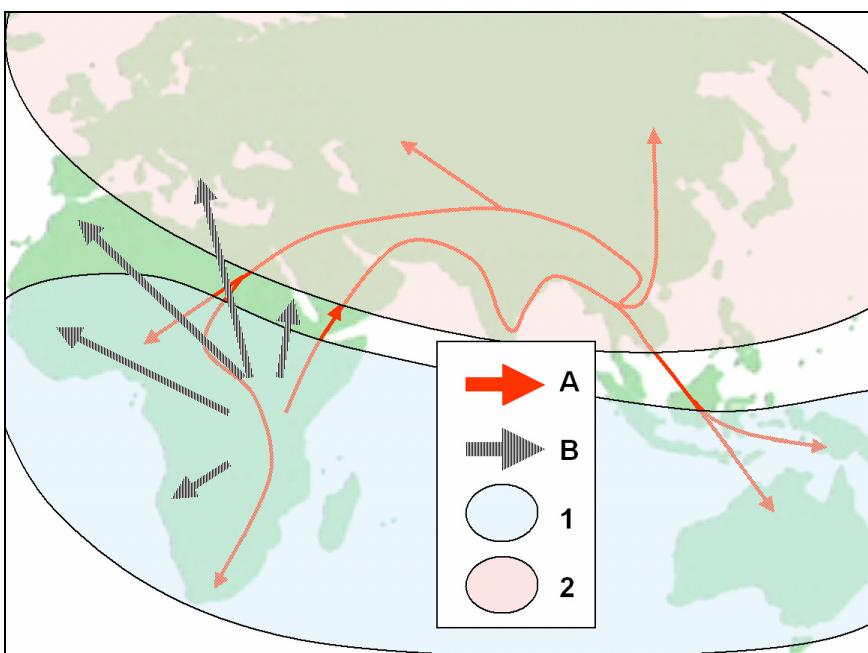


Figure 2. Michael Witzel's recent proposal for absolute discontinuity in comparative world mythology, projected onto a simplified model of the Out-of-Africa migration (c. 140,000 BP) and the Into-Africa return migration (from c. 20,000 BP).

- A and B, see Figure 1.
- |   |                                   |
|---|-----------------------------------|
| 1. 'Gondwana' mythologies                                   | 2. 'Laurasia' mythologies         |
| • No true cosmogony or anthropogony                         | • True cosmogony and anthropogony |
| • From tree   | • Cosmic egg                      |
| • Other Laurasian traits may be absent, e.g. no Flood myths | • Father Heaven/ Mother Earth     |
| • History as cyclical                                       | • History as epic/linear          |
|   | • Flood myths                     |
|   | • Kings and Heroes                |

'While Laurasian mythology can be described as being highly interested in origins, especially the origins of the universe and the succession of the various generations of the gods and that of four subsequent ages, the mythologies of Africa and Australia, New Guinea generally do not take notice of this question and generally confine themselves to describe the emergence of humankind in an already existing world. (...) It is significant that certain motifs are altogether missing in this Gondwana belt. Typical examples are the lack of cosmogonic myths that tell the origin of the world or of the lack of flood myths, or of details such as the lack of female witches.' (Witzel 2001: 5). On the other hand, the notion of mankind's origin from a tree-trunk appears, to Witzel, a positive Gondwana trait, peripherally retained in some Laurasian contexts and perhaps revealing the oldest 'pan-Gaea' layer.

In the present paper I seek to answer the following questions:

1. Can we identify any mythical contents that arguably belonged to the postulated 'Out of Africa' package, subsequently to spread across the world?

2. After the Out-of-Africa migration, was any primal mythical material left to percolate inside Africa, and can we identify it?
3. What, if any, was the effect of more recent return migration into Africa, on the corpus of African myths now available?
4. Can we propose systematic reasons why the intercontinental dynamics of world mythology may have taken the form speculatively reconstructed here?

### 1.3. The method to be followed in this argument

The method I will follow is straightforward and obvious, and consists of the following steps:

1. Construction of a corpus, as representative and as complete as possible, of mythical material from sub-Saharan Africa, and rendering of that corpus in one language of analysis (English). Large problems are to be confronted here, of recording method, language mastery, contamination of the data with the collectors' own (typically North Atlantic, Christian, evolutionist,<sup>4</sup> diffusionist, hegemonic etc.) mythical beliefs, etc. A discussion of these problems falls outside our present scope. The present argument is predicated on the assumption that these methodological and knowledge-political shortcomings do not totally invalidate the corpus. My main reason for this assumption is that the pattern emerging from my analysis of this (admittedly highly defective) corpus yet turns out to make considerable sense; but I am aware of the circularity of such an argument.
2. Identification of individual mythemes in that corpus
3. Combining of these individual mythemes into a much smaller number of explicit Narrative Complexes.
4. Perhaps the most difficult, and certainly the most crucial part of the whole exercise: designing an explicit methodology that allows us to advance explicit and systematic reasons (derived from astronomy, genetics, linguistics, archaeology, ethnographic distributions, modes-of-production analysis, hermeneutics, etc.) for situating each of these Narrative Complexes at a particular place and time within the overall long-range Out of Africa.
5. Integrating the emerging pattern into an overall, again very highly tentative scheme encompassing the entire Old World since the putative Out-of-Africa migration (c. 140,000 BP).
6. Taking a very relative view of such a scheme, as merely a heuristic framework inviting a future growth of knowledge and insight in world mythology.

## 2. The empirical data

### 2.1. Construction of a corpus

For the current provisional and exploratory analysis, I have approached the problem of the construction of a sub-Saharan mythological corpus in a very pragmatic way. What is required is a data set that is sufficiently rich and comprehensive to bring out repetitive patterns of major mythemes, and show these mythemes in the context and in connection with other mythemes. Much like the set of literary works on the basis of which a literary scholar provisionally reports on a national literature in a particular period, such a data set need not be totally complete, up-to-date, philologically impeccable, nor randomly representative, as long as it covers a large part of the available sources, and contains the more salient types and cases. For the sake of comparative treatment of the mythemes, the data set must also be rendered in one language of analysis, for which I have preferred English. Moreover the construction of the data set needed to be concluded within a reasonably short time, so as to concentrate on analysis. A practical solution was offered by the presence of an extensive electronic collection of African mythical fragments in Rens van der Sluijs' *Mythopedia* (van der Sluijs n.d.) My general

<sup>4</sup> In the sense of a paradigm, dominant in late 19th c. CE North Atlantic scholarship, according to which human cultures, including expression in the fields of religion, literature and art, typically traverse fixed evolutionary stages from more primitive to more civilised, with the highest stage being, inevitably and revealingly, reserved for the militarily and politically dominant European colonising nations at the time. Such evolutionism is clearly a hegemonic Eurocentrist ideology, and is completely divorced from the modern biological evolution theory that underlies state-of-the-art, scientific Palaeoanthropology.

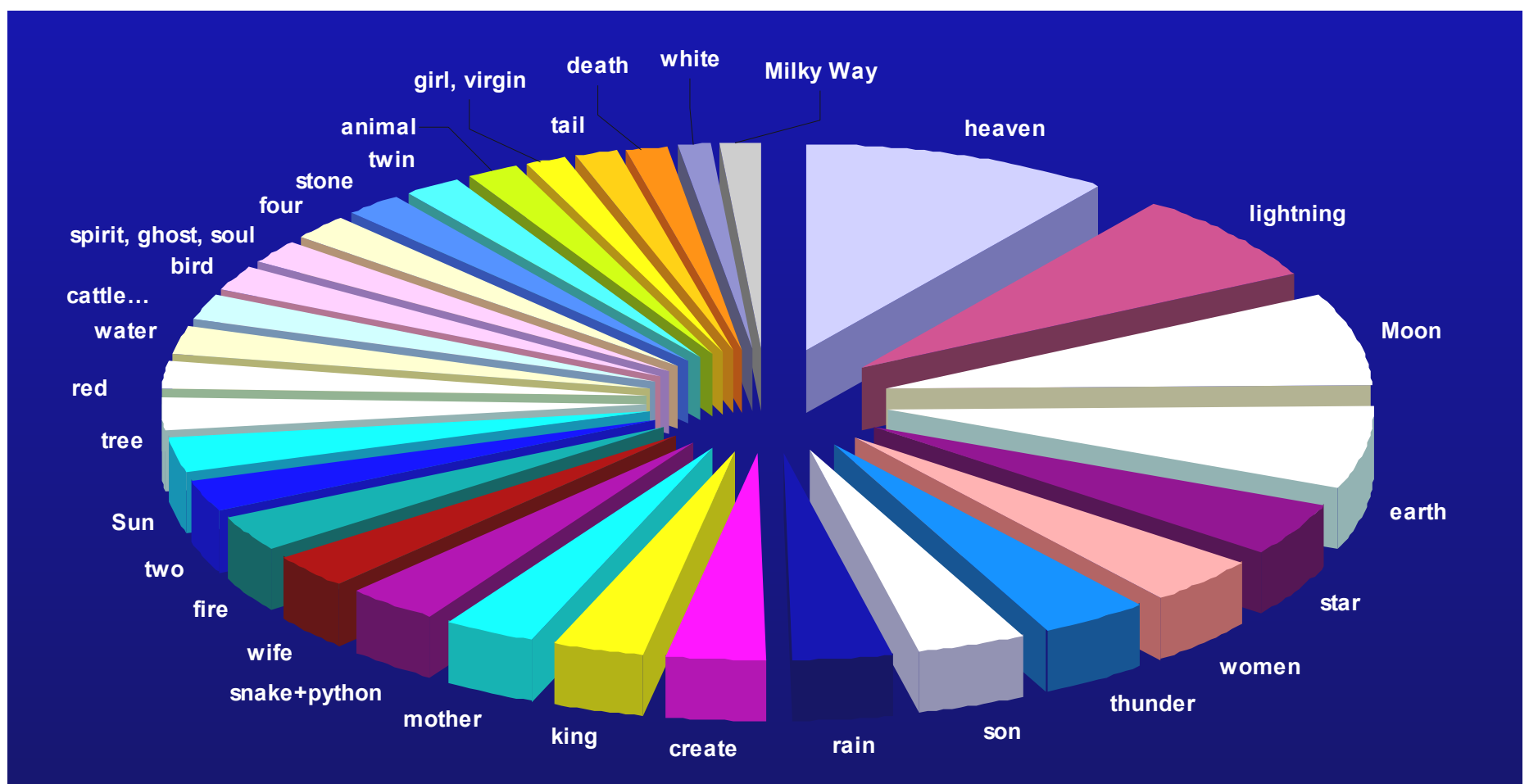


Figure 3. Graphical summary of Table 1 for the key words that occur with the highest frequency in our data set.

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.

acquaintance with the African material allowed me to recognise this collection's usefulness and considerable level of representativeness, to trace the provenance and bibliographic background of the materials included when these were given with adequate scholarly detail, and to add to the material on the basis of my own primary data collection in various parts of Africa since the late 1960s.

Although I consider the resulting sub-Saharan mythological corpus of sufficient scope and quality to base the present exploratory study upon, still my tentative conclusions will have to be checked, in the near future, on the basis of a much more systematic and comprehensive data set still to be constructed.

## 2.2. Identification of individual mythemes relating to cosmogony in Africa

After constructing the provisional data set, we are ready to isolate a number of mythemes.<sup>5</sup> However, before we do so it is instructive to subject the data set to a different, less sophisticated form of content analysis: by listing – without any attempt at exhaustiveness, so omitting obvious words such as house, food etc. – words or concepts that occur, in the data set, with conspicuous frequencies.. Figure 3 gives a graphical summary of the relative frequency with which the most frequent key words occur in our data set.

<sup>5</sup> Against the background of the established tradition of research into myth and fairy tales, any attempt at the classification of motifs must be evaluated and calibrated against the Aarne-Thompson numerical motif index, for which Aarne laid the foundation in the beginning of the 20th c. CE. (Cf. Aarne & Thompson 1973.) Although a wealth of mythical material from all over the world has been processed according to this index (cf. British Columbia Folklore Society 2000, which provides an impressive bibliography), the exclusion with which sub-Saharan Africa is treated in comparative mythology is clear from the fact that hardly any African material has been thus indexed. (With the exception of the unpublished PhD thesis by Clarke (1958) for West Africa; and two collections of Ancient Egyptian material (Maspero 2002; El-Shamy 1980.) It would be a major task in its own right to process, in terms of the Aarne-Thompson index, the sub-Saharan African cosmogonic material on which the present study is based. Without denying the desirability of such processing, I submit that my present purpose is not classification but exploration. Therefore I feel justified to postpone till some other time, and preferably to leave to some other researcher, the task of bringing my own tentative classification of sub-Saharan African cosmogonic myth in line with the Aarne-Thompson classification. Probably such a further analysis will cast additional light on the long-range connections I claim to discover in the present study, and in that respect it would be an obvious next step. On the other hand, the present study implies the claim that much, if not all, of global mythical material may be subsumed under the twenty Narrative Complexes I tentatively distinguish, and in that respect my approach implies an attempt to establish the kind of comparative connections for which the Aarne-Thompson index was initiated but which research along those lines appears to have seldom delivered.

Narrative Complex
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

Table 1. Overview of a set of twenty cosmogonic Narrative Complexes as constructed on the basis of the set of over two hundred individual mythemes (for reasoned details, see van Binsbergen, in preparation, Appendix II)

## 2.3. Combining the over two hundred individual mythemes in our data set of sub-Saharan African cosmogonic mythology, into twenty Narrative Complexes

Two hundred distinct mythemes is too large to handle in a qualitative analysis looking for historical patterns. Through an extensive process of classification and close reading that cannot be discussed in our present scope (see van Binsbergen, in preparation: Appendix 1 and footnotes to Table 2) we end up with twenty Narrative Complexes (Table 2) that together systematically accommodate all the mythemes encountered in the data set.

## 2.4. Reducing the number of cosmogonic Narrative Complexes: Which Narrative Complexes may be considered transformations of other Narrative Complexes in the sub-Saharan African mythological material?

We may now proceed to assess whether all the twenty Narrative Complexes as distinguished in Table 2 are irreducibly independent, or whether, on the contrary, some of them may be considered trans-

formation or equivalents of the other Narrative Complexes. If the latter is the case, we will end up with a somewhat smaller number of Narrative Complexes for dating and for reconstructing of the pre- and post-Out-of-Africa history of Old World.

### 3. Situating each of the remaining Narrative Complexes in time and place

#### 3.1. Preliminary remark: The rate of cultural change

The kind of long-range intercontinental connections and continuities we are looking for in the present argument are only conceivable under at least one condition: that items of culture may remain relatively stable and unchanged across centuries, even millennia, even tens of millennia. This is not the experience of many people now living, who have seen their world change almost beyond recognition during their lifetime. Of course, both

- adaptability to a changing environment and to new influences, on the one hand, and
- a Gestalt-like propensity to continuity,

are essential, and complementary, features of any cultural patterning. If we implicitly claim cultural continuities across millennia, even across the time-span separating us today from the ‘Out-of-Africa’ migration, a theory of cultural retention is required, that provides a radical explanation for such retention. Such a theory is not currently available at any level of sophistication and persuasiveness. At a weaker and more intuitive level, one might attribute long-range retention to two factors:

- ritual enshrinement (often implicit, and non-verbal) of ancient cultural patterning
- the remote possibility that thought patterns that fundamentally organise the human experience (such as basic myths) spill over from the realm of what one acquired through individual learning processes (‘culture’), and become somehow hereditary on an organic basis (‘nature’); this is a reformulation of Jung’s contentious idea of the collective subconscious.

Identifying the ritual factor leaves unanswered the theoretical question as to why the ritualisation of a cultural item should be particularly conducive to its inertia. This presses all the more since we know that ritual itself is far from exempted from change (e.g. van Binsbergen 1981). How then could ritual enshrinement of ancient cultural patterning bring about long-range spatio-temporal continuity of culture items (such as myth) across dozens of millennia and many thousands of kilometers? Perhaps the following answer may be suggested. Ritualised cultural items (which usually have a strong practical anchorage in bodily routines such as prayer movements, dancing, music, breathing exercises, trance, etc.) may display high inertia because the historical participants possessing these items *tend to think of them as inert*. Collectively owned and managed myths, much like the personal narratives of psychic trauma that appear to be the individual counterparts of such myths, do not carry *date tags* – they are outside history, *in so far as the conscious reflection of the owners of these myths is concerned*. Whenever myth appears, it represents an all-overwhelming mythical present, that imposes its illuminating but often tyrannical order upon everything else. Yet myths were, unmistakably, created in history, and the central problem of my argument is to try and assign some kind of relative date to the various mythemes, and complexes of mythemes, to be identified in the African mythical material.

#### 3.2. Defining methodologies for dating the cosmogonic mythical material

In the earlier steps in the present argument I have engaged in a straightforward and highly predictable form of data reduction: from a raw data set of latter-day African mythical material, to over two hundred specific mythemes; and from the latter, to about a score Narrative Complexes. The possible merit of my argument does not lie there, but in the next step: seeking to situate each Narrative Complex in space and time, as the decisive step towards an argument provisionally identifying the likely composition of the (postulated) original Out-of-Africa mythical package, and allowing all

Narrative Complexes as distinguished to be subsumed as part of one sustained history of humankind’s earliest discourse, first Out of Africa, then along the Indian Ocean coast to South East Asia, branching off into Australia, then westward across the Asian continent, branching into Europe, and finally back to Africa in a feedback return migration, more recently – ultimately to spill over into the Americas and Oceania, from East Asia.. Most scholars today would reject such an argument off-hand as far too speculative, as wishful thinking: trying to reduce the infinite complexities of the human mythical inventiveness to one, coherent, unilineal (albeit sweepingly recursive) historical development.. Taxing the scholarly imagination and credulity almost to breaking point, such an argument can only pretend to have left behind the phase of science fiction, or of New Age pseudo-scholarship, if it can be based on a explicit, richly argued and, in combination and mutual reinforcement, rather convincing set of explicit methodological prescriptions for dating. This is what the present section intends to offer, as the methodological and scientific backbone of my argument.

*My surprising point of departure in this decisive methodological section is that we have actually far more clues to date mythical material from the remotest past, than is generally realised – so that a triangulation between several such dating methods applied to the same mytheme or Narrative Complex, is likely to yield results that, although fundamentally provisional, may yet claim considerable plausibility.*

The available clues to dating a particular Narrative Complex range from astronomy to population genetics, comparative historical linguistics, and archaeology (for which see van Binsbergen, in preparation), to three methods which I can present in some detail here: modes of production analysis; distributional analysis; and hermeneutical analysis.

#### 3.3. Modes of production as a clue to dating

Modes-of-production analysis dating method revives a concept that was very much en vogue in the anthropology and archaeology of the 1970s-80s, but has since shared the fate of all Marxian-inspired approaches. A *mode of production* is a coherent, historical set of practices for a human group’s exploitation of nature, combined with the particular ideology, imagery and ritual that unite, legitimate, and lend meaning to, these practices. Relative dating of narrative themes is often possible on the basis of the idea,<sup>6</sup> that in human history a number of modes of production have appeared in such a way that an earlier mode (such as hunting and collecting)

1. may be retained (in some ‘articulated’, encapsulated, and exploited form) in a later phase when other modes (e.g. food production through agriculture and animal husbandry; kingship as a mode of exploitation based on central organisation, tributary extraction and raiding) are available,
2. whereas a typologically more advanced mode cannot obtain at a particularly early historical moment.

The modes of production perspective helps us to understand some of the material conditions under which the concrete, specific imagery of certain mythemes may be understood in relation to the specific productive circumstances of the people invention and managing these mythemes. The same perspective may also help to explain why certain mythemes do not disappear although they belong to an older mode of production, that was largely supplanted by a later one, as dominant mode safeguarding the reproduction of a specific social formation. Modes of production typically do not disappear completely– they become linked (‘articulated’) to other, later, more advanced and more dominant ones, becoming subservient to the latter, but derive from such encapsulated subservience an extended lease of life, also for the imagery that forms part of the ideological repertoire of a particular mode of production. Thus it does not run counter to our theory that the trickster motif is found, both in Africa, Australia, and New Guinea, but also, and with considerable prominence, in the New World: the hunting and gathering mode of production to which the trickster idea typically belongs (as an image of the vicissitudes of production in that mode), was also that of the Asians venturing into the New World, and has not been completely eclipsed when

<sup>6</sup> Cf. van Binsbergen 1981, 1992; van Binsbergen & Geschiere 1985a, especially 1985b.

some of these New World immigrants invented agriculture – as a henceforth dominant mode of production to which hunting and gathering, until quite recently, remained articulated as an appendix.

Modes of production analysis yields dating clues based on an anthropological examination of mythical contents. Myths invoking kingship may of course be regurgitating much older pre-kingship themes in a more recent kingship-orientated idiom, but to the extent to which they do invoke kingship, they must belong to a relatively recent phase in the history of Anatomically Modern Humans: kingship depends on the accumulation and circulation of more or less durable surplus, which normally presupposes food production through agriculture or pastoralism. The same kind of argument may be extended to other modes of production, for whose occurrence and dating archaeology often provided the empirical evidence.

Sometimes the mythical material contains not only symbolic clues, but also specific material clues to be interpreted in terms of modes of production. E.g. when it is said, in the Bushong (Vansina 1955, 1971) cosmogonic myth, that after the appearance of plants, humans and animals came into being, as well as

‘...the basic implements are razor, healing tools, and meteorites’,

then we may believe to be in the presence of

1. circumcision (until well into recorded history, genital mutilation was widely executed with stone tools),
2. leechcraft (which in view of humankind’s manifest survival throughout the several million years of its history may be deemed to have been of all ages, but whose specific growth into a specialisation may well be argued to be mark the emergence of *shamanism*, for which above a date of 15,000 BCE has been suggested), and
3. the earliest metallurgy (for which meteorite iron was used).

These three references to modes of production are typically diverse, and seem to refer to different periods. This reminds us of the fragmented, layered, internally heterogeneous form in which cosmogonic myth usually occurs in the African context during in historical times – an important theme (also because it defies Witzel’s 2001 exhortation to study myths as wholes) but outside our present scope. But if we cannot treat the Bushong cosmogonic myth as a whole, and fix one convincing date to it, we may assign relative, and even absolute, dates to some of its components.

### 3.3.6. A Narrative Complex’s distribution as a clue to dating

In the opening pages of this study, we have already encountered an elaborate example of distribution as a clue to dating: if male genital mutilation is considered to have diffused from South Central Asia then any date would apply and the Upper Palaeolithic would be a likely guess; but once we have realised that the distribution pattern fits that of the Out-of-Africa hypothesis almost perfectly, then a dating to before 140,000 is almost inevitable.

From the Out-of-Africa perspective, we may expect a Narrative Complex’s distribution to be in principle a clue to its dating. For instance, if we find a particular complex to be found in both Africa, New Guinea and Australia, but nowhere else, we have reason to consider it a candidate for inclusion in the original Out-of-Africa package. Above I argued that the same holds true for cultural (near-)universals.

One example of distributional dating is studied in Figure 4, where I present the African distribution of two mythemes which partly overlap with the Narrative Complexes highlighted in the present study: the mythemes of the Tower and of the Flood. That both mythemes are by no means confined to Africa is clear to any reader of the Bible or of the Qur’an.

The parallels between the biblical and the sub-Saharan African flood myths can be astonishing, for instance in the following myth from the Masai pastoralists in East Africa:

‘Tumbainot and his wife Naipande had three sons, Oshomo, Bartimaro and Barmao. In those days the world was thickly peopled, but men were not good ... But at last, one unlucky day, a certain man named Nambija knocked another man named Suage on the head. Then God commanded Tumbainot to build an ark of wood with his family and some animals. When they were all safely aboard, (...) God caused it to rain so heavily and so long that a great flood took place, and all men and beasts were drowned, except those which were in the ark; for the ark floated on the

face of the waters. Tumbainot let a dove and a vulture fly out. He fastened an arrow to the tail-feathers of the vulture. As he stepped out of the ark, Tumbainot saw no less than four rainbows, one in each of the four quarters of the sky, and he took them as a sign that the wrath of God was over.’

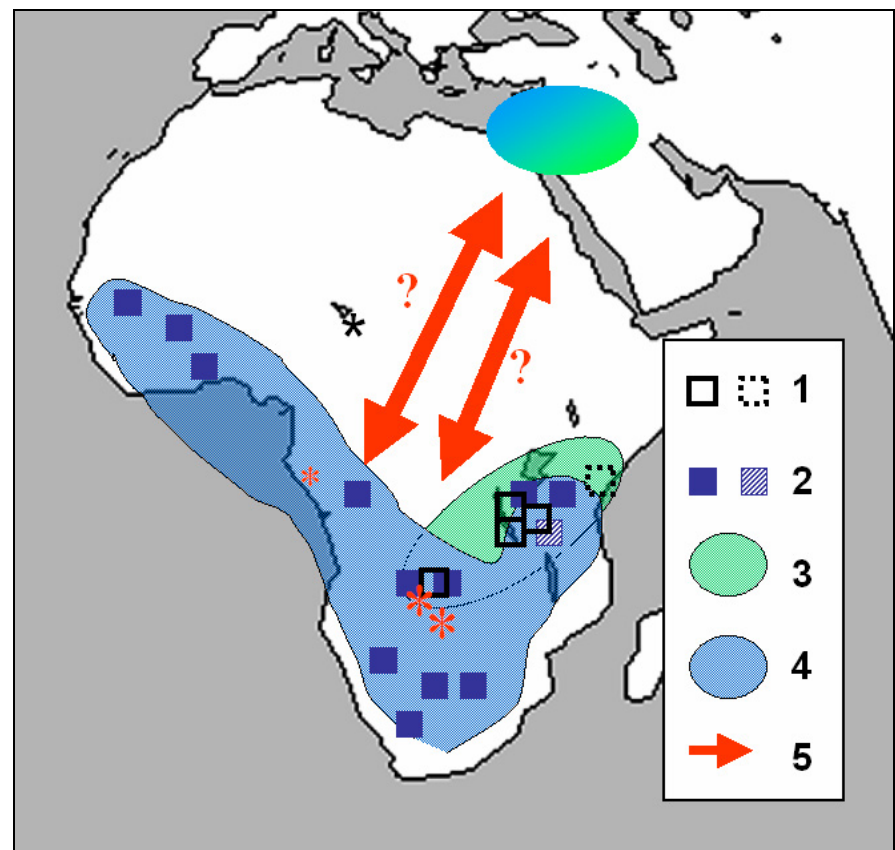


Figure 4. An example of distributional analysis as a clue to dating a Narrative Complex: (1) *Tower myths* and (2) *Flood myth* (*‘Primal Waters’ Narrative Complex*) in Africa in historical times: not absent (*pace* Witzel), but the restricted distributions suggest recent introduction related to return migration into Africa<sup>7</sup>

1. Tower mytheme attested
  2. Flood mytheme attested
  3. African distribution of (1)
  4. African distribution of (2)
  5. improbability of borrowing from South West Asia, where both mythemes occur together in the biblical context
- hatched outline or fill indicates doubtful attestation

The two themes happen to combine in the Bible (Gen. 6-11) although not in Ancient Mesopotamia (the Flood story of the Gilgamesh epic). To judge by their distribution they may be independent in Africa, although overlap occurs in Zambia and East Africa.

The *Tower* mytheme is also known from South Asia, notably among Austro-Asiatic speakers. In Africa, it largely follows the lake belt towards the interior, and coincides with the distribution of sacred kingship, to which Austro-Asiatic influences may have contributed (cf. the peopling of Madagascar from Indonesia via Sri Lanka). There is a very convincing argument why this mytheme may be considered to be extra-African in origin, and specifically South Asian. In South Central Africa, especially in Zambia, it is elaborated in the story of the king who built a tower into heaven from forked branches; the name of that king is given as *Kapesh kamununga mpanda* ‘Kapesh joiner of forked branches’ (van Binsbergen 1992; Jensen 1932: 76). *Kamununga mpanda* is straightforward Bantu, but the name *Kapesh* has no Bantu etymology. It could derive from Afro-Asiatic, notably Hebrew<sup>8</sup> קפֿשׁ, *qps*, used for a capering movement as of a fleeing deer, with the remote possibility of containing a reference to the hobbling gait of the divine king for whom the forced displacement of the hip joint was often part of the initiation (Graves 1948, 1964). However, much more probable is an Indo-Aryan etymology *\*gabhasti-*, ‘forked carriage pole, hand’ (de Vries 1958, s.v. ‘gaffel’). Both phonologically and semantically the fit is perfect, albeit that the horseless environment of the African savannah south of the rain forest could not accommodate the reference to the wheeled vehicle; however, it does retain the implied reference to the celestial pole as one of the principal connections between heaven and earth, along with the

<sup>7</sup> Sources include Frobenius 1931: Introduction and pp. 166f, 169; van Binsbergen 1992; van der Sluijs n.d.

<sup>8</sup> I am indebted to Peter Broers for sharing his vast knowledge of Hebrew with me on this point, but he is no accessory to my etymological sins.

tower. I take the distribution area of the Tower theme in Figure 4 as an indication of massive cultural influence from South Asia (and, via South Asia, from South East Asia), one of whose items was kingship with an elaborate court culture in which musical instruments and orchestras played a major role. At the courts of MweneKahare and Mwene Mutondo, two major kings of the Nkoya people in Zambia, who have become my close relatives since I started research in their area in 1972, many royals have names straight out of the Mahabharata, such as S(hi)kanda and Mangala. Karst (1931: 535f) claims (but without giving sources) that under the name Kale, Gypsy groups have penetrated Africa from India. Indeed, Gypsy groups have been studied in Sudan (Streck 1996), Kale ('Black') as a Gypsy name is widespread in Eastern Europe, and Kale is indeed the alternative name of the Kahare royal title (Smith & Dale 1920).

The *Flood* mytheme, by contrast, has a very wide distribution globally, and probably echoes (Anati 1999) the historical dramatic rising (by 200 m) of the ocean level in the beginning of the Holocene (10,000 BP). In Africa, this mytheme seems to follow the coast rather than the lakes. This could be because any actual rising of the ocean level would be felt on the coast and not on the interior. On the other hand, the distribution of the Flood mytheme brings out a pattern of continuity similar to that apparent in the distribution of geomantic divination, divination bowls, and perhaps the name of Mbedzi (marked by red asterisks in Figure 4) as a mythical ancestor/divine saviour – which suggests that this mytheme may not have originated in Africa but spread there from elsewhere, probably from (South West) Asia, and mainly by sea. Meanwhile sporadic Bantu lexical elements in the Biblical world (cf. van Binsbergen, in press), including the name Cainan (in the Septuagint, Talmud and Islamic tradition, cf. proto-Bantu \*-kán-; also cf. *Canaan*) for Noah's son who *refused* to follow his father into the Ark, suggest

- an African *origin* for the Flood complex
- a major African *influence* on the Flood complex, or
- *Africa-bound diffusion* of a Flood complex from some hypothetical original pre-Bantu region in West or South Asia.<sup>9</sup> However, proto-Bantu is now generally considered to have arisen near Lake Chad, 8,000 BCE (marked by a black asterisk in Figure 4).

This analysis of Flood and Tower myths concentrates on Africa, but involves comparison with other continents. When we are exclusively dealing with the distribution of traits *inside* Africa, their interpretation in terms of dating is less straightforward. Given the extreme complexity and heterogeneity of African socio-cultural formations and their incomparably longer history (under the Out-of-Africa hypothesis), it is not realistic to expect the traces of the most ancient mythemes, of the pre-'Out-of-Africa' mythical repertoire, and of subsequent re-immigration into Africa from Eurasia, to be conspicuous, in the sense of being noticeably concentrated in any specific part of the continent. For throughout the continent, such traces may be expected to be overlaid, and combined, with later mythical innovations and inventions. Perhaps not all parts of sub-Saharan Africa show this phenomenon of combination of mythemes to the same extent. It is reasonable to expect that the part of Africa farthest removed from Eurasia, i.e. West and South West Africa, would have least influences of Eurasian re-immigration. In fact, there are extensive indications to this effect:

1. Frobenius' (1954: 169f) inroads of shamanism apparently eclipsing the African tradition of sculptural representation, but leaving the westernmost parts of the African continent more or less untouched, 'pristine';
2. van Binsbergen's (forthcoming) inroads of leopard-skin associated symbolic specialism, notably (from North West, via North and East, to South East Africa) bards, saints, mediating earth priests, kings and mediums)

These inroads date from relatively recent periods (1st mill BCE and later; mainly later), and although that tallies with recognised historical or prehistorical movements into Africa from South and South

East Asia (Indonesia, India, Sri Lanka, Iran, Arabian peninsula), the Eurasian re-immigration must have started much earlier: for the ancestors of today's Khoi-San speakers a West Asian environment has been demonstrated for c. 10,000 BC. Khoi-San movement, pastoralist movement across the African continent southward (which may have overlapped with Khoi-San expansion southward and eastward), and the Niger-Congo / Bantu migration from an epicentre near Lake Chad from 8,000 BCE onward (but mainly from rather more recent millennia) – these movements created such percolation throughout the continent that no neat localisation of pre-Out-of-Africa mythemes, or of re-immigration mythemes, can be expected. Instead, fragments of such mythemes may be expected to be stacked with others mythemes in kaleidoscopic variety all over the continent. If Cavalli-Sforza (1991; Cavalli-Sforza et al. 1994) is right (what seems to be confirmed by very recent linguistic insights) the case of the Khoi-San speakers has taught us (also cf. Wilmsen 1989) that archaic and peripheral life styles by no means indicate a genetic background that is at the same time primordial and local.

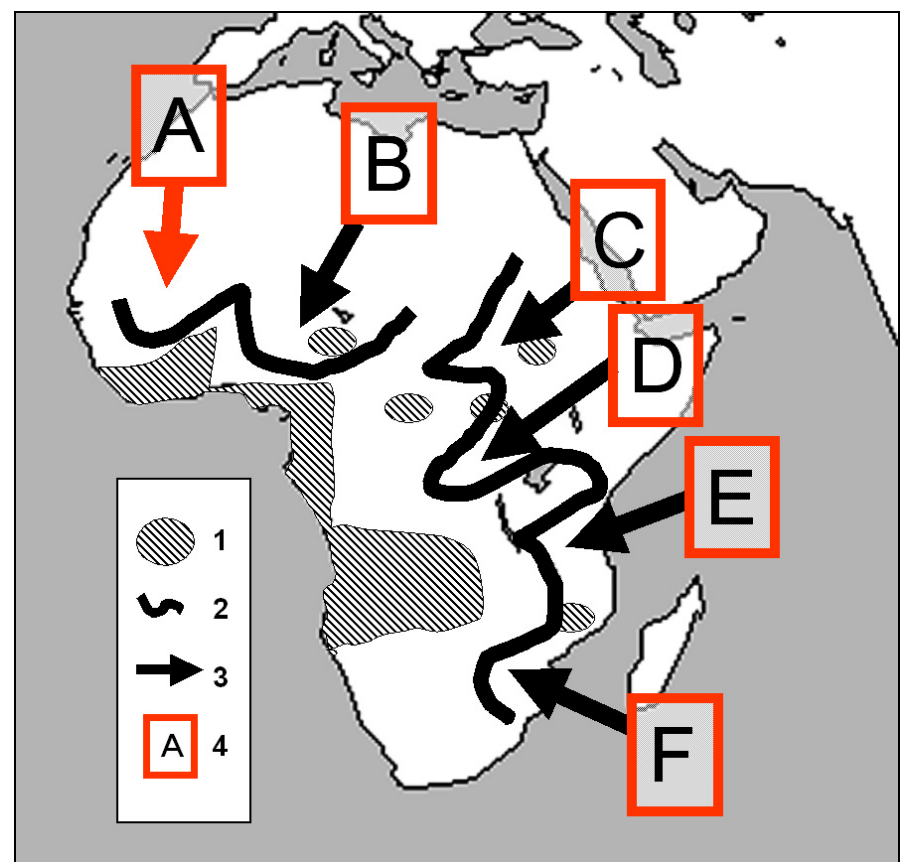


Figure 5. West Africa as relatively pristine: Map rendering Frobenius' ideas concerning the inroads of named shamanistic cults (white arrows) and the main regions of representative art in (later second millennium CE) Africa

- |  |  |  |
|--|--|--|
| 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                                       |

Clearly it will be immensely difficult to identify pre-Out-of-Africa mythemes in Africa today, merely on the basis of an internal comparison of the African data set alone. We will need to find more effective clues to dating.

One such a clue, and a powerful one, may still be found in an analysis of distribution patterns, notably in *triangulation of African mythical materials with New Guinean and Australian mythical materials*. Although we cannot exclude the possibility of recent diffusion into New Guinea and aboriginal Australia from other parts of the Old World (or even the New World, perhaps), yet, if a trait occurs in Africa, New Guinea and Australia, we may take this as a suggestion that it belonged to the Out-of-Africa package, especially in the following conditions are also met:

- a. that trait is not conspicuous in Eurasia
- b. we can produce an additional argument, not based on distribution but on formal or content criteria (such as mode of production analysis, or the hermeneutical analysis to be indicated below), as to why that trait should be particularly old.

<sup>9</sup> This is the old Trombetti scenario (cf. Trombetti 1923), which is my opinion (but I am not a Bantu linguist) is rather plausible although now completely discarded by mainstream scholarship.

Another way to identify any mythical components of the Out-of-Africa package, if any, is by *reasoning backwards*: we try to identify such mythemes (or, preferably, at a higher level of aggregation, such Narrative Complexes) as can be argued to be associated with Eurasian return migration back into Africa, and when we subtract those recently introduced Narrative Complexes from the entire set of Narrative Complexes present in a latterday data set of African mythical material, we are likely to come closer to identifying the original Out-of-Africa package. ‘Reasoning backwards’ effectively means that we seek to interpret, for dating purposes, the presence of apparently West and South Asian themes within the dataset of sub-Saharan African cosmogonic myths. Here we have to make a tripartite distinction between

- a. such West Asian themes as are known to have entered sub-Saharan Africa in the last two millennia under the influence of Islam and Christianity,
- b. those that appear to have been brought directly from West Asia and Northwestern Africa (from the ‘Extended Fertile Crescent’<sup>10</sup> of Neolithic food production through agriculture and pastoralism
- c. those that resulted indirectly from such Neolithic expansion in the sense that this expansion pushed Khoi-San speakers from West Asia into Africa, where (due to continued type (b) pressure) they ended up in the Southern African *cul-de-sac*; these Khoi-San speakers comprised both hunter-gatherers exhibiting a pre-Neolithic mode of production, and early pastoralists.

### 3.3.7. Hermeneutics as a clue to dating

A risky but potentially highly insightful dating method is one based on the hermeneutics of mythical contents. Here we try to put ourselves in the place of the conscious historical actor owning, managing and transmitting a particular mytheme or, as coherent combination of a number of mytheme, a Narrative Complex. And we ask ourselves: what sort of specific discourse characterises, at the hermeneutical level, a particular mytheme or a particular Narrative Complexes – and how can we arrange two specific discourses (a) and (b) into a sequence where (b) can be argued to be only possible, only thinkable, provided the conscious actor has first had (a) at her disposal, secondarily transforming (a) so as to arrive at (b), typically at a point in time later than the period typically associated with (a). I propose a number of specific procedures through which hermeneutics can be argued to offer concrete clues to the *relative* dating of mythemes, and *a fortiori* of Narrative Complexes. In the first place these involve formal content analysis. A close reading of the mythical contents of two different Narrative Complexes may allow us to consider one Complex older or younger than another by the following differences between the two:

- *integrated consistency versus chaotic and heterogeneous fragmentation*
- *chaotic and heterogeneous fragmentation versus newly constructed consistency*
- *hierarchy versus equality and vice-versa*
- *alien origins versus kinship*
- *shifts in hierarchy*
- *gender shifts*

A number of conceptual transformations must be noted whose implications in term of historical sequence is not immediately clear:

- *a plurality of protagonists may be conflated into one person,*
- *the conceptual juxtaposition of opposite is personified and epicised as the concrete fight between two concrete protagonists,*
- *In similar fashion, we may see some of the abstract concepts of a specific Narrative Complex transformed into a more concrete evocation*

Another set of hermeneutical dating devices consider contents. Our analysis will indicate that incidental meteorological phenomena such as lightning and the rainbow have captured Anatomically Modern Humans’ mythopoeic imagination from the very beginning, but a consistent, enduring contemplation of the sky and a fascination with verticality can be argued to be a relatively recent development, coinciding with the emergence of shamanism in Central Asia c. 15,000 BCE. Humankind’s gaze was only gradually turning upwards: This celestial and meteorological themes provide possible clue to dating Narrative Complexes. By the same token, complementarily, the notion of an underworld offers another such clue. Moreover, I argue that the conceptualisation of evil and the occult constitutes a domain where the oldest Narrative Complexes are likely to lurk. Linked to the increasing insistence on verticality, the world of the sacred gradually gives rise to the conception of routinised transcendence, cast in politico-religious institutions such as the kingship, as the priesthood as a manifestation of organised religion – themes which I take to be relatively recent (certainly no older than the Upper Palaeolithic, and probably mainly Neolithic and later). Since our sub-Saharan African corpus consisted of cosmogonic myths, it is a pertinent question whether the idea of origin in itself could serve as a possible clue to dating Narrative Complexes. Witzel’s contention is that Gondwana cosmogonies (including sub-Saharan African ones) would not display a true sense of origin, contrary to Laurasian ones; however, this is not borne out by close inspection of the African corpus, so that no relative dating can be based on it. On the contrary, the African cosmogonies are permeated with a dramatic sense of beginning, of which lightning is the principal emblem; this cosmogonic orientation even informs much of African life today, at the expense of carefully maintained socio-political structure.

### 3.4. After dating, the problem of localisation in space

Much as myths do not carry a date tag but impose an all-overriding, immutable present upon the situation in which they are found, so myths are also essentially unmarked in terms of place of origin, of provenance. The myth is not only the ultimate now, but also the ultimate here. The world evoked in myth, is the world of the here where the myth is being recounted or enacted.

Yet in the present analysis, the problem of situating a particular myth in *space* does not seem to pose the same tantalising problems as that of dating. Often the distribution of Narrative Complexes already seems to give a rough indication as to where to locate it in space. More importantly, if we adopt, as our organising frame of reference, the Out-of-Africa hypothesis, and see the subsequent development of myths as one sustained process in step with the more or less traceable peregrinations of Anatomically Modern Humans, across Asia, into other continents, and finally back into Africa, then we could propose an abstract formal model (extremely simplified in the sense that only primary innovations are acknowledged in the time and place where they occurred, while secondary spread, interactions and feedback effects are ignored at this stage of the analysis. almost automatically any dating implies a particular position along the calibrated curve that swings from out of Africa to South East Asia, New Guinea, Australia, into Asia, and back into Africa, with secondary ramifications into Northeastern Asia, the Americas, and Europe.

This means that our by now familiar line of Anatomically Modern Humans Out of Africa, across Asia, and back into Africa (Figure 1) will also be the itinerary along which we may project primary innovations in world mythology (in the of the emergence and mutual accommodation of our score of Narrative Complexes), in such a way that rough indications of the time of innovation (along a non-linear, irregular, but roughly ordinal time scale) also gives a rough indication of place of innovation, and the other way around.

Besides, content clues may be offered as to the likely original location of a Narrative Complex, e.g. although we cannot very well identify where, along the recursive line our formal model, the Primal Waters came into play (perhaps in South East Asia), their transformation into a white-skinned First Human organising the waters probably hails from Central and/or East Asia.

Finally, all these considerations of dating and localisation lead to the kind of analysis summarised in Table 4.

<sup>10</sup> A term I coined in 1997, to designate the region of primary Neolithic domestication of food crops and animals, ranging from the fertile Sahara to Iran, and thus explicitly joining North-eastern Africa and West Asia.

#### 4. Situating the Narrative Complexes in time and place

Against the background of the great variety of complementary and mutually reinforcing dating methods (and localisation methods) discussed in the previous section, in Table 4 I have listed the main reasons for proposing a particular dating and original location of emergence, for each Narrative Complex.

Some Narrative Complexes initially distinguished turn out to be superfluous – they are better subsumed under other major complexes. The proposed dating uses the dating methods outlined in my section on this point. I cannot sufficiently emphasise the speculative and provisional nature of the entries in this Table 4. The emerging model is highly abstract and simplified, and gives only the most cursory, streamlined indication of what in reality were complex and contradictory, often stagnant or abortive, processes of mythological development. However, it presents a systematic and methodologically underpinned framework, not only for sub-Saharan mythology but for major forms of mythology throughout the Old World since the Middle Palaeolithic (200,000 BP).

The significance of such a scheme is *not* that it lays claims to truth or permanence, but that it will be of considerable heuristic and theoretical value, inspiring more focussed future research. I can hardly stress sufficiently that *all* identifications in space and time as contained in the following table are highly provisional and even contentious. Many or most of these identifications are likely to prove untenable – yet the overall coherence and consistency of the emerging picture, and the explicit methodology (however capable of improvement) underlying these identifications, suggest that the exercise as a whole is truly scientific, and, if subjected to critical but sympathetic and creative scrutiny by a sufficient number of specialists over a sufficient amount of time, may ultimately lead to a much better reconstruction that may then deserve to be supported by a considerable number of serious scholars.

Narrative Complex (number and description)	Discussion	Proposed origin	
		in time	in space
1. The separation of heaven and earth	Is largely identical to 2, and presupposes 10. Not separately needed	– (see 2)	– (see 2)
2. The connection between heaven and earth after separation	Largely identical to 14, developing from 19; shamanic elements; upward gaze; 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 as rain and lightning (cf. 4). This is the central Niger-Congo mythical complex, encompassing the entire Southern half of Africa. Its Asian overtones are another reason to reconsider the extra-African antecedents of Niger-Congo/Bantu.	Neolithic	Central and West Asia/ Extended Fertile Crescent
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; not separately needed	– (see 2)	– (see 2)
4. The Lightning Bird (and the world egg)	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. The world egg is central to 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. 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 data set, would not be situated as	Pre-Out-of-Africa Middle Palaeolithic?	Sub-Saharan Africa?

	part of the Out-of-Africa package (African Middle Palaeolithic), but in Middle or Upper Palaeolithic South or South East Asia. 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.		
5. The mantis	Probably a transformation of 4, but with shamanic elements (16). Association with Khoi-San speakers would superficially suggests great antiquity and part of the Out-of-Africa complex, but recent genetic findings favours West or Central Asian rather than Southern African origin for Khoi-San speakers and hence for this Complex. Details seems to confirm this, like reference to shoe, moon, and the fact that 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). 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)	Upper Palaeolithic	Central Asia
6. The ogre	Rather akin in form and function to 11, but simpler. In combination with 19 produces the widespread Python vs. Apollo mytheme. Essentially a narrative to explain the rescue of Being out of Non-being. Occurrence in Australia and New Guinea of the ogre theme suggests it to be part of Out-of-Africa package, which is astonishing in view of its sophisticated discursive message. As argued in the main text, I would rather view this Narrative Complex as a secondary transformation of 11, and therefore give it the same situation in space and time	Upper Palaeolithic or Mesolithic	(Central/ South East/ East) Asia
7. From the mouth	Masculinising 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 <sup>6</sup> producing humankind, Athena's birth from her father's head	Neolithic or Bronze Age	Extended Fertile Crescent
8. The stones	Not specific to any particular mode of production, which suggests great antiquity. Originally part of 10, but reinterpreted in the light of 19 (stones represent demiurge) and 2 (stones from heaven = meteorites = iron; in the latter case Neolithic or later) – hence not separately needed	– (see 2)	– (see 2)
9. The moon	Connotations of cosmic egg (4); of women's cults cf. 10, 19 and 15; of human sacrifice; of kingship and royal cult (also star cult) including human sacrifice, regicide and <i>suttee</i> ; incompletely integrated in 2. The penetration of several major other complexes suggests great antiquity of this complex. Conus shell lunar ornaments distributed in East and Central Africa and New Guinea. Despite the lunar dominance in the data set I hesitate to propose a pre-Out-of-Africa origin, and would rather propose South or South East Asia.	Mesolithic, more probably Neolithic	South or South East Asia
10. The earth as primary	Probably associated with puberty rites/ circumcision, for which I have build a case for their belonging to the original 'Out of Africa' package. In recent millennia this Narrative Complex was largely incorporated in 2, but 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
11. The primal waters and the flood	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 – suggestive of maritime diffusion from South Asia and/or Oceania); 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	Upper Palaeolithic or Mesolithic	(Central/ South East/ East) Asia
12. From under the tree	Not specific to any particular mode of production, which suggests great antiquity. Intercontinental distribution of tree burial (New Guinea, South and South East Asia) compatible with belonging to Out-of-Africa package. On the other hand associated with the Tower motif, which has a restrictive distribution in Africa suggestive of West Asian origin; so does the shamanic connotation of West African bard, singled out for tree burial	Upper Palaeolithic / Mesolithic	West or Central Asia



13. The cosmic / rainbow snake	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
14. Fundamental duality	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 belongs 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
15. The spider and feminine arts	The spider features in three ways: as trickster (cf. 5, 13, 17, 20); as connection between heaven and earth and hence, by substitution, as Supreme Being (Nyambi, Anat, Neith, Anahit, Athena etc.); and finally as the patron of weaving. 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.	Mesolithic or Neolithic	Extended Fertile Crescent
16. Shamanism, bones	Although shamanic themes abound in the data set, and have particularly shaped 2 (ascent and descent along the celestial axis is shamanic), shamanism is not at home in Africa, and I refer to my other work (especially on leopard-skin symbolism world-wide) for the complex linguistic, iconographic and archaeological argument to the effect that shamanism emerged in Central Asia in the Upper Palaeolithic	Late Palaeolithic	Central Asia
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 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, as I will work out in section 8 below, 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.	– (Pre-Out-of-Africa Lower Palaeolithic)	– (Sub-Saharan Africa)
18. Honey and honey-beer	References to honey are rare in the 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 Egypt, Madagascar (with South East Asian connotations), and South Central Africa. The bee represents both heaven, and descends along the celestial axis – and the underworld (where she may live, in addition to trees). The symbolic elaboration is therefore largely 2, but in fact this Complex is not separately needed	–	–
19. The cosmogonic virgin and her son/lover	An analysis of 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 appears as celestial cow). In addition to its great dominance in the sub-Saharan African mythical data set, his Complex consti-	Neolithic	Extended Fertile Crescent

	tutes 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		
20. Contradictory messengers bring death	The most popular theme in the 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.	–	–

Table 2. Postulated/reasoned relations between the Narrative Complexes, with proposed dating (extremely provisional) and proposed original location of emergence (likewise extremely provisional).

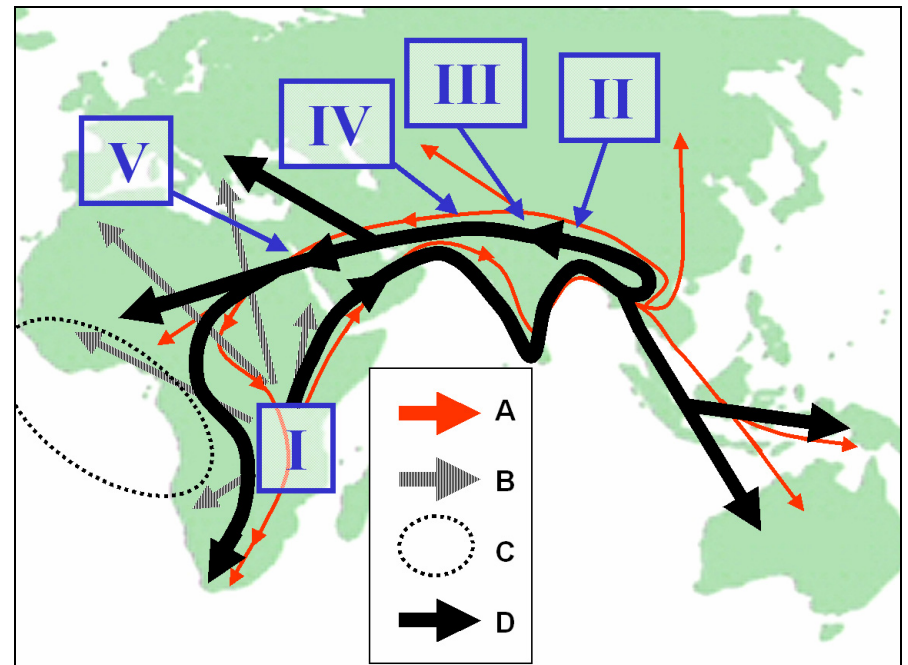


Figure 6. Summary of results: Preliminary situation in space and time of major Old World mythical complexes, in relation to the Out-of-Africa migration (c. 140,000 BP) and the Into-Africa return migration (from c. 20,000 BP)

A and B see Figure 1  
C. Frobenius’ ‘pristine’ Africa  
D. Out-of-Africa mythical package and subsequent developments  
I: Out-of-Africa mythical package, 140,000 BP: Narrative Complexes 4, 10, 13  
II: W or C Asia, Upper Palaeolithic/ Mesolithic: Narrative Complexes 5, 12, 16  
III: C, S or SE Asia, Upper Palaeolithic/ Mesolithic: Narrative Complexes 11, 6  
IV: S or SE Asia, Mesolithic/ Neolithic: Narrative Complex 9  
V: Neolithic Extended Fertile Crescent: Narrative Complexes 2, 7, 14, 15, 19  
in order to highlight the basic west-east-west movement, secondary spread and feedback effects have largely been ignored  
missing numbers were discarded, see main text

The careful consideration of all Narrative Complexes, and their possible situation in time and place, has enabled us to answer most of the four questions with which we set out:

- We found reasons to assume that the Out-of-Africa (as postulated under the Out-of-Africa hypothesis) package did contain mythical material, and we identified the latter as Narrative Complexes 4, 10, 13 (in which Narrative Complex 17 – speckledness and the leopard – was incorporated).
- As for the intra-Africa percolation of pre-Out-of-Africa material after the Out-of-Africa Exodus, we suggested that the direct northward expansion of this pre-Out-of-Africa material into North Africa, West Asia, and Mediterranean and Atlantic Europe has formed a substratum (still conspicuous in Neolithic archaeology, and in the ritual and folklore of the historical times) of sacred forests, cult of the land, puberty initiation and masquerades in the regions.
- As far as the effect of the Back-to-Africa return migration is concerned (for which population genetics has produced massive evidence in recent years), we identified ample mythological traces of this return migration, through the presence, in African mythological material for the historical period, of Narrative Complexes that were developed in Asia, long after the Out-of-Africa Exodus, and on the basis of a transformation, on Asian soil, of the initial pre-Out-of-Africa mythical material
- What remains is question d, which I will; consider in Section 5.5 below.

## 5. Conclusions: Interpreting the emerging overall pattern in long-range comparative terms

### 5.1. African mythology is world mythology par excellence

According to the view widely held by scholars even today, the mythical material from Sub-Saharan Africa exists in isolation from the, much studied, mythical parallels across Eurasia and into the Americas. It is high time to discard this misconception (as comparativists like Frobenius and Baumann said we should, already in the first half of the last century). An examination of the Narrative Complexes constructed for the African material shows very considerable parallelism with Ancient Greek, Ancient Egyptian, and Biblical mythical themes. As has been stressed by exponents of Afrocentricity, especially and most vocally in recent years, there is much parallelism between the sub-Saharan African mythical material, and that of Ancient Egypt. Although Afrocentricity has often boiled down to Egyptocentricity, it would be myopic to try and explain away the African/Egyptian parallels one-sidedly as paramount cultural influence emanating from historic Ancient Egypt upon the African continent, or of sub-Saharan Africa upon Ancient Egypt – the latter monocausal explanation would leave the unmistakable Egyptian parallels with West, Central, and South Asia totally unaccounted for. It is much more attractive to explain these parallels on the basis of the idea that both Ancient Egypt and sub-Saharan Africa participated in an ongoing process of myth formation, diffusion and transformation, going back in time all the way to the Out-of-Africa migration (c. 150,000 BP) and (inside Africa) even further, and stretching all over the Old World (and spilling over into the New World) – and also involving, among others, Ancient Greece and the Biblical world.

Meanwhile we must realise that the detour across South and East Asia, taking over 100,000 years, has not been the only way for pre-Out-of-Africa themes to travel from sub-Saharan Africa to Egypt and to Europe. It must have done so with a certain time lag as compared to the ‘mainstream’ process via South East Asia, because Anatomically Modern Humans had to arrive in the Mediterranean and in Europe in the first place before they could receive the northward-bound diffusion of the pre-Out-of-Africa package; while the palaeoanthropological record for the Levant is contradictory and suggests Anatomically Modern Humans to have been present there 100,000 BP, in most of Europe their entry can be dated at only 40,000 BP. The pre-Out-of-Africa package percolated through Africa northward also after the Out-of-Africa Exodus. Therefore we must be prepared to explain such manifestations of the pre-Out-of-Africa Narrative Complexes (4, 10, and 13) as we can find in the Eastern Mediterranean region and in West Asia from the Neolithic onwards, as

- a. transformed items of the pre-Out-of-Africa package, that have travelled all the way through Asia
- b. transformed items of the pre-Out-of-Africa package that have directly travelled north through Africa
- c. the result of interactions between (a) and (b).

As noted above, there *is* as very marked continuity between sub-Saharan Africa, the Mediterranean, and Atlantic Europe, in terms of sacred forests, the cult of the earth, puberty and community initiation, masquerades, purification of murderers by earth priests, and I propose that these parallels are largely due to (b). Meanwhile there is no reason why the direct northward diffusion of the pre-Out-of-Africa The extent to which (a) (may also have caused these parallels may be ascertained by tracing the distribution of these institutions to Central, South and East Asia. The latter is beyond my present scope and competence, but I venture three wild guesses:

- North, Central and even East Asia have a greater share of pre-Out-of-Africa themes than West, South and South East Asia;
- in the latter regions such themes tend to be concentrated among ‘tribal’ populations outside the realm of the principal civilisations and the states associated with these civilisations
- although shamanism is a relatively recent innovation from Central Asian (I propose a date of c. 15,000 BC), and emphatically situation along the mainstream of world mythological development, still it has managed to retain and

transmit certain pre-Out-of-Africa themes; this retention has been one of the keys to shamanism world-wide success, both in its typical form, and in its later transformations into kingship, statehood, science and organised religion.

Incidentally, such continuity between sub-Saharan African and Europe due to (b), also render far less plausible Witzel’s theory of a fundamental distinction between Laurasia and Gondwana mythologies – unless we decide (against all evidence) to classify European mythology as largely Gondwana.

### 5.2. Witzel’s Out-of-Africa proposal *grosso modo* confirmed: Overall match between the genetic, linguistic and mythical trajectory of Anatomically Modern Humans

While we may differ in detail, this study owes a great deal to Witzel’s (2001) seminal insight into the overall match between the genetic, the linguistic and the mythical trajectory of Anatomically Modern Humans.

Africa has been recognised as the continent with the highest level of genetic diversity, as befits

- a. the cradle of humanity (at least 3,000,000 years BP), and
- b. the cradle of Anatomically Modern Humans (c. 200,000 years BP);

return migration back into Africa from Eurasia/Oceania has further contributed to the genetic heterogeneity. Africa’s linguistic and cultural diversity is far more limited than its genetic diversity, due to a number of converging factors in the most recent millennia (the spread of Niger-Congo language family over almost the entire southern half of the continent; and the converging influences of Islam, Christianity, colonialism and globalisation). Witzel’s (2001) claim of the existence of mythical parallels between

- a. sub-Saharan Africa, Australia and New Guinea (‘Gondwana’) that seem to have no counterparts in
- b. Eurasia/America (‘Laurasia’)

suggests that world mythology was already incipient in Africa prior to the Out-of-Africa migration, and that some of its early themes may have continued to percolate in the continent perhaps even right through to modern times. Eurasian return migration into Africa (from no later than 10,000 BCE: Khoi-San) will have brought into Africa Eurasian mythical themes developed in c. 100,000 years in Eurasia, to start on subsequent African trajectories. The heterogeneity of over a dozen Narrative Complexes, some more elaborate than others, can be plausibly associated in this overall history of genetic and cultural diversity in Africa.

*Thus we are able to provisionally propose a pattern for the history of Old World mythology extending over more than 150,000 years – thus further reconstructing humankind’s oldest traceable discourse.*

Of course, this is nothing but a first proposal, inviting theoretical and methodological criticism; alternative readings of the available material; the addition of much additional material both from Africa and from other continents; a careful assessment of whatever has been used, in this analysis, from such ancillary disciplines as genetics, linguistics and anthropology; and in general much more reflection and debate. Working at the absolute outer limits of knowable or reconstructible intellectual history, we cannot expect first trials to be convincing hits. But by formulating and circulating our first trials, we may mobilise the skills, knowledge and intuition of colleagues working in the same and adjacent fields – without which an exercise like the present one will never proceed beyond the realm of science fiction.

### 5.3. Humankind’s oldest discourse philosophically sound

*Far from revolving on mystifying stories that conceal the nature and complexity of reality and the causal processes that govern it, the mythical tradition of Anatomically Modern Humankind, as traced in the present argument, shows a persistent grappling with the fundamentals of Being, at a very high level of philosophical sophistication.*

These are not recreational stories to be told by the fireside after a good day’s hunting – they are the fundamental ideas that not re-

created, but that *constituted in the first place*, Anatomically Modern Humankind. One attractive theory of the constitution of early society (Cassirer 1946, 1953-1957, Donald 1991) is that the recounting of myths created both language and society. The mythical tradition explored here – and it encompasses the whole of humankind as we know it, and the seeds of all great religious and ideological systems as we know them – far from being a mere fantasy or pastime, may well have been Anatomically Modern Humankind’s main instrument for competitive survival. The grappling with cosmogony implies a vision of reality in which all Being is essentially cosmogonic, all human life a challenge to participate in the cosmogony of Being, and all initiation, all ritual, all intimacy, all making, a reviving of the fundamentally cosmogonic nature of Being. Eliade was right in seeing myth as revival of primordial times, but he did not fully realise the extent to which such reviving was not simply a revoking an *original state* of Being, but an *original Cosmogony* as the fundamental state of Being. This finds its emblematic expression in fire, and especially in lightning, as the reviving of the cosmogonic moment par excellence. With such a philosophy of being, a biological sub-species (like Anatomically Modern Humans) appears to be sufficiently equipped to conquer the world – for better or worse.

If the mythical Narrative Complexes summed up, and situated in space and time, in Table 4, summarise the main types, of developments and of relationship between humankind’s myths, then they constitute the oldest discursive repertoire humans had at their disposal. This is the beginning and earliest development, not only of myth, but also of religion, science, and philosophy. It would be worth our while to spell out the underlying basic ideas in today’s metaphysics, see what philosophical sophistication these myths were already implying, and compare the Narrative Complexes systematically with Egyptian, Chinese, Biblical, Graeco-Roman, Indian, etc. mythologies, and philosophies from these cultures. Such a comparison would make us aware of an amazing continuity in the intellectual history of Anatomically Modern Men across more than hundred millennia and across all continents – a finding that cannot fail to be relevant for today’s globalised, but conflict-ridden world, where the fragmentation of proclaimed identities obscures such massive continuities and communalities, not only of the body but also of the mind and of worldview, as unite us Anatomically modern Humans, and as the present study has sought to reveal to mythology.

#### 5.4. From modes of production to worldview, but also the other way around

*Relating specific Narrative Complexes to specific modes of production is one of the central features of my dating methodologies; however, while a particular mode of production suggests a particular discourse (e.g. food production > knowledge of biological causality > Virgin Birth as cosmogonic trope) it is also conceivable for the relationship to work in the opposite direction, in the sense that a particular cosmogonic Narrative Complex may make a particular innovative mode of production thinkable, in the first place, in partial preparation for its subsequent practical realisation.*

Our dating of individual mythical Narrative Complexes is largely predicated on the idea that certain images are much more to be expected in the context of a particular mode of production; e.g. the idea of virgin birth as cosmogony presupposes a strong rational sense of beginning and linear time progress, and a detailed awareness of the causal link between conception, pregnancy and birth – insights which, if far from absent *outside* the Neolithic complex of agriculture and animal husbandry, are at least indispensable for the Neolithic complex to be engendered and sustained. However,

- myth need not always follow the organisation of material production (as would be stipulated from a Marxist materialist point of view) –
- it is also possible that myths ramify off in directions totally unconcerned with material production,
- or, alternatively, that myths provide the conceptual and imaginary clues which then are subsequently explored and applied in the emergence of new modes of production, e.g. that a myth of speckledness and hence a fascination with grains and raindrops would help the thinkability and hence the emergence of agriculture, instead of the other way around.

All the same, it is not as if sustained logical thought only appears relatively late in the mythological history which the present study seeks to overview. One is struck by the high level of logical reasoning implied in most of the Narrative Complexes. Of course, the Narrative Complexes were compiled by the present writer, and any suggestion of their level of rationality may be an artefact of scholarly representation. Yet (contrary to the impression Witzel 2001 gives of what he distinguishes as the Gondwana mythical complex, which includes sub-Saharan Africa) concrete examples of illogicality turn out to be quite rare.<sup>11</sup>

#### 5.5. The spasmodic process of extensive continuity punctuated by specific moments of great conceptual change, presumably coinciding with the rise of new modes of production

We are left with our fourth and last initial question (d): suppose there is some truth in the world-wide sustained mainstream mythological development argued in this paper, what factors caused the process to take the particular shape it took? We have already considered one of these factors: the pendulum-swing between meaning-destructive fragmentation and consistent integration. But I believe the modes-of-production perspective, which was so helpful as a dating method, can offer us further insights into these factors.

*To the extent to which the emerging picture may be taken seriously, it is suggestive, not of a constant flow of cosmogonic mythical innovation, but of a far more spasmodic process, where at a limited number of moments great conceptual changes occurred, resulting in the emergence of new Narrative Complexes; it is tempting to try and identify these moments, and relate them to crucial innovations in the sphere of modes of production, the (probably concomitant) emergence of new linguistic (macro-)families, etc. (cf. Table 3)*

The process of Old World mythical development since the emergence of Anatomically Modern Humans does not seem to be a steady process with constant rate of growth and change. Rather, Figure 6 suggests long periods of steady continuity to be punctuated by a few relatively short periods of rapid innovation and transformation of the available mythical material. Since the mythical material is at the religious, political and economic heart of historical socio-cultural formations, such periods of rapid innovation and transformation in the mythical domain must coincide with periods of major change in the demographic, productive, and socio-political domains. We would like to identify, in each case, the specific factors that triggered these changes. Table 3 indicates a number of such moments, and proposes specific triggers that may have caused the intensification of the mythopoeic process in these specific historical periods. Since innovation in the linguistic field seems to have marked some of these periods, major language (super-)families are tentatively indicated. The emergence and relative success of new language (super-)families is likely to be subject to the same factors in the demographic, productive and socio-political domains as would account for the intensification of innovation and transformation of the mythical corpus.

Context in space and time	Narrative Complexes	Proposed trigger	Tentative linguistic context
I. Out-of-Africa mythical package, 140,000 BP	4. The lightning bird (and the world egg) 10. The earth as primary 13. The cosmic/ rainbow snake	a. The emergence of Anatomically Modern Humans as a biological mutation? b. 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 c. The emergence of myth as constitutive of a new type of human com-	Proto-Human

<sup>11</sup> The following could serve as an example of illogical treatment:

‘In the beginning everything was dark and there was nothing. It rained continuously on earth. When the rain stopped, Mawese regulated the waters in rivers and created the first people and everything else. He also instructed the people in the heart of agriculture and he created the snakes. Then Mawese married Muvadila and became the ancestor of all peoples. Finally he returned to the sky, whence he later issued a human couple with the first fire’ (Pende, South-Congo).

This story has a typical inconsistent time sequence: humans are created at three different moments of time; the creator marries a primal woman and becomes the ancestor of all people, whereas there are already people mentioned. Incidentally, the most striking parallel that comes to mind is not African/Gondwana, but the sequence of anthropogonies in Genesis 1f!

		<p>munity: self-reflective, coherent, communicating, engaging in hunting and collecting, and creating coherence, through the narrative and ritual management of symbols, leading to articulate language</p> <p>If (c) is plausible, then the earliest phase in the overall process is in itself myth-driven</p>	
(probably also I) S or SE Asia, Middle or Upper Palaeolithic	4. The lightning bird (and the world egg)?	No firm proposal, but the migration out of Africa meant entering regions with richer soils; meanwhile the specific imagery of Complex 4 suggest rather a link with pyrotechnics (harnessing of fire) or improved bird catching, neither of which require leaving Africa	? Proto-Austronesian?
II. W or C Asia, Upper Palaeolithic/Meso-lithic	5. The mantis 12. From under the tree 16. Shamanism, bones	The emergence of shamanism, 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 upperworld, created a politico-religious social hierarchy on which more effective forms of socio-political organisation could be based.	Proto-Khoisan and Proto-Dene-Sino-Caucasian
III. C, S or SE Asia, Upper Palaeolithic/Meso-lithic	11. The primal waters and the flood <sup>12</sup> 6. The ogre	a. The rise of the sea level at the beginning of the Holocene; b. there are indications that Central and South Central Africa was a major source of population out-migration in the period indicated, but beyond microliths and improved boats I have no suggestion to offer as to what innovation in the mode of production could have caused a population surplus	Proto-Dene-Sino-Caucasian and proto-Nostratic
IV. S or SE Asia, Meso-lithic/Neolithic	9. The moon	Kingship, star worship, human sacrifice as major contexts for socio-political organisation and surplus extraction	? (pre-Bantu?)
V. Neolithic Extended Fertile Crescent	2. The connection between heaven and earth after separation 7. From the mouth 14. Fundamental duality 15. The spider and feminine arts 19. The cosmogonic virgin and her son/lover	Neolithic food production through agriculture and animal husbandry; Neolithic arts and crafts such as pottery, spinning, weaving; male ascendance; complex society, the emergence of writing, the state, organised religion, and science; incipient metallurgy	Nostratic, especially Western Nostratic (i.e. proto-Afro-Asiatic and proto-Indo-European)

Table 3. Contexts of mythological innovation and transformation from the Middle Palaeolithic onward

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<sup>12</sup> I postulate that these themes are younger, by perhaps five millennia, than shamanism; but this hypothesis is based of a number of assumptions concerning periodisation that might not survive closer analysis.