

Astrology and Cosmology in the World's Religions

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Chapter 7

Sub-Saharan Africa: Heaven on Earth

*Oh, if there were a place in heaven for me!
That I would have wings to fly there!¹*

The division of Africa into regions is problematic, and is best done in terms of linguistic groups, Afro-Asiatic, Nilo-Saharan, Afro-Asiatic, Nilo-Saharan, Niger-Kordofanian (Bantu), Khoisan, and Malayo-Polynesian (Austronesian). However, for general purposes a division into two – the north and the sub-Saharan – is logical on the simple historical grounds that the entire region along the southern Mediterranean fringe was subject to intense influences from the Near East – chiefly the Phoenicians – and Greeks, along with occupation by Rome, conversion to Christianity and invasion by the armies of Islam. In general, much of the area to the south of the Sahara desert was untouched by such cultural forces until the colonial period, although there were exceptions, notably the extension of Islam as far south as northern Nigeria in the west, and the coastal area of modern Mozambique. The Mozambiquan coast was also previously in range of Roman and, later, Chinese traders; the latter, or their intermediaries, penetrating inwards to the political and financial hub at Great Zimbabwe, which flourished for three hundred years, from the thirteenth to sixteenth centuries; during the heyday of Great Zimbabwe, there may have been between one and two thousand Muslims engaged in diplomatic and commercial activities in the Zimbabwean uplands. At this stage, let me add two qualifications, one negative the other positive. First, I do not mean to imply that Africans were passive recipients of imported ideas, who were not able to generate their own sophisticated culture. Second, I do wish to dispel the myth Africa did not participate in the long range relationships which connected western Europe to eastern Asia in the ancient world.

No cultural boundaries are water tight, and ancient Egyptian civilisation, in the far north-east of the continent, was in constant communication with its immediate southerly neighbours, and was also subject to at least one dynasty of Nubian pharaohs. In addition, since the early centuries CE, Ethiopia has been Christian,

¹ Basuto prayer displaying possible Christian influence, cited in Dominique Zahan, *The Religion, Spirituality and Thought of Traditional Africa*, (Chicago: University of Chicago Press, 1979), p. 49.

while in the 1980s the presence of African Jews in the country became world-wide news. In the west, a network of kingdoms extending down to the coasts of modern states such as Ghana, profited from trade with the north, the most celebrated of all cities in the region being Timbuktu, a remarkable cultural centre, which flourished from the eleventh century until Moroccan occupation in 1591 initiated a decline in both trade and scholarship.² From now on though, when I use the term African in this chapter, I will refer primarily, though by no means exclusively, to those areas of culture which have not been subject to Islamic influence.

Our knowledge of African cosmology, astronomy and astrology has suffered from a range of methodological problems. Those scholars who have paid attention to African culture, and they are not many, have generally been ignorant of celestial matters. Or rather, if they deal with cosmology, it is in terms of social hierarchies and kinship relations, with a little attention paid to celestial deities. Only terrestrial cosmology seems to be of general interest to anthropologists, and the celestial dimension is largely ignored. That said, while divination is ubiquitous, astrology itself is unusual except where part and parcel of Islam. A much higher value appears to have been placed on divinatory methods which communicated with the immediate environment rather than the distant, with local spirits rather than celestial deities. In this sense, Heaven, as a source of wisdom, is on Earth.

In addition, if we wish to engage with African cosmology prior to western colonisation, we confront significant problems associated with western influence, a key example of which is the Dogon controversy, with which I shall deal with briefly. Keith Snedegar summed up the problem, in his excellent introduction to the area, thus: 'all scholarship from the field' he wrote 'must be handled with care'.³ Developing this theme, James Denbow has drawn attention to the personal difficulties which can occur when Africans, confronted with Christianity may struggle to either reject or salvage their traditional learning.⁴ The South African

2 James Denbow, 'Heart and Soul: Glimpses of Ideology and Cosmology in the Iconography of Tombstones from the Loango Coast of Central Africa', *The Journal of American Folklore*, vol. 112, no. 445, 'Theorizing the Hybrid', (Summer 1999), pp. 404-23.

3 Keith Snedegar, 'Astronomical Practices in Africa South of the Sahara', in Helaine Selin (ed.), *Astronomy Across Cultures: the History of Non-Western Astronomy*, (Dordrecht: Kluwer Academic Publishers, 2000), p. 455. See also Maxwell Owusu, 'Ethnography of Africa: the Usefulness of the Useless', *American Anthropologist*, New Series, vol. 80, no. 2, (June. 1978), pp. 310-34.

4 James Denbow, 'Heart and Soul: Glimpses of Ideology and Cosmology in the Iconography of Tombstones from the Loango Coast of Central Africa', *The Journal of American Folklore*, vol. 112, no. 445, 'Theorizing the Hybrid', (Summer 1999), p. 404.

astronomer, Thebe Medupe, for example, talks of the way in which his scientific education has created a gulf between his own self-identity and his roots in the 2008 film, 'Cosmic Africa'.

An additional problem, of course, is the reliance on oral traditions and general absence of written sources which always creates such problems for anthropologists; African religion does not have sacred texts and its cosmology is not described in encyclopaedias. Then there are the political agendas. Clive Ruggles, whose work in the field of non-western astronomy is comprehensive and encyclopaedic, has warned against the problems of both ethnocentrism, in which theories which have developed in western contexts (such as that all non-western astronomy must depend on observations of rising and setting stars on the horizon) is then countered by an equally misleading reaction in which non-western astronomies are seen as complex, unique and defined by their difference to western ideas.⁵ Both are ideological positions which can prevent a good understanding of the evidence. There has been, though, some good work, together with the recent, valiant initiatives of Jarita Holbrook, formerly of the University of Arizona, who has done her best to put African astronomy on the academic radar by bringing scholars in the field together. Her efforts resulted in a conference in Ghana held to coincide with the total solar eclipse of 26 March 2006, and a resulting publication, *African Cultural Astronomy*.⁶ Dominique Zahan's *The Religion, Spirituality and Thought of Traditional Africa* is a comprehensive introduction to the subject area while John S. Mbiti, meanwhile, has dealt well with general African cosmology in his *African Religions and Philosophy*, although his book remains an introduction and a call to others to take this area seriously.⁷

All the current evidence suggests that human beings evolved in Africa and migrated to the rest of the world in successive waves. The implication is that, once these early people had developed sufficient awareness of the world around them, and when they had evolved into story-telling beings, they would have had invented tales about the stars. They would then have taken these to Asia and Europe as they

5 Clive Ruggles, 'The Borana Calendar: Some Observations', *Archaeoastronomy, supplement to the Journal for the History of Astronomy*, no. 11, (1987), pp. S50-51.

6 Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008).

7 John S. Mbiti, *African Religions and Philosophy*, 2nd edition, revised, (London: Heinemann, 2008).

moved from one place to another. Astronomy, therefore, began in Africa. The archaeologist Jacquetta Hawkes reasoned that it must have been back in east Africa, where the fossil record shows that the earliest humans were walking on two legs and making tools around three million years ago, that they began to notice the sun as a separate powerful force in their lives. 'Now at last mind was dawning', she wrote, 'raised between sun and earth...In that dawn of mind, sunrise and sunset, if not the sun itself, seem likely to have been among the first things to have been named by the first men. Even such a being as Oldoway Man [Olduvai man, from the Olduvai Gorge in Kenya], one of the earliest known hominids...must always have been very much aware of the passage of the sun across the gorge where he lived. He may conceivably even have (expressed) its coming and going. If so, then here already was a step in creation through *logos* - the separation of day and night'.⁸ Hawkes, as she freely admits, was engaging in imaginative speculation. The material evidence dates from millions of years later, when Africans were marking lunar calendars on animal bones; a baboon's thigh bone, discovered in the Lebembo mountains bordering Swaziland and dated to 35,000 BC, contains twenty-nine notches, suggesting, plausibly, that it may have been a counter for the synodic month (from new moon to new moon) of 29.53 days.⁹

It was many years later, only five thousand years before the modern era, that, at the far north-east of the continent, the Egyptians gave voice to an elaborate and rich cosmology which was both remarkable in its time and was arguably to become a huge influence in Christian theology through its notions of a cosmic battle of light and dark, the judgment of the dead and the soul's journey to a heavenly realm. African religion contains distinctive features such as shamanic practices, the transmigration of souls and veneration of ancestors, but I will focus only on its celestial components.

African cosmology is as subtle, nuanced and varied as that of any other continent.¹⁰ If we can generalise, and so risk misrepresenting the variety in African cosmology, then we can point to the following major characteristics: the universe is broadly divided into three zones (sky/heaven, earth and an underworld); there is a single

⁸ Jacquetta Hawkes, *Man and the Sun*, (London: the Cresset Press, 1962), p 47-8.

⁹ Marshak, Alexander, 'Lunar Notation on Upper Palaeolithic Remains', *Science* (1964), Vol. 146, pp. 743-5.

¹⁰ See Dominique Zahan, *The Religion, Spirituality and Thought of Traditional Africa*, (Chicago: University of Chicago Press, 1979), p. 3.

creator, but with myriad other deities and spirits; the entire world is alive; magic, in the sense of manipulation of the world through engagement with visible and invisible forces is taken for granted; the sun and moon are venerated as vital to human existence; the sky is a dramatic stage set for telling stories about human affairs and the passage of the year and the cosmos requires active participation by human beings, an expression of Lucien Lévy-Bruhl's *participation mystique*, if we can maintain the concept of deep and active engagement with the cosmos while rejecting Lévy-Bruhl's view of it as primitive.¹¹ All these characteristics, of course, are standard features of pre-modern culture. What we don't find in Africa, perhaps not even in Egypt, is the absolute devotion to the exact, precise and meticulous devotion to the motions of time and the directions of space which was a feature of those societies which developed technically complex astrologies, and which its most extreme in China. We could argue, then, that African cosmology slows more room for the human than the celestial and we might, therefore, with caution, describe it as humanist.

The African approach to time is active and participatory which is, in itself, a fairly uncontroversial statement. African time-keeping is also generally (although not universally) experiential and defined by seasonal events and their attendant rituals. John C. Mbiti has written of the traditional African approach through a comparison based on modes of economic production. Whereas in the modern west, he argued, time is a pre-existing commodity which can only be utilised, bought and sold, in Africa, time has to be created or produced: in Africa, Mbiti writes, 'Man is not a slave of time; instead he "makes as much time as he wants"'.¹² As a vivid comparison, he writes that when foreigners, of whom he identifies Europeans and Americans are the most prone to this misunderstanding, observe the local people apparently sitting around doing nothing, they are not 'wasting' their time but are actually making it in preparation for the next round of action. The day, for example, is based not on the precise stations of the sun, but on human activities. Again, according to John Mbiti, although

the rising of the sun is an event which is recognised by the whole community. It does not matter...whether the sun rises at 5 am or 7 am, so long as it rises. When a person says that he will meet another at sunrise, it

11 Lucien Lévi-Bruhl, *How Natives Think*, (Princeton: Princeton University Press, 1985).

12 John S. Mbiti, *African Religions and Philosophy*, 2nd edition, revised, (London: Heinemann, 2008), p. 19.

does not matter whether the meeting takes place at 5 am or 7 am, so long as it is in the general period of sunrise.¹³

The cosmological focus is therefore on lived experience on earth rather than imagined experience in the sky. The day, then, is related to terrestrial events and actions so that, for example, milking may take place at 6 am not because it is 6 am, but because the milking has to take place. Actually, although Mbiti particularised this approach to time to the African context, he has actually identified a general, pre-modern, pastoral view of time which we might have found until recently in Europe and certainly still will in any peasant culture. Other qualitative aspects of African time-keeping are also alive and well in modern western culture. For example, the Luo people of Kenya are not alone in refer to times past by the memory of general disasters, a form of chronology which Michael Dietler and Ingrid Herbich imply is a remarkable and distinctive feature of their time-keeping.¹⁴ For most Europeans of a certain age, though, the periods ‘before’ and ‘after’ the ‘war’, still have a profound resonance, while, for those known as the baby-boomers, the ‘summer of love’ has an enduring iconic mystique. It’s not clear, then, in what way a supposedly distinctive African view of time is actually distinctive. Rather it’s a rich example of a once pervasive worldview. In addition, we should avoid the trap of imagining that African time is entirely subjective and anthropocentric. No time-keeping system can ignore the fact that the regular cycles of the sun and the moon continue, no matter what human beings do, and only transient events, such as comets and shooting stars, represent a sufficiently dramatic interruption in the orderly succession of celestial patterns. In spite of Mbiti’s romantic picture, Dietler and Herbich point out that the Luo require a sense of abstract time in order to fulfill specific tasks, a framework within which one can be early or late, fast or slow.¹⁵

13 John S. Mbiti, *African Religions and Philosophy*, 2nd edition, revised, (London: Heinemann, 2008), p. 19.

14 Michael Dietler and Ingrid Herbich, ‘Living on Luo Time: Reckoning Sequence, Duration, History and Biography in a Rural African Society’, *World Archaeology*, vol. 25, no. 2, Conceptions of Time and Ancient Society, (Oct., 1993), p. 250.

15 Michael Dietler and Ingrid Herbich, ‘Living on Luo Time: Reckoning Sequence, Duration, History and Biography in a Rural African Society’, *World Archaeology*, vol. 25, no. 2, Conceptions of Time and Ancient Society, (Oct., 1993), p. 254.

Knowledge of African calendars is, like African time-keeping, fragmentary and subject to instances of over-interpretation. Brian Warner has claimed that the thirteen month, moon-based calendar was near-universal and that, where twelve month calendars occur, they are the result of cultural transfer which, in most of the continent before the colonial period, would be Islamic.¹⁶ Calendars, then, are generally lunar and named according to the changing agricultural, herding or meteorological qualities of the year, given that it is in the nature of moon calendars to slip out of synchrony with the solar year, and hence with farming and the weather, by 11 or 12 days every year. The Latuka people of the Sudan, for example, have months with precise natural names such as 'Give your uncle water', 'Let them dig' and 'Grain in the ear', but which will soon cease to have any relevance under a lunar system. Societies for whom precise time-keeping is a religious necessity, often deal with this problem by periodically including extra, intercalary months, but, again, Mbiti draws attention to the terrestrial rather than celestial basis of time keeping, taking as his example, the 'hunting month': 'It does not matter', he argues, 'whether the "hunting month" lasts 25 or 35 days: the event of hunting is what matters'.¹⁷ Similarly, whether a year lasts 350 or 390 days is less important than that nature's benevolent rhythms continue. To reinforce the point, we should return to Keith Snedegar: 'in no instance', he claims, 'did flexible qualitative measures of duration give way to rigid enumeration'.¹⁸ On the other hand, the Yoruba appear to have used a divinatory calendar which was based on fixed number values, based on such notions as the rectangular division of the earth into four.¹⁹

As an example of the problems of understanding African calendrical systems, and the way they have been reported, the story of research into the Borana people of

16 Brian Warner, 'Traditional Astronomical Knowledge in Africa', in Christopher Walker (ed.), *Astronomy before the Telescope*, (London: British Museum Press, 1996), p. 306.

17 John S. Mbiti, *African Religions and Philosophy*, 2nd edition, revised, (London: Heinemann, 2008), p. 20.

18 Keith Snedegar, 'Astronomical Practices in Africa South of the Sahara', in Helaine Selin (ed.), *Astronomy Across Cultures: the History of Non-Western Astronomy*, (Dordrecht: Kluwer Academic Publishers, 2000), p. 465.

19 Ségla, Dafon Aimé, 'The Cosmological Vision of the Yoruba-Idaacha of Benin Republic (West Africa): A Light on Yoruba History and Culture', in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), pp. 189-207.

Ethiopia is instructive. Information about the Borana calendar attracted attention in the 1930s and was first published in the 1940s. The Borana have a calendrical system based around such periods as the *gada*, in which successive generations of men are linked to a 40-year cycle which dominates their political system. The Borana scheme appears to be based entirely on astronomically-determined cycles and therefore challenges the convention that African calendars are experiential. The system was studied by in the 1960s by Asmaron Legresse, who reported that the *ayyantu*, the Borana calendar-making, time-keeping experts, can tell the day and time either from memory of, if a guide is needed, from the moon's relationship to the stars, in a system which was comparable in its complexity to those developed, say, by the Maya or Chinese.²⁰ There is considerable discussion concerning the precise details and a certain excitement that the inhabitants of Kenya might be using a calendar which might use megaliths (at the site at Namoratanga II, by Lake Turkana) as a marker (like the ancient British) to create a calendar which sets the moon against the background of the stars (like the Islamic calendar) and, moreover, could have been calibrated in 300 BCE.²¹ Clive Ruggles, on the other hand, accused the anthropological advocates of Kenyan calendrical complexity of willfully exaggerating the intricacy of the system in order to compensate for all their academic predecessors who had variously regarded Africans as savage or primitive, and the entire debate was concluded, inconclusively, in an issue of *Current Anthropology*, with no less than thirteen contributors arguing for different positions.²² It does seem likely, though, that the solution is a middle way.

There are some indications of a certain casual attitude towards the coordination of royal activities with celestial events. The !Kung Bushmen, or San, people of

20 Asmarom Legesse, *Gada: Three Approaches to the Study of African Society*, (London: Collier-Macmillan, 1973).

21 Marco Bassi, 'On the Borana Calendrical System: A Preliminary Field Report', *Current Anthropology*, vol. 29, no. 4, (Aug.-Oct. 1988), pp. 619-24; Laurance R. Doyle, 'The Borana Calendar Reinterpreted', *Current Anthropology*, vol. 27, no. 3 (Jun. 1986), pp. 286-287; Dietrick Thomsen, 'What Mean These African Stones?', *Science News*, vol. 126, no. 11, (15, 1984), pp. 168-169, 174.

22 Clive Ruggles, 'The Borana Calendar: Some Observations', *Archaeoastronomy, supplement to the Journal for the History of Astronomy*, no. 11, 1987, pp. S35-S53; David Turton, Clive Ruggles, Anthony F. Aveni, Elizabeth Chesley Baity, Catherine A. Callaghan, Marvin Cohodas, James Dow, Walter Hirschberg, Alice B. Kehoe, Jonathan E. Reyman, James L. Swauger, Serge Tornay and Gary Urton, 'Agreeing to Disagree: The Measurement of Duration in a Southwestern Ethiopian Community [and Comments and Reply]', *Current Anthropology*, vol. 19, no. 3, (Sep., 1987), pp. 585-600.

southwest Africa, who conduct curing dances for the sick, ‘almost invariably dance at least once during the full moon’ and believe there is a ‘special potency’ if a dance is performed at dawn.²³ If a similar custom had existed in China, every detail, including whether, when and where the dance was to be performed, would be prescribed by tradition, rules and divination. For the San, though, human intentionality and action seems to be more important than precision in timing. That said, ritual times every individual’s journey through life. Barth Chukwezi summed up the performance aspect of Nigerian Igbo (or Ibo) cosmology as follows:

The universe is seen as the regulator of human events and human cycles that are divided into various cultural activities denoting the passage of time and events...the various rites of passage are sanctioned and were related to the cosmological worldview which involved various ceremonies right from birth, naming of a child, initiation to boyhood/girlhood, marriage and finally death.²⁴

The Borana question, though difficult, has attracted nothing like the Dogon problem, which has over-shadowed all other major controversy in African astronomy. The Dogon, who live in Mali, were studied by the French anthropologist Marcel Griaule for various periods over twenty-five years, from 1931 to 1956. In 1946 Griaule was told that Sirius, the brightest of the fixed stars has two companion stars, which is the case, even though the two additional stars are invisible to the naked eye and hence would be unknown to the Dogon. Griaule and his partner, Germaine Dieterlen, also claimed that the Dogon knew of Jupiter’s moon’s and Saturn’s rings, which are visible only with the use of a telescope. The Dogon’s supposed, inexplicable, astronomical knowledge, remained largely unnoticed until the publication in 1976 of Robert Temple’s *The Sirius Mystery*, which interpreted their apparent awareness of a triple star as the legacy of extra-terrestrial contacts with the ancient Egyptians.²⁵ Griaule’s Dogon mystery turns out not to be a mystery at all, and it appears that the Dogon had sufficient contact with

23 Lorna A. Marshall, 'Kung Bushman Religious Beliefs', *Africa: Journal of the International African Institute*, vol. 32, no. 3, (Jul. 1962), p. 148.

24 Barth Chukwuezi, ‘The Relationship Between Human Destiny and the Cosmic Forces – A Study of the IGBO Worldview’, in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), p. 211.

25 Robert Temple, *The Sirius Mystery*, (London: Sidgwick and Jackson, 1976).

westerners for there to be no puzzle as to the source of their knowledge of Jupiter and Saturn, while Sirius' two stellar companions appear to be the result of Griaule's own enthusiastic over-interpretation of his informant's accounts.²⁶ Nevertheless, the Dogon have become an important feature of modern UFO-religion, propagated by Temple's ongoing publicity machine.

In some versions, the traditional African cosmos is structured as a state in which power relations on earth were reflected in the sky, and vice versa, although R.J. McIntosh has challenged too easy an application of an astral-hierarchy model.²⁷ Nevertheless, the sun, typically, represented the power of the ruler, in turn possessed the power of the sun, a sympathetic link between terrestrial and celestial monarchs which is almost universal, not just in Africa, but in every human society. Often the universe is gendered with a male sun and a female moon, sometimes partnered as a married couple.²⁸ While division of the world into four occurs widely, as it does in the rest of the world; it is also often round: the Yoruba of west Africa have a round earth and a four day week.²⁹ The Igbo structure the cosmos with a lower realm, the earth, and a higher, *Igwe*, sky or heaven, which is sometimes deified as *Igwe Ka ala*, who, having been endowed with personality, can be consulted on everyday matters.³⁰

A belief in a single, sometimes sky-based, creator, is also ubiquitous although sometimes, as in other traditions (the Christian trinity comes to mind) in

26 Walter E.A. van Beek, 'Haunting Griaule: Experiences from the Restudy of the Dogon', *History in Africa*, vol. 31, (2004), pp. 43-68.

27 R.J. McIntosh, *Ancient Middle Niger: Urbanism and the Self-Organizing Landscape* (Cambridge, 2005).

28 Damian U. Opat, 'Cultural Astronomy in the Lore and Literature of Africa', in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), pp. 218-19.

29 **Ségla, Dafon, Aimé**, 'The Cosmological Vision of the Yoruba-Idaacha of Benin Republic (West Africa): A Light on Yoruba History and Culture', in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), p. 193.

30 Barth Chukwuezi, 'The Relationship Between Human Destiny and the Cosmic Forces – A Study of the IGBO Worldview', in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), p. 211.

association with other deities who may be identified as separate or as forms of each other. The Yoruba, for example, are said to have a supreme sky-based god, Orunmila, from Orun-ni-o mo eni-ma-la, translated as 'only heaven knows the secret to salvation and survival', Obatala, Odudwa and Shango, who also took on legendary form as ancestral kings.³¹ However, this is an area where Keith Snedegars' call for cautious scepticism is most important. Like all deities, African divinities have multiple forms, a matter of great confusion to both western scholars on the one hand, and, on the other, indigenous people who have the thankless task of representing their beliefs to westerners, who are intent on establishing precise categories and correspondences in an area which may be best understood through imagination and metaphor. The situation may be understood if we imagine the reverse of the normal research context, in which, for example, a series of pre-colonial African anthropologists embark on fieldwork in Europe and attempt to describe Jesus: is he a man, a god, a third of a god, a carpenter, a king, dead, alive, a bringer of good luck, a saviour of the poor or a guarantor of military victory? If one attempted to define him as any of these, one would be missing the point. Yet this is precisely the way in which westerners have approached African religion.

There has been no consistent and comprehensive study of African star names and stories, which is a somewhat astonishing lapse in scholarship. However, we do have scattered information. For example, Lorna Marshall gave the following brief account of the astronomy of the San people of the Nyae Nyae region of Southwest Africa – modern Namibia:

The Nyae Nyae !Kung have various beliefs and lore about the sun and moon, Canopus, the Pleiades and other stars, and they have the well-known myth of the moon and the hare; but they do not attribute active divinity to the heavenly bodies, which are 'just stars', they say, in effect, and we did not find that they either fear them or seek to gain beneficent influence from them. As far as we know, they do not pray to them for food as the Cape Bushmen are said once to have done, or for rain as the Naron and Auen and !O !Kung do.³²

³¹ Peter Morton-Williams, 'An Outline of the Cosmology and Cult Organisation of the Oyo Yoruba', *Africa: Journal of the International African Institute*, vol. 34, no. 3, (Jul. 1964), pp. 243-61.

³² Lorna A. Marshall, 'Kung Bushman Religious Beliefs', *Africa: Journal of the International African Institute*, vol. 32, no. 3, (Jul. 1962), pp. 221.

Actually, this passage is rich in information. Notably, stories of the hare and the moon occur from China to Mesoamerica, suggesting that either there is something deeply archetypal in the connection, which story-tellers the world over recognise, or that the origin predates the human migration out of Africa. Marshall also tells us that there is an apparent diversity, even amongst closely connected groups, and that others apart from the Nyae Nyae !Kung do pray to the stars. Marshall also suggests another archaic theme in the identification of the stars Canopus and Capella as the horns of *tshxum*, possibly a magical rain-bull and possibly connected with the Pleiades. Other stories are told which relate the stars to human action in a playful manner.³³ One myth tells of a girl who threw ashes from her campfire into sky, where the sparks became stars. Another tells of the Sun chasing the moon across the sky, biting pieces out of it until it shrinks and disappears into the new moon. Such stories reflect, above all, a love of story-telling as a means of transforming the cosmos, from a huge, dark and dangerous night sky, into a friendly and domesticated place.

The cosmos was articulated through, and in, the built environment, a practice of which there are different kinds of evidence, including two much-studied examples of megalithic sites. The earliest is the stone circle in the Egyptian desert, at Nabta Playa, on what was once the shore of a lake to the west of the Nile, and which appears to have marked the rising summer solstice sun around 4000 BCE.³⁴ The sun is, in these terms, a crucial calendar marker, but it's also entirely consistent with later Pharonic cosmology to regard it as a symbol of resurrection, invariably, a symbol of resurrection. Much further south, and from a later date, in Kenya, on the shore of Lake Turkana, 19 basalt pillars, together with a grave marked by other stones, constitutes the site designated Namoratunga II by archaeologists, is associated with the Borana calendar and may incorporate significant site lines for the rising of a number of important stars around 300 BCE, including Sirius, the Pleiades and Aldebaran, which tend to be significant in most cultures due to their prominence. I emphase the words 'may incorporate' for, even if a stellar alignment is established, this does not prove intentionality on the part of the builders.

33 Keith Snedegar, 'Astronomical Practices in Africa South of the Sahara', in Helaine Selin (ed.), *Astronomy Across Cultures: the History of Non-Western Astronomy*, (Dordrecht: Kluwer Academic Publishers, 2000), p. 460.

34 J. McKim Malville, Fred Wendorf, A.A. Mazaar, and Romauld Schild, 'Megaliths and Neolithic astronomy in southern Egypt', *Nature*, 392, (1988), pp. 488-91.

The vernacular architecture of West Africa also shows evidence of symbolic as well as functional purposes.³⁵ For example, the Mamprusi people of northern Ghana construct the doors of their houses facing the west so that the elders can sit in the rays of the setting sun: as the sun sets at the end of a day spent accumulating experience and wisdom, so do the elders. There are pragmatic, functional reasons for such alignments as well for as the sun's evening light falls on a wall which functions as a calendar. But then, of course, as soon as we make a distinction between the symbolic and the functional we are imposing western categories which do not make sense in the Mamprusi's cosmos.

In the far south, in the Orange Free State, in South Africa, there is an iron-age site named Nstuanatstatsi, which was active between the fourteenth and eighteenth centuries, which, in the Sesotho language, means 'sunrise'. The monument marks the spot where Bafokeng chiefs held their councils and where their ancestors had first risen from the earth, and is oriented to the east, meeting the rays of the rising sun. Rituals such as this enacted and re-enacted the creation, maintaining the rhythms of life on their endlessly repetitive journey and renewing the cosmos itself. The rainmaker of Bunda Mountain, amongst the Chewa people in Malawi performed a rite in which the focus was the lighting of a fire, reinventing fire itself in the process, in order to mirror the primeval conflagration. According to Deborah Kaspin:

On the appointed day in August he walks to the shrine, a small round hut at the foot of the mountain with walls of poles and branches, a rood of dry thatch and four doors opening to the north, south, east and west.³⁶

Eventually, after about a week, the whole mountainside is scorched, creation, earth and heaven are reborn and life can continue.

Astrology exists in African culture in the broad sense, as a general emphasis on the alignment of life with the heavens although, as we have seen, there is no evidence

35 Suzanne Blier, *The Anatomy of Architecture: Ontology and Metaphor in Batammaliba Architectural Expression*, (Cambridge: Cambridge University Press, 1987). See also the summary in Keith Snedegar, 'Astronomical Practices in Africa South of the Sahara', in Helaine Selin (ed.), *Astronomy Across Cultures: the History of Non-Western Astronomy*, (Dordrecht: Kluwer Academic Publishers, 2000), pp. 455-74.

36 Deborah Kaspin, 'A Chewa Cosmology of the Body', *American Ethnologist*, vol. 23, no. 3, (Aug. 1996), p. 566.

of a belief that human affairs should be precisely and exactly choreographed with the stars in the sense we observe in the great, traditional, astrological cultures, such as China, India and Mexico. Dominique Zahan makes the point that African divination, even in its celestial varieties, requires a heavy degree of human participation on the part of both diviner and client, unlike what he sees as the passive character of the mathematically-based astrology of the western-Islamic-Indian tradition; further such human engagement involves the ancestors, souls and 'doubles', that being which is part of the individual, may animate him or her, but may also walk away.³⁷ The contrast, though, is a misleading one: the western-Islamic-Indian astrological tradition requires active participation in the cosmos. What we see in Africa is powerful example of practices which are still evident in India and traditional cultures in Islamic countries, but is suppressed in the west.

Events of general+ significance, though, which, in the western tradition are characterised as natural astrology, were often recognised. For example, amongst the Nigerian Igbo, a red sunset is a sign of death, dark clouds indicate rain and a full moon exacerbates mental problems.³⁸ The Sandawe of Tanzania believe that the moon exercises an influence on the sex of their unborn children.³⁹ Some omens have multiple, sometimes contradictory, meanings. For the Igbo, a rainbow, for example, may indicate the end of rain but, if it appears suddenly, great sorrow, while a shooting star may presage either good fortune or the death of an important person. We must suspect, although we do not know, that the difference in meaning may depend on the precise context in which the phenomenon is observed. Alternatively, it may depend entirely in the judgment of the observer; both options are consistent with astrological practice. There were other regional variations; meteors, like comets, were generally bad omens, but the Tswana or Botswana, the San, and the Masai in Kenya and Tanzania, as well as certain groups in Morocco, regarded them as benign.⁴⁰

37 Dominique Zahan, *The Religion, Spirituality and Thought of Traditional Africa*, (Chicago: University of Chicago Press, 1979), pp. 87-89.

38 Barth Chukwuezi, 'The Relationship Between Human Destiny and the Cosmic Forces – A Study of the IGBO Worldview', in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), p. 214.

39 Eric Ten Raa, 'The Moon as a Symbol of Life and Fertility in Sandawe Thought', *Africa: Journal of the International African Institute*, vol. 39, no. 1, (Jan. 1969), p. 24.

40 Brian Warner, 'Traditional Astronomical Knowledge in Africa', in Christopher Walker (ed.), *Astronomy before the Telescope*, (London: British Museum Press, 1996), pp. 312-13; Allen F. Roberts,

Celestial timing could also be used in the manufacture of magical or ritual objects, what would be called in the western tradition, astral magic. The Igbo, for example, according to John Anenechukwu, make ‘certain entities or *ogwu*...when the Moon is waning, some when it is waxing and some when the Moon has gone in’, the latter a reference to the dark nights of the New Moon.⁴¹ We also find instances where personal identity is linked to periods of time, whether days or seasons. Amongst the Luo people in western Kenya, people tend to be named after the time of day when they were born. Girls during midday (*odiechieng*’), when the sun (*chieng*’) is at its highest – around 11 am to 3 pm in western reckoning - will be called *Achieng*’ while boys born at the same time are known as *Ochieng*’.⁴²

Such practices co-exist in large parts of the continent with the Babylonian-Greek-Indian version of horoscopic astrology, which spread where ever Islam took root (and latterly, where European influence is strong, as in South Africa). We know, for example, that the *Kitab al-falak (Book of the Planets)*, written by the Moroccan astrologer ‘Abd al-Haqq, was read throughout west Africa in the 16th and 17th centuries.⁴³ On the other side of the continent, on the island of Madagascar, a complex system of astrology is still practiced which is based on a lunar calendar and appears to contain Arabic, South Asian and Indonesian influences, as well as its own distinctive features. According to Christel Mattheuws: ‘Each astrological month or day in place determines in which capacity or with what quality or destiny places, things or activities are generated and take shape’.⁴⁴ Arabic influence

“Comets Importing Change of Times and States”: Ephemeræ and Process among the Tabwa of Zaire’, *American Ethnologist*, vol. 9, no. 4, Symbolism and Cognition LL, (Nov. 1982) pp. 712-29.

41 John Anenechukwu, *After God is Dibia: Igbo Cosmology, Healing, Divination of Sacred Science in Nigeria*, 2 Vols, (London: Karnak, 1999), p. 43, cited in Damian Opat, ‘Cultural Astronomy in the Lore and Literature of Africa’, in Jarita Holbrook, Rodney Medupe and Johnson Urama (eds.), *African Cultural Astronomy: Current Archaeoastronomy and Ethnoastronomy Research in Africa*, (Amsterdam: Springer Verlag, Astrophysics and Space Science Proceedings, 2008), pp. 217-29.

42 Michael Dietler and Ingrid Herbich, ‘Living on Luo Time: Reckoning Sequence, Duration, History and Biography in a Rural African Society’, *World Archaeology*, vol. 25, no. 2, Conceptions of Time and Ancient Society, (Oct. 1993), p. 250.

43 Keith Snedegar, ‘Astronomical Practices in Africa South of the Sahara’, in Helaine Selin (ed.), *Astronomy Across Cultures: the History of Non-Western Astronomy*, (Dordrecht: Kluwer Academic Publishers, 2000), p. 469.

44 Christel Mattheuws, ‘Towards an Anthropology in Life: The Astrological Architecture of Zanandroandrea Land in West Bezanozano, Madagascar’, (PhD Thesis, University of Aberdeen, 2008), p. 70.

extended as far south and inland as Botswana, where it is evident in constellational symbolism (Cancer and the fixed star Spica) and may occur in the common, so-called four-tablet divination system.⁴⁵ To the north, Arabic astrology is apparent in Somalia, where the 7-day week and Arabic months and lunar mansions provide a framework for counting time and assigning significance, as they do in west Africa and the Swahili speaking regions, from Kenya down to Mozambique. Prognostication in Somali astrology begins with the days of the week, each of which has a quality. Friday is auspicious but Thursday (contrary to the Islamic tradition) inauspicious and, if a year begins on a Thursday the entire period is difficult. One rule claims that ‘the plants shriveled by the drought of the Thursday year may be revived by the rains of the Friday year and the youths who thirsted will regain their strength and go wooing’.⁴⁶ A child born when the moon is in the lunar mansion Dirir, which contains the benevolent star Spica, is thought to possess *buruud*, the ability to inspire respect, and will have good fortune in the ownership of camels and horses, an indication of wealth.⁴⁷ Other celestial omens are purely transient. For example, the *Mood*, an indication of prolonged dry weather, occurs when the setting sun sends dark radiating lines into the sky. Others are regular and seasonal; the constellation *Hal-Toddobaaddo*, the ‘seven-in-one’ (the Great Bear) predicts rain and, if the rain has not started by the time it reaches its significant position, sinking below the horizon, it is a warning to prepare for doubt.⁴⁸

The identity between individual and star could also be represented via bodily markings; in Mozambique it is the custom of some women to incise circular marks, usually on their foreheads, to represent the moon, while solar marks are also known, lines representing meteors have been observed on forearms, and in some southern Sudanese tribes, some women ornament their lower lips with pieces of

45 Wim Binsbergen, ‘Regional and Historical Connections of Four-Tablet Divination in Southern’, *Africa: Journal of Religion in Africa*, vol. 26, fasc. 1, (Feb. 1996), p. 19.

46 Muusa H.I. Galaal, *Stars, seasons and weather in Somali pastoral tradition*, (Niamey: Celhto, 1992), p. 10.

47 Keith Snedegar, ‘Astronomical Practices in Africa South of the Sahara’, in Helaine Selin (ed.), *Astronomy Across Cultures: the History of Non-Western Astronomy*, (Dordrecht: Kluwer Academic Publishers, 2000), pp. 455-74.

48 Muusa H.I. Galaal, *Stars, seasons and weather in Somali pastoral tradition*, (Niamey: Celhto, 1992), p. 25.

polished quartz, representing stars which have fallen to earth.⁴⁹ In this sense, the body itself becomes an expression of cosmology, or even, as Deborah Kaspin would say, a cosmology in itself.⁵⁰

The invasion of Africa by western ideas in the colonial era has had a significant impact on traditional cosmology and anthropologists encounter many who have become Christian and are ashamed of former practices. There has, of course, been a counter movement, with the wholesale export of African culture to the Americas, with profound consequences for religious practices.⁵¹

In the past, though, African culture was systematically belittled by western scholars. It is not so long ago, for example, that it was assumed that Great Zimbabwe was built by Arabs on the grounds that Africans were incapable of such a feat. However, there is also now a counter tendency; to promote African culture as possessing unique features, such as a particular attitude to time. However, where African cosmology is intriguing is in its presentation of a matrix of active, ritual and participatory practices which, heavily codified, underpin the astrological systems of China, Mexico and the western-Islamic-Indian tradition, and which are currently thriving in New Age culture with its channelling of disincarnate entities, use of crystals and distance-healing, and the rest of the paraphernalia of a magical, meaningful cosmos. It is not that Africa is like the rest of the world, but the rest of the world is like Africa.

⁴⁹ Brian Warner, 'Traditional Astronomical Knowledge in Africa', in Christopher Walker (ed.), *Astronomy before the Telescope*, (London: British Museum Press, 1996), p. 313.

⁵⁰ Deborah Kaspin, 'A Chewa Cosmology of the Body', *American Ethnologist*, vol. 23, no. 3, (Aug. 1996), pp. 561-78.

⁵¹ Fennell, Christopher C., *Crossroads and Cosmologies: Diasporas and Ethnogenesis in the New World* (Gainesville: University Press of Florida, 2007), esp. pp. 68-95.