

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Mythology as a Veritable Source of Philosophy: A Philosophical Analysis of Computer and Ifa Divination Techniques

Femi Bejide

Ph.D. Student, Department of Philosophy, University of Ibadan, Ibadan, Nigeria

Abstract:

It is now generally agreed that there exists African philosophy. The debate on whether it exists or not lingered for decades, for the antagonists of the existence of African philosophy claimed, among others, that what we call African philosophy was nothing but myth which lack rigour and rationality and thus cannot be taken to be philosophy. Myth plays an important role in the way Africans understand reality. It provides necessary analytic and conceptual framework for African philosophy. Philosophy was regarded essentially as Western because of the great contributions of the Western philosopher like Hegel, Immanuel Kant, David Hume, George Berkeley to mention a few, and their works as a result, became reference points in important academic debates. However, African intellectuals and philosophers were spurred into intellectual action of decolonization of the Africans by publishing several books and other publications. There emerged two dominant schools in the field of African philosophy, namely the traditionalists and the universalists; while the universalists inherited the Eurocentric mentality of seeing philosophy as an enterprise which necessarily needs a writing tradition since it is (erroneously) believed that ideas can only be preserved and exchanged in books and journals, the traditionalists believe that writing is not a precondition for philosophy, that ideas can be preserved through devices like songs, folklore, proverbs, and so on. In this paper, I shall argue that myth is a veritable source of philosophy, and a careful analysis of the comparism between computer and Ifa divination techniques are made to further buttress my position.

1. Introduction

Myth is an account of a creation. It is the dramatic breakthrough of the supernatural (sacred). It is breakthrough that establishes the world and makes it what it is today. Pre- historic culture attempts to answer certain questions about reality - how did the world come into being? How do we explain man's position in the world? Who is responsible for creation and also why should evil and good both patronize man's way? There is no culture the world over that has not passed through the stage of explaining things mythologically. Before the advent of philosophy, that is, before Milesian philosophers, events were explained from mythologico - theological perspectives. The reasons for rainfall, rainbow, the alternating nature of Day and night, the starry sky etc, were given mythological explanations. Certain gods or other supernatural beings were believed to be behind the happenings and the nature of the universe, and more importantly, mythological stories were coined to make man able to comply with moral laws and live happily with people in the world he has found himself. Even after the Milesian philosophers, myth continues to play a major role in the effort to understand and explain the nature of the universe. Plato's allegory of the cave was a good example of mythological explanation of the nature of reality. The concise Oxford English dictionary defines Myth as a purely fictitious narrative usually involving supernatural persons..... and embodying popular ideas on natural phenomenaⁱ. According to Geertz (1979), myth is conceived to serve as a unifying concept which enables anthropologists to talk about etiological narratives which, for the societies involved, make a body of assumed knowledge about the universe, the natural and supernatural world and man's place in the totalityⁱⁱ. The Yoruba myth of creation which identifies the role of Olodumare, Orisa nla and Ajala in man's creation are regarded as the basic belief of the people about the creation of man. In Yoruba, myth are regarded as history - 'itan'. Ifa narratives are regarded as 'itan'. It is myth that gives the Yoruba whatever knowledge they have today of the world. The Ifa corpus serves as a guide in tracing realities from the past through the present into the future. In Yoruba myth of creation for example, 'ara' (the human body) is believed to be the handiwork of Orisa nla (or Obatala) the creator divinity, who is responsible for moulding lifeless human form. Olodumare (God) consequently puts 'emi' (breath), regarded as the Deity' breath of life, into the formed body. Before leaving 'orun' (heaven), the human being goes to Ajala's store of heads to chose an 'ori' (head, which symbolizes destiny). It must be noted, however, that this 'ori' (head) refers to the spiritual or metaphysical element in human person and usually feature in discussions of the immaterial aspect of the human person. In Yoruba thought, the human head 'ori' is very important both as a physical and as well as a spiritual element that is regarded as the symbol of the whole personⁱⁱⁱ.

This Yoruba myth of creation is peculiar to them. Other cultures all over the world have theirs too. But the main point of the antagonists of African philosophy is that mythological explanations of reality are not tenable because they are characterized with irrationality. The main problem here is that they view this from cross - cultural perspective. This Yoruba creation story, at least, tells

us of the coming into being of the human body, soul, spirit and his destiny. The rationality of this I am not ready to prove here but to use this as a paradigm of mythological explanation of a people. However, rationality of mythological presentations of this culture I shall point out later in this paper.

2. Mythology, Philosophy and Computer Defined

2.1. Myth: The Encyclopedia Britannica defines myth as.... a story handed down in oral form from our forefathers, which explain reality, concepts and beliefs and further serves as explanations of nature events such as creations, origin of things, history of a race or a people. According to Jaja (2014) a people's world – view cannot be studied in isolation of their past and the past is as important as the present in deciding the future. And in the light of this we can explain that myth brings the past experience of a people and from there the present African philosophy sees an avenue for philosophizing: ^{iv}Myth is an observation of things encumbered with all that they may suggest to a dramatic fancy. It is common root and raw material of both poetry and science, and also of arts. Myth can be described as the start point from which philosophy gathered its ingredients of cognitive enterprise. Udefi (2012)(quoting Inge. 1936) emphasizes the usefulness of myth to philosophy by saying the Hebrew who denied themselves a rich mythology, had no science or plastic art; the Greeks who indulged in....myth, were the founders of science and philosophy. Myth is thus the natural prologue to philosophy.^v

2.2. Philosophy is a discipline that is difficult to pin down to a definition unlike other disciplines like history, sociology, psychology etc. Staniland (1985) defines philosophy as the criticism of the ideas we live by. ^{vi}These ideas could be the ideas of life, death, democracy, education, truth etc. When we criticize and reflect on these ideas we are philosophizing. Staniland further explains that:

By criticizing I mean not negative appraisal; but rational impartial and articulate appraisal, whether positive or negative. To be critical of received ideas is accordingly not the same as rejecting them; it consist rather in seriously asking oneself whether the idea in question should be reformed, modified, or conserved, and in applying one's entire intellectual and imaginative intelligence to the search for an answer.^{vii}

Philosophy is essentially a critical and reflective activity. To philosophize is to reflect on human experience in search of answer to some fundamental questions. In the same line, philosophy has also been defined as the rational, critical thinking of a more or less systematic kind about the conduct of life, the general nature of the world and the justification of belief.^{viii} As the early Greek Philosophers were filled with philosophic wonders, they were amazed at two things that stuck them with particular interest; they were struck by diversity and the unity in this diversity. They were also struck by the fact that things were constantly changing and in the midst of this change were basic continuity. Those, in any civilization in the past, who were particularly struck with wonders at the marvels and complexities of human being or the physical universe and frequently devoted a lot of time reflecting from fundamental questions arising from this marvels and complexities constitute the philosophers of these civilization. In essence, every culture in the world has in the past found itself at this stage. In Africa and other mythical societies, there have been critical, philosophical ruminations on those marvels and complexities. Philosophy is speculative and also prescriptive in nature. When political scientists, for instance, describe the political situation of a country, philosophers prescribe what the political situation should be.

2.3. Computer

A computer is a device that can be used for various tasks like carrying out arithmetic or logical operations automatically. It can be programmed to solve more than one problem at a time. It is a device for processing, storing and displaying information.^{ix}

2.3.1. A Brief History of Computer

Abacus was the earliest known device used in computation. It was developed around 2700 – 2300 BC. It is a wooden rack with some strings holding some beads strung on them. The beads are moved around for mathematical and logical functions.^x The modern day computer originated from an English professor of mathematics called Charles Babbage. He designed the analytic engine that the basic framework of today's computers is based on. The analytic engine had expandable memory and an arithmetic unit and logic processing capabilities.^{xi}

Basically, and for the purpose of this paper, computer can be classified into three generations. After the first generation the next generations reflected improvement on the first generation computers. The first generation was between 1937 and 1946, and it witnessed the first electronic digital computer built by Dr. John V. Atanasoff and Clifford Berry, named Atanasoff Berry Computer (ABC). In 1943, another computer named Colossus was built for the military. And in 1946, the Electronic Numerical Integrator and Computer was built. The second generation of computers was between 1947 and 1962; transistors were used instead of vacuum tubes. Universal Automatic Computer (UNIVAC 1) was built. And in 1953, the International Business Machine (IBM) 650 and 700 series emerged to boom the business world. Programming, language and operating system were the main features of this generation computers. The third generation of computers, 1963 to present day, was as a result of the invention of integrated circuit which makes computers smaller, more powerful and able to perform many tasks at the same time. In 1980, Microsoft Disk Operating System (MS-Dos) was introduced and in 1981, IBM introduced the first personal Computer (PC) for homes. Macintosh computers emerged later and in the 90s came Windows operating system.^{xii}

3. Ifa Divination

Ifa is the Yoruba deity of wisdom. The Yoruba call on Ifa when they need an explanation to unravel a mystery, or when there is a choice to make between two or more options in which a wrong choice would imply doom or danger for an individual or a community.

It could be choosing an oba (king) for a town, marrying a wife or even inquiring about a trade that would be profitable out of several trades available. Ifá is regarded as a citadel of wisdom by the Yoruba. A close examination of the themes of Ifá divination poems, according to Wande Abimbola, reveals that they represent the traditional Yoruba world – view. Ifá literary corpus is, therefore, the store - house of Yoruba culture inside which the Yoruba environment can always be found. Even until today, Ifá is recognized by the Yoruba as the repository for Yoruba traditional body of knowledge, embracing history, philosophy, medicine and folklore. ^{xiii} There is nothing the Yoruba want to do that they would not ask from Ifá the possible outcome. When there is war threat from neighboring town, it is Ifá the elders would ask what to do, whether to attack or pacify the aggressor and more importantly what to do to make peace reign in the community.

The Yorùbá god of wisdom is mostly called Ifá and Orunmila, both of which are the centre of controversy. A number of writers hold the mistaken view that the name ‘Orunmila’ refers to the deity himself while the name ‘Ifá’ only to his divination system (Abimbola 1976, 3). ^{xiv} Orunmila is the deity while Ifá refers to both the deity and the divination system. However, the two names could be used interchangeably. There are two alternative but equivalent techniques in Ifá divination. The divination with *ikin*, the sixteen sacred palm nuts and the divination with *Opele*, a chain with eight cowries (or eight half nuts of concave and convex faces on each half nut) strung to it. Using the *ikin* technique, the sixteen palm nuts are put in the left hand and an attempt is made to scoop them at once with the right hand. The number of the nuts remaining in the left hand should be zero, one or two, if not, the action is void and then repeated. So, let *x* represent the number of nuts remaining in the left hand. If $x=0$, two vertical strokes are marked, if $x = 1$, one vertical stroke is marked, and if $x = two$, two vertical strokes are marked. One or two vertical strokes are marked after the operation has been performed four times to form a vertical column on a side. The operation is then repeated to give the second column of vertical lines to the left side of the first column. The two columns stand for an *odu* or *omo* – *odu* (one of the major divinities or a minor divinity) ^{xv}

Opele, the divining chain that has eight cowries (or eight half nuts with a concave and a convex face on each half nut) strung to it can also be used to arrive at the same result. The chain is thrown in a way that the two ends of the chain face the diviner, and the positions of the faces of the half nuts are read from right to left. In just a throw, divination with *opele* is complete. The diviner recites the poem (*ese-Ifá*) for the *odu* that emerged for the client. At the end of the divination, the diviner makes the explanation simple and comprehensible for the client. The result of the divination is explained to him, and a possible action plan is drawn.

There are sixteen major *odu* and two hundred and forty minor *odu*. Altogether there are two hundred and fifty six divinities in Ifá divination pantheon. “*Odu* is a collection of thousands of aphorisms, poems, and riddles passed on from generation to generation of diviners (*Babalawos*). It contains elaborate exegesis on the text, but more importantly, it contains... theories about how to do the work of interpretation” (Eze 1998, 174). ^{xvi} Oluwole argues that the two hundred and fifty six (256) *odu* are works of ancient Yoruba philosophers who lived in distant past, and that their works as seen in *odu Ifá* have peculiarities with those of the Western philosophers. According to her, Some Ifá verses are tense and harsh, while others are soft and more humane. Some verses in one *Odu* contradict verses in others. If we were to compare the mathematical rigour of Pythagoras’ works with the humanistic concerns of Socrates, we will come up with some distinctions similar to the ones drawn in Ifá verses (Oluwole 1996). ^{xvii}

In the course of explaining the process of rationality of all societies, Habermas, in his book, ‘the theory of communicative interaction’, makes the controversial claim that modern society is more rational than the mythical one. Habermas’ claim is anchored on his view that modern Western societies’ way of understanding the universe is centred and objective and this makes possible for a progressive form of learning than in the mythic world which does not have this features. Habermas’ position has been triggered by the claim of the relativists who contend that Western rationality is not better than or preferable to other forms of rationality. ^{xviii}

In his critique on Habermas’ position in the theory of communicative action, that the modern Western society is more rational than the mythical society, Dipo Irele, in his article, *Rationality, Myth and the Other : A reconsideration of the Habermas*, argues that Habermas’ characterization of societies is essentially drawn from the perspective of the Western society. It assumes rather than prove the universal significance of the categories and concepts which grounds it. He claims that Habermas account could only be tenable if it can be shown that his account of societal rationalization transcends a particularistic biased account of mythical form of it. ^{xix} in his conclusion, Irele makes it clear that mythical mode of thought betrays a Eurocentric bias since it is the Western concept of rationality that Habermas takes as the universality and through this see the mythic mode of thought as deficient compared with it.

It is not necessary to employ Aristotelian or Russellian logic in the reflective activity before one can be deemed to be philosophizing. It is not necessary to carry out the reflecting activity in the same way that Western thinkers do because ability to reason coherently is an integral of human rationality. ^{xx} The point here is that the fact that the philosophical reflections of African thinkers in the past were not preserved or transmitted by writing, or the fact that these philosophers remain unknown to us does not mean that they did not exist, for we have fragments of their philosophical reflections and their views preserved and transmitted to us through channels like formulas of wise sayings, traditional proverbs, stories religion, myth and so on. My effort in this paper, however, is to attempt how myth could serve as a source of African philosophy by rationalizing Ifá divination technique in comparison with modern day computer. This I shall do by employing the myth of the Yoruba, my background, as embedded in Ifá divinity. Mythology could serve as a source of African philosophy by presenting myths objectively with the aim of challenging African moral, socio – political and economic problems.

4. Computer and Ifá Divination Technique

Ifá divination technique has been proved by scholars to be rational and logical to a remarkable extent and great similarities have been shown between computer and Ifá divination technique. Some of these scholars are Isidore Okpewho, Sophie Oluwole, Olu Longe, Bade Ajayi to mention a few.

In an inaugural lecture delivered in 1983 by Professor Olu Longe, a professor of computer science at the University of Ibadan, it was argued that computer operations have some basic similarities with Ifa divination techniques. He mentioned some basic computer concepts that are very important in its operation technique and related them with Ifa divination technique. They are: The binary digit, Representation of numeric values in a digital computer, Modulo arithmetic, Permutation and combination, Representation of basic characters in a digital computer, Boolean algebra and logic, Computer memory organization and addressing and Matrices. All these are present in Ifa divination technique as well.^{xxi}

Now, let's look at some the basic similarities between computer and ifa divination techniques.

4.1. The Binary Digit Similarity

The smallest unit of data that can be represented or manipulated in a digital computer is the binary digit, shorten into 'Bit'. A bit is a variable which at a given instance has only one of two possible values of 0 or 1. The technique of Ifa divination too is based on the binary system. Each of the eight half – nuts comprising the opele has two faces. The face presented by a half nut when the opele is cast is read as binary digit. A concave face denotes binary 0, and a convex face denotes binary 1. Similarly, each marking on the surface of opon ifa (the divining tray) in divination with ikin is a binary digit. This is the reason why the names of the sixteen major odu such as Ejiogbe, Oyeku – meji, Iwori – meji, Odi – meji, Irosun – meji etc have a pairing or a binary connotation. (Eji or Meji means two in Yoruba language)

In an example of Ejiogbe poem, Bade Ajayi, explains that Ejiogbe is the cue to the mathematical basis of Ifa divination. One Ejiogbe poem reveals that the ancient Yoruba used the binary system (number to base two) to develop the *Ifa* literary corpus.

Eji eji ni mo gbe,
N o gbe enikan mo
A dia fun Tayewo,
A -bu-fun-keyinde

TRANSLATION

I bless in twos,
I do not bless only one
Divined for Tayewo,

He-that-shares with Keyinde^{xxii}

It is clear from the forgoing that both the computer system and Ifa divination use binary system which is has been proved to be very useful in logic and mathematics education.

4.2. Representation of Numerical Values, Similarities

In both computer and ifa divination, the most convenient number base is 2. Thus numerical values are used in binary or converted to binary for computation.

Modulo Arithmetic in Ifa. Divination in ikin uses modulo-2 arithmetic. When an attempt is made to scoop at one try, the nuts in the left hand with the right hand a number 'x' of nuts remain in the left hand. The marking on the opon Ifa (the divining tray) is determined using modulo-2 arithmetic as follows:

If x = 0, marking is a two stroke representing binary 0.

If x = 1, marking is a one stroke representing binary 1.

If x = 2, marking is a two stroke representing binary 2.

In Boolean algebra and logic the binary constants of 0 and 1 correspond to false and true respectively. Divination with opele starts with this technique too. Also the basic unit of data and addressing in Ifa – the 8 bit byte system which is the standard unit of computer data was adopted in 1964. The 8 bit has been standard unit data in Ifa, centuries before 1964.^{xxiii}

4.3. Permutation Similarities

Ifa has 16 major divinities with other minor divinities, which are called Odu and Omo - Odu. The minor divinities are derived from major divinities such that each minor divinity could bear a compound name derived from the name of two patron major divinities, Oyeku and Ejiogbe produce Oyekulogbe, Iwori meji and Obara meji also produce Iworibara, etc. The number and names of the minor divinities are thus based on permutation.^{xxiv}

$$16 p_2 = 16! / 14 = 16 \times 15$$

$$= 240 \text{ minor divinities} + 16 \text{ major divinities}$$

$$= 256 \text{ divinities}$$

Extended binary coded decimal interchange code IBM (1974) uses 8 bit code word. Each of this 8 bit code can represent a total of

$$2^8 = 2 \times 2$$

$$= 256 \text{ characters}$$

4.4. Ifa matrix

The sixteen major odu and two hundred and forty- six minor minor odu relationship can be presented as 16- square matrix. Each of the major odu is associated with a family of sons. Each son enjoys the patronage of an uncle, who is one of the remaining fifteen major odu. Thus each omo – odu has a double barreled name which is a permutation of his father’s name and his patron’s name e.g. Oyekulogbe, Iworibara etc.

Each Odu or omo Odu Ifa has its own poem. A complete round of divination gives a signature, then recitation of the divination poem that is relevant to the signature obtained follows. The poem interpreted and its significance in relation to the situation been divined is drawn.^{xxv}

Okpewho (1981) in his article, myth and rationality in Africa says that:

In putting myth on a level with philosophy and science, Frazer..... Puts his finger on the true essence of rationalization. A very good illustration from traditional African society of such a system can be seen in the narrative exempla (ese) of the Yoruba divination corpus, Ifa. Backwards, these myths tell us of previous cases of the kind that the suppliant has brought; forwards, they provide a frame of explications for this and future problems of the kind. The essential thing here is that a scheme of convenience has been evolved which helps society to take account of the vast array of ideas and experiences which it has inherited in time.^{xxvi}

According to Bodunrin (1981) the futility of the continuation of the debate in the existence of African Philosophy is today generally conceived. The new orientation is to concentrate on the presentation of concrete examples of African thought that can pass muster as philosophy.^{xxvii} Sophie Oluwole, (1996) explaining Jean Grimshaw’s position says many philosophers have in recent times, also concern themselves with logical and conceptual analysis of language and thought and that the human characteristic of most philosophic literature worldwide are that they are basically critical treaties produced by individual thinkers. Philosophy is conventionally associated with criticisms and arguments. Analysis becomes intelligible only in the light of certain understandings of social relationships and human nature and in the light of certain beliefs and desirable social goals.^{xxviii}

Oluwole, in ‘African philosophy as illustrated in Ifa corpus’ demonstrated with two verses of Ifa corpus, the rationality of African philosophy. I shall examine her second example

5. Rationality in Ifa Corpus

OWONRIN MEJI

Owon irin ni i m’abere w’ona
 Owon omi ni I m’akeregbe sonu
 Owon omo ni i mu omo o jale
 Ti won fi I pee bi ni I pa a l’ode ido
 Eni po ti o gbon
 Eje a fi won we yunyun ninu oko
 Adia fun owon
 Ti won o fi joye ile e baba re
 O ni ki won o ma mu ohun joye
 O no ohun o lowo lowo
 Won ni ki I sowo ni won n wa
 Bi ko se ogbo re to po lapoju
 Ni won ba mu Owonrin joye ile baba re
 Won sopa saran
 O mu ti ‘nu u re jade
 Won ya enu koto
 Orin awo ni won n ko
 Won no ‘ A foworin joye loni
 Ire de
 Yegede
 Afowonrin joye loni o
 Aje de
 Yegede
 Eni bi’mo bi’ye lo bi’mo
 Yegede.^{xxix}(Oluwole quoting Abimbola(1969) pp36 – 37)

TRANSLATION

The scarcity of iron sends back needles back into the smithy
 The scarcity of Water leads to the loss of gourds
 The scarcity of children leads to the defence of an only child's stealing as an act justifiable on terms of hunger
 People who are many but unwise
 Are comparable to weeds in the farm
 The truth of this thesis are adequately demonstrated
 In the incidence of crowning Owon unto his father's throne
 Owon argued that he should not be crowned because he has no money
 And the people retorted they were not after his money
 But are impressed by his abundance of wisdom
 They therefore went ahead and crowned Owonrin
 The drums sounded
 And brought forth their best
 The people opened their mouths
 And sang the song of wisdom
 They exclaimed
 Owonrin rules today
 Goodness is with us
 Hurray!
 Owonrin rules today
 Prosperity is with us
 Hurray!
 Only he who gives birth to a rational child truly has a child
 Hurray! (Oluwole, 1996)

In the above poem, Owonrin argued that he did not want to become a king because he was not rich. The people objected because it was not his wealth they needed but his abundant wisdom. And eventually when Owonrin was crowned peace and prosperity reigned supreme. His wisdom did qualify him as a 'philosopher king' just as we have in Plato's thesis. The thesis here is that it is wisdom to rule rather than wealth of the ruler that makes a nation great.

I believe foundations of philosophical activities such as we have in contemporary institutions were considerably laid in the traditional societies. And if this is the case, why has the evidence for such an activity been long waiting? I tread the path of Okpewho in that the dichotomy between the primitive and the civilized mentality is so entrenched that attempt to see any link or correspondence between them have been as comparing death with sleep. Also Africans are in bondage of a foreign intellectual culture whose principles are today used to wrongly characterize African mode of thought. In the same vein, Oluwole (1996) puts it thus: " We appreciate, for instance, Plato's definition of justice and praise to high heavens his philosopher king's thesis, but because Owonrin meji did not occur in the literary fashion of the West, we fail to recognize their intellectual cogency" (P. 11).^{xxx} This is why From the following, we should agree with Winch (1964) that beliefs and practices should be judged only within the hermeneutic matrix of specific cultures; that is each culture should be judged within the context of the way of life of those peoples.^{xxxi}

6. Conclusion

The question of the existence of African philosophy was a debatable argument for years. Scholars have argued for and against its existence. However, it is now generally agreed that there is African philosophy, finally laying to rest the debate as to its existence.^{xxxii} Myths as origin of societies and cultures are used by scholars to study African philosophy, history and reality. This myth, which some scholars argued that we should not call philosophy for it lacks rationality, now shows an array of rational and logical ingredients as shown in Ifa divination technique. A relationship between computer science and Ifa divination has been established, and the foundation for further studies has been laid. I have argued that the logic and rationality that characterize computer operational technique is comparable to what we have in Ifa divination technique. The basic ingredients of philosophical activity – rationalization and speculation – are creditably accounted for by oral traditions of African society which Yoruba is a part.

7. References

- i. The Concise Oxford English Dictionary. (2012) Oxford: Oxford University Press.
- ii. Geertz , Clifford. (1979). Religion as a Cultural system, in William A. Lessa & Evon Z.Vogt (Eds) Reader in Comparative Religion, New York, Harper and Rowp.168.
- iii. Omolafe, John A. (1998). The significance of psychic functions in Yoruba representations of human experience. Ibadan Journal of Humanistic Studies, No 8. Oct. P. 30.
- iv. Jaja, M. Jones M. (2014).Myth in African Concept of reality. International Journal of Educational Administration and Policy Studies, vol. 6, no. 2, p. 12
- v. Amaech, Udefi . (2012). Philosophy, Myth and an African Cosmological System. Global Journal of Human Social Science, Geography and Environmental Geoscience. Vol. 12 issue10. p. 61

- vi. H.S. Staniland. (1985) What is philosophy, in K.A. Owolabi (Ed), Issues and problems in philosophy, Ibadan: Glovac Network. P.3
- vii. Ibid. p.4
- viii. Quinton, Anthony. (1997). Philosophy. Encyclopedia Americana, Vol. 21. Danbury: Grolier publishers p. 925
- ix. Computer. (2015). in Encyclopedia Britannical. Retrieved July, 01, from <http://www.britanica.com/technology/computer>
- x. George, Ifrah. (2001). The Universal History of Computing: From Abacus to the Quantum Computer. John Wiley and Sons.
- xi. Babbage, Charles. (2015). Complete Dictionary of Scientific Biography. Retrieved July 01, from Encyclopedia.com: <http://www.encyclopedia.com/doc/1G2-2830905456.html>
- xii. Computer. (2015). In Encyclopedia Britannical. Retrieved from <http://www.britanica.com/technology/computer>
- xiii. Abimbola, Wande. (1975). Sixteen great poems of Ifa, UNESCO AND Abimbola, p. 32
- xiv. ----- (1976) Ifá: An Exposition of Ifá Literary Corpus (Ibadan: Oxford University Press,), 3.
- xv. Longe, Olu. (1983). Ifa Divination and Computer Science: an inaugural lecture, Ibadan: Ibadan University Press. p. 18
- xvi. Eze, E.C. (1998). The Problem of Knowledge in "Divination": The Example of Ifa. In E.C. Eze (Ed.). African Philosophy: A Critical Reader, pp. 173-175. Oxford: Blackwell Publishers Ltd.
- xvii. Oluwole, S.B. (1996). African Philosophy as Illustrated in Ifa Corpus. Imodaye: Journal of African Philosophy 2, 1-20.
- xviii. Dipo Irele. (1996) Rationality, Myth and the Other: A Reconsideration of Habermas'. Quest International Journal of Philosophy, vol. 10, no 2, P. 97
- xix. Ibid. p. 102
- xx. Oluwole, Sophie. Op. Cit.
- xxi. Longe, Olu. Op. Cit. pp. 11 - 14
- xxii. Ajayi, Bade.(2013) A New Model of Ifa Binary System. Retrieved July, 01, 2015 from www.unilorin.edu.ng/publications/yajayi/NEW%20MODEL.DOC
- xxiii. Longe, Olu. Op. Cit. p. 11 – 14
- xxiv. Ibid. pp. 24 - 25
- xxv. Ibid. pp. 37 - 41
- xxvi. Okpewho, Isidore. (1981). Myth and Rationality in Africa, Ibadan Journal of Humanistic Studies, no 1, p. 32
- xxvii. Bodunrin, P.O. (1981) The question of African philosophy, in Philosophy, vol. 56
- xxviii. Oluwole, Sophie. Op. Cit. p. 2
- xxix. Ibid. pp. 7 - 10
- xxx. Ibid. p. 11
- xxxi. Winch, Peter.(1964). Understanding a primitive society, American Philosophical Quarterly, vol. 1, no. 4 p. 308
- xxxii. Bello, A.G.A. (1998). Towards a History of African philosophy, Ibadan Journal of Humanistics Studies, no. 8, p. 1.