

A DISCOURSE ON THE DISCORD BETWEEN THE YORÙBÁ NOTION OF DESTINY AND THE SCIENCE OF GENETICS

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Abstract. In the age of scientific and technological breakthroughs, the general conviction in *Ori*, among traditional *Yorùbá*, as the bearer of an individual's destiny and life faces some serious implications. Using philosophical analysis as fulcrum, the present study scrutinizes the relation between physiognomy and destiny in traditional *Yorùbá* idea of *Ori*. The cumulative traditional *Yorùbá* allegorical account depicts *Òrìṣànlá* as the primordial divinity casting *Ara* (human body) from clay or sand; *Olódùmarè*, the Higher God, providing *Èmí* (life-force) and *Ajàlá*, another primordial divinity, the maker of *Ori* (destiny) which must be acquired pre-natal. Hence, it seems on first showing, that it is impossible for the *Yorùbá*, as portrayed in the allegory, to believe in *Ori*, on one hand and genetically modified individuals on the other hand. As a consequence, this paper proposes to reconstruct a type of *Ori* acquisition that is consistent with *Yorùbá* thought system and loyal to the overwhelming and undeniable achievements of Genetic Engineering.

Keywords: *Ori*, *Àdáyébá*, Genetics, Environment, Traditional *Yorùbá*.

Introduction

Given the required amount of money and the competence of an experienced and well-equipped surgeon, anyone who wishes, can undergo plastic surgery, change identity and look as she/he desires. Perhaps she/he may not do that! Probably, she/he may allow germ cells to be simulated on a petri dish and be in the position to deliberate and appoint which shape of head, nose, ear, colour of eyes, skin, hair his/her offspring would or not possess. She/he can even decide whether or not she/he prefers twins or quadruplets. Religious persons with strong interests in the Abrahamic monotheisms would call this, an act (or art) of playing God (Dasaolu 2009: 88). The prime issue here however, is to question the place of *Ori* as a consequence of the scientific challenge posed by genetic manipulations, cloning and cases of plastic surgery.

There are several publications redolent with the impression that be-

lief in *Orí* among traditional Yorùbá is inconsistent and incoherent with the lived realities of the people. This thinking is present but not limited to: Segun Gbadegesin (2004), Debola Ekanola (2006) Richard Oyelakin (2013) and Emmanuel Ofuasia (2016). However, the findings of each of these scholars, inspires a deeper investigation or scrutiny of the Yorùbá belief system that would be pragmatic in a jet age. This revision is necessary given the obvious that belief in *Orí* is very resilient among the Yorùbás. Hence, the end of the present research is to reconstruct and propose an idea of *Orí* that is faithful to the lived realities of the Yorùbás, void of anachronistic tendencies and in tune with scientific and genetic (or Biological) advancements of the 21st century.

In four parts, and employing the method of analysis and hermeneutical interpretation, this essay proposes that *Àdáyébá* is the most plausible for a consistent and coherent belief in *Orí*. And *Àdáyébá*, literally translates as that kind of destiny that is encountered in the world. In the third part of this work, the argument that it is not possible to consistently hold a belief of pre-natal destiny without taking seriously, the place of the environment is given chief attention. However, the next section begins with the myth of creation in traditional Yorùbá cosmogony. It reveals some of the epistemic issues replete in Yorùbá human creation allegory and concurs with Debola Ekanola (2006) and Richard Oyelakin (2013) that to save the Yorùbás from irrationality and metaphysical incoherence on the discourse of *Orí*, the allegory and every belief surrounding it needs revision. It is not an incorrect generalization that no one recalls a pre-natal existence where they acquired an *Orí*. If no one recalls events leading to the acquisition of *Orí* pre-natally in the face of genetically expounded cause for human existence, why build the root of their belief on human personality and life course on it? When the third stratum answers this query, the fourth rift concludes this exercise.

The Concepts of *Orí* in Traditional Yoruba Folklore

Orí is unanimously admitted among the traditional Yorùbá as the “bearer of a person’s destiny as well as the determinant of one’s personality” (Gbadegesin 2004: 314) in traditional Yorùbá thought system. It is not an understatement that several scholars [see Abimbola (1976); Idowu

(1962); Makinde (1985); Morakinyo (1983); Oladipo (1992); Ekanola (2006); Balogun (2007); Gbadegesin (2004); Oduwole (1996); Oyelakin (2013); Ofuasia 2016]) have tinkered on the subject. However, only a handful has engaged with the role played by Biology and Environment in an individual's *Orí* [see Ofuasia (2016) and Ekanola (2006)]. It is therefore pertinent to argue the point explicitly in such a way that does not make the Yorùbá belief in *Orí* otiose in entirety.

Literally, *Orí* in the Yorùbá language means head, the physical head upon which hair grows. However, when the Yorùbás speak metaphysically, “the concept enters the fray as one of the entities that make up a human person” (Ofuasia 2016: 186). Erudite scholar Segun Gbadegesin, a notable personality of the *Orí* discourse expatiates:

It refers to the physical head, which is considered vital to the physical status of a person. It is, for instance, the seat of the brain. But when a typical Yorùbá talks about *Orí*, she is, more often than not, referring to a non-physical component of her person. For there is a widely received conception of an *Orí* as the bearer of a person's destiny as well as the determinant of one's personality (Gbadegesin 2004: 314).

The foregoing as expressed by Segun Gbadegesin has been corroborated by others [see Idowu (1962); Ekanola (2006); Abimbola (1976); Balogun (2007); Oduwole (1996)]. For the Yorùbás, a human is composed of *Ara* (physical body), *Èmí* (life-force or soul) and *Orí* [(Ekanola 2006: 46); (Gbadegesin 2004: 314)]. However, there are other spiritual elements tied to the overall constitution of the human person. *Ọwó* (spiritual hand) and *Èsè* (spiritual leg) have been added as the elements that make up the complete Yorùbá view of the person [(see Abimbola (2006); Balogun (2007); Ekanola (2006)]. However, *Orí*, the spiritual head has come to be synonymous with destiny, as Gbadegesin (2004: 314) conveys in that excerpt. In other words, “*Orí* is usually typified as the carrier of the destiny of a human being” (Ofuasia 2016: 187). How can this be the case? A perusal of the creation myth would be helpful at this interval.

According to consensus, *Ọbàtálá* or *Òrìṣàńlá* (one of the primordial divinities in the Yorùbá world-view (fond of drinking palm wine) fashions a human body (*ara*) out of clay or sand. Meanwhile, *Olódùmarè* (the Supreme Deity) gives life-force or soul (*Èmí*) to the ‘craft’ of *Òrìṣàńlá*.

The animated *ara* then proceeds to *Àjàlá's* abode (another primordial divinity who makes *Orí*) to make a choice of *Orí*. It is in this sense that *Orí* becomes the carrier of human destiny. *Orí* refers to the experiences and life course that a human person would encounter on Earth. The selection process of an *Orí* in Ekanola's view has three important aspects. Firstly, freedom to choose an *Orí* is assumed. Secondly, the *Orí* selected determines the life course and personality of its possessor on Earth. Third, each individual is unaware of the content or quality of the chosen *Orí*, that is, the person making the choice does not know if the destiny embedded in an *Orí* is good or bad (Ekanola 2006: 41). These points are substantiated in the works of other scholars such as Abimbola (1976) and Morakinyo (1983).

Furthermore, destiny, *Orí* may be acquired through any of the following ways: *Àkúnlẹ̀yàn* (that which is *chosen* while kneeling); *Àkúnlẹ̀gbà* (that which is *received* while kneeling); *Àyànmó* (that is which is *affixed* to oneself); *Ìpín-Orí* (allotment); and *Àdáyé bá* (that which is *encountered in the world*) [(see Gbadegesin (2004); Ekanola (2006); Balogun (2007); Idowu (1962)]. With each of the ways of acquiring a destiny subtly stated, it is not inappropriate to question the place of genetic and biological factors. However, before engaging with that, it is imperative to illuminate or clarify that the models: *Ìpín-Orí*, *Àkúnlẹ̀gbà*, and *Àyànmó* indicate the idea of bestowment, where choice and information is almost non-existent. Although *Àkúnlẹ̀yàn* accommodates freedom to a considerable level, there is absence of deliberation and lack of information leading up to the choice, more on this later.

Another impression that needs elucidation is that both *Àkúnlẹ̀yàn* and *Àkúnlẹ̀gbà* occur in a kneeling posture. The word *Ìkúnlẹ̀* literally means kneeling down but in the hermeneutic sense it connotes respect; lacking in resistance or self-effacement. Sometimes when a Yorùbá person says: “*Orí Ìkúnlẹ̀ ni mo wà*” (*I am on my knees*), s/he may say that standing or bowing, without being practical (i.e. kneeling) in posture. What is being emphasized is that the humble but not arrogance is the disposition in play. This is more glaring when the Yorùbá says: “*Má dúró lé mi lórí*” which literally translates as: “*do not stand on my head*”. People do not stand on the head of others practically but standing while a superior or elder is talking indicates lack of respect or humility. A child is therefore expected

to be on his/her knees while being advised or reprimanded.

This foregoing clarification is necessary and further reveals that *Àkúnlègbà* is almost synonymous with *Àyànmó* and the one could be hermeneutically interchanged with the other without betraying the concept and context. To amplify, they both indicate calisthenics that were done by a superior being to a lower person with total humility and inability to reject. As a consequence, the belief in freedom and choice surrounding the process of acquiring a destiny is almost non-existent. In this mould, Segun Gbadegesin (2004: 316) who marshals four arguments against the idea of acquiring a destiny harps:

Choice presupposes freedom, information, and genuine alternatives. None of these conditions is present in the case of the “choice” of destiny. The body-plus-emi entity is unfree since he or she has to have a destiny. So he or she cannot avoid making a “choice” and cannot walk away. Second, this entity is unfree to choose in the sense that he or she has no personality, without which it is impossible to have preferences of life-patterns. Destiny is what confers personality; for it is what confers tastes and preferences, important elements of personality. But without a specific personality, one has no basis for choice. Third, this being has no full information to make a choice. There is no recitation of what is in each of the *Orí*. So this being has no basis for comparison between them, without which it is impossible to make a real choice. Finally, there are no genuine alternatives, since there is no way of differentiating in any intelligent way between the available *Orí*, at least as far as their real essence is concerned. On the outside, each *Orí* looks exactly like the other.

The foregoing is a clear indication of the problems that a pre-natal existence leading to a choice of *Orí* through any of *Àkúnlèyàn*, *Àyànmó*, *Ìpín-Orí*, and *Àkúnlègbà*, admit. But *Àdáyébá* overcomes all of the problems latent in each of the other modes of acquiring *Orí*. This is the case since *Àdáyébá* literally translates as: “the kind of destiny which is *encountered in the world*”. In other words, *Àdáyébá* promotes a form of destiny that is social in nature. It takes cognizance of the social ideologies that shape the destiny, character and life-course of an individual. It is also not shy of the role that genetic scientists play on the physiology and genetics of a human personality. In today’s world, with the aid of genetic manipu-

lations and a fat cheque book, anyone can decide to or not to have twins. They can decide what colour of eyes, shape of nose, ear, mouth that a baby should or not have. And if genetic scientists have not been building castles in the air, *Òrìṣàńlá*'s authority as the one who fashions human body becomes moot. On first showing, the two beliefs (possession of destiny and genetic and environmental impression on individuals) are mutually exclusive. Logic would say that one has to be false for the other to be true.

A Discourse on the Idea of Socio-Cultural Influence in Destiny as Illustrated in *Àdáyé bá*

In this stratum, *Àdáyé bá*, the idea of *Orí* that is consistent with freedom, choice, responsibility and physical existence is expounded. It is the case that no one recalls a pre-natal existence where they made choices of *Orí*. Whereas this does not wish away cases of reincarnation where people recall instances of previous lives [see Lobsang T. Rampa (1980; 1978) and Ian Stevenson (1997)], it conceives as metaphor the belief that an *Araplus-Èmí*, is compelled to 'acquire' a life course under the veil of ignorance, for which it would be held responsible. Hence, given the problems presented in the preceding section by Gbadegesin (2014: 316) for *Àyànmó*, *Àkúnlẹ̀yàn*, *Ìpín-Orí*, and *Àkúnlẹ̀gbà*, how does *Àdáyé bá* overcome? For the sake of the purpose of this study, it would be prudent to justify that (2) cannot be held rationally, once and for all. While arguing for the metaphorical nature of the myths, Debola Ekanola (2006: 48) expatiates thus:

I am of the opinion that the fact that hereditary and environmental factors, which influence the situations in which people find themselves, exist prior to and independent of the birth of the individuals they affect contributes to the Yorùbá view that certain aspects of human lives are determined prior to birth in heaven. But there seems to be no good reason supporting the Yorùbá prenatal thesis. Rather than maintain that there is a pre-natal choice of *Orí* which determines one's destiny, personality, and entire life course, I argue that the idea of a chosen *Orí* is no more than a combination of all the various acts of free choice made by an individual up until any specified time in his life.

It is the case that the above excerpt may be interpreted as a justification for *Àdáyé bá*. The allegorical or metaphorical idea of picking an *Orí* in

Òrun (spiritual world), before sojourning to *Ayé* (Earth) may be accepted uncritically, perhaps for instructional purposes synonymous with the Genesis account where two individuals graced the Garden of Eden nakedly, even when no one remembers to ask how these first species of the *Homo sapiens*, fared during winter. In spite of the obvious that these stories have influenced minds, they are meant to be taken as justification, albeit a weak one, as to why humans fell into sin and how evil entered the world. There is no one, not even the writer of Genesis that witnessed the event before and inside Eden, first hand. In the case of picking an *Orí*, pre-natally, the situation does not improve. No one has documented or recalled that s/he proceeded to either *Olódùmarè* or *Àjàlá* to acquire the required *Orí*. To save the discourse from unnecessary logjam and impasse, it is interesting to be fortified with the idea that:

Nonetheless, Biology and Evolution have fortified us with the most rational explanation regarding the origin of life. The fusion of an ovum and sperm cell led to an embryo, then a foetus and lastly a human baby. This baby could suffer from some form of physical or mental deformities. This baby could either be an albino or Caucasian or dark-skinned (Ofuasia 2016: 197).

Since no one remembers even the pain of circumcision, going further to debate over the kind of *Orí* acquired pre-natally is needless. These are the grounds upon which (2) founders. Hence, it is pertinent at this interval to expose some of the trends in Genetic Engineering and employ Cesare Lombroso's theory of crime to show how genes, but not pre-natally ordained *Orí*, shape human character and disposition in the world. We commence with the former.

In the words of Satyajit Patra and Araromi Adewale Andrew (2015: 1) "Genetic engineering can simply be explained as the alteration of an organism's genetic, or hereditary, material to eliminate undesirable characteristics or to produce desirable new ones". It is an undeniable fact that "human genetic engineering relies heavily on science and technology. It was developed to help end the spread of diseases" (Patra & Andrew 2015: 1). In a related development, Desmond Nicholl (2002: 1) avers:

The term genetic engineering is often thought to be rather emotive or even trivial, yet it is probably the label that most people would recognize. However, there are several other terms that

can be used to describe the technology, including gene manipulation, gene cloning, recombinant DNA technology, genetic modification, and the new genetics. There are also legal definitions used in administering regulatory mechanisms in countries where genetic engineering is practiced.

While it is not the scope of the present study to delve fully into the nitty-gritty of Genetic Engineering, scholars such as Babajide Dasaolu (2007: 203-8) have chronicled in this mould. It is pertinent to however, hint that there are many areas, according to D.S. Nicholl (2002: 2) in which genetic manipulation is of value, including: Basic research on gene structure and function; Production of useful proteins by novel methods; Generation of transgenic plants and animals; and Medical diagnosis and treatment.

Clearly, one of the greatest benefits of this field is the prospect of helping cure illness and diseases in unborn children. Having a genetic screening with a foetus can allow for treatment of the unborn. Overtime this can curb the growing spread of diseases in future generations. Is *Òrìṣàṅlá* therefore responsible for this spread? Perhaps!

It is however consoling that humanity has been able to correct the ‘gaffes’ of *Òrìṣàṅlá*. Today genetic engineering is used in fighting problems such as cystic fibrosis, diabetes, and several other diseases (Dasaolu 2007: 204). Today genetic engineering is used in fighting problems such as cystic fibrosis, diabetes, and several other diseases (Fischer, Hacein-Bey & Cavazzana-Calvo 2002: 622). In a similar vein, Tina Kafka (2009: 11-2) expounds:

Once genetic engineers learned to cut and recombine genes, the possibilities of developing drugs to treat human diseases and even organs for human transplant became almost limitless. At the beginning of the twenty-first century, genetic engineering is still in its infancy. But already, the magnitude of the possible medical applications of this new technology is apparent.

It is important to hint at this juncture that genetics and genetic engineering are not recent activities. In the words of Lisa Yount (2006: xvi):

The study of genetics, and even genetic engineering, is as old as humankind. People have always noticed that members of families tend to look alike, having similar hair or eye color, for

instance. Sometimes parents and children share a certain trait or way of behaving, such as singing talent or a quick temper. Those qualities seem to have been passed down from one generation to the next. People who observed such similarities were seeing genetics in action.

The above is not the opposite of the truth if we consider that family semblance is taken seriously among Africans as a form of paternity determination. However, much as the temptation is rife, that *Òrìṣàṅlá* fashioned human bodies in *Òrun*, the idea in the foregoing excerpt calls for a revision of the idea – Is *Òrìṣàṅlá* also concerned about family semblance during his molding session? Perhaps!

There is no doubt that there are arrays of moral issues surrounding the science of genetic engineering. However, the present study is not committed to the moral or ethical implications therein. The crucial point is to establish that genetic engineering has come to stay as humans can now play the role of *Òrìṣàṅlá*. How is this possible? In the words of Christopher Gyngell (2015: Par. 1):

The ultimate goal of gene editing technologies is the capacity to make precise, controlled modifications to very specific areas of the genome. This would be a powerful ability. Gene editing unlocks access to an entirely novel way to fight disease which has been unreachable until now.

The above necessarily raises some questions regarding the acquisition of destiny in Yorùbá cosmogony. It clearly questions the expertise of *Òrìṣàṅlá* and the role of *Orí* acquired from *Àjàlá* or *Olódumarè*. If the entity making *Ara* does no better job, it does not matter the kind of *Orí* acquired, one's destiny already has some limitations. To amplify, the allegory implies that there is no connection between one's destiny and one's physiognomy, whereas reality has shown that the latter has a role to play in assisting the fulfillment or miscarriage of the former. Given that individuals must acquire an *Orí*, one needs to question whether the *Orí* is the cause of some birth defects or the genetic (even if we grant for the sake of argument, that the divinity knows about gene manipulation) error of *Òrìṣàṅlá*, while molding an individual. Birth defects are not uncommon among newborns and this is the starting point for assessing the originality in *Òrìṣàṅlá's* 'craft'. Speaking on physiological defects in human babies,

Christopher Gyngell (2015: Par. 2) announces:

Around 7.9 million children each year are born with a serious birth defect that has a significant genetic contribution. If we could safely and easily correct these errors at the embryonic stage it would be possible to virtually eradicate this disease burden. In addition, 30% of all deaths worldwide are due to chronic diseases (such as heart disease, cancer, and diabetes) in those under 70. We all know of people who seem innately resistant to the perils of ageing and flourish well into their 80s and 90s. Gene editing could ensure we all have the best chance to live healthily into old age

It is clear from the above excerpt that humans have not only detected the errors and negligence of *Òrìṣàṅlá*, they seem to have found what could be ways to avert some of these defects and bring about improved species. In a related development Sarah Griffiths (2014: Par. 4) amplifies:

The procedure is designed to get rid of genetic mutations that can lead to blindness, epilepsy and other medical problems. Mitochondria convert energy from food into essential ingredients that human cells need in order to function. Critically, they also carry their own DNA as well as the nuclear DNA in humans' chromosomes which store most of our genetic information. Only mothers pass on mitochondrial DNA to their children, which sometimes contain mutations that can lead to epilepsy, diabetes, blindness and other medical problems. It is estimated that one in 5,000 to 10,000 women carry mitochondrial DNA with mutations.

If we acquired some of our genes from our mothers, as the foregoing entails, what essence does a primordial god play in our physiognomy? Taking the allegory as a metaphor is crucial, for it serves no end if admitted hook, line and sinker. If taken otherwise, it only reinforces folly. It is therefore not an error why some ancient beliefs among the Yorùbás are practiced as a consequence of the medical and genetic ignorance that follows from this fallacy. It had already been argued that the divinity synonymous with wisdom in Yorùbá pantheon, *Òrúnmilà*, has no idea of some of the conditions humans find themselves ailing from (Ofuasia 2016). This is owing to the fact that *Òrúnmilà* is only sighted at the place where destinies are acquired but not where bodies are molded. Oladele Balogun (2007:

122) amplifies in this vein that:

In all these myths, *Òrúnmìlà* (arch-divinity), the founder of *Ifá* (oracle) system of divination, is noted to be a witness of man's choice of destiny. Little wonder he is referred to as *Eleri-Ìpín* (the witness of destiny) and the only one competent to reveal the type and content of 'Ori' chosen by each person.

From the foregoing, Ofuasia (2016: 196) infers that:

Òrúnmìlà would have no idea of women suffering from *Mullerian agenesis*, for instance. This is because he did not witness *Orishanla*, omitting the womb during his sand or clay session of such women. Neither is *Òrúnmìlà* able to recommend that couples with AS genotype ought not to copulate to avoid a high mortality SS offspring. It would be recalled that in traditional Yorùbá societies, there are reports of children born to die at infancy. Whereas Yorùbás call these 'abiku', some other groups in Nigeria refer to these children as 'ogbanje'. Poems from Nobel Laureate Wole Soyinka and John Pepper Clarke already attest to this belief. With the advancement and development in medical technology and research, it has come to light that the problem is actually genetic but not spiritual.

So far, this essay has been able to argue that the myth surrounding human creation in *Òrun*, as presented in Yorùbá thought system founders in the face of the revelations and researches in gene manipulation and cloning.

We take this position in this research due to the understand that before coming into the world, the society into which the child would be born, the genes of the parents as well as other factors play crucial and corpulent roles in character and personality formation. Emmanuel Ofuasia (2016: 196) is therefore not in error when he points out that "The child grows in a community with its own distinct ideology. The environment shapes the way the child would think. At this point, it really matters where the child is raised". A child born with the destiny of being a great footballer should be born into a family that loves football or who allows children to express themselves freely. Otherwise, the child may not actualize the destiny because a social condition is missing. This line of thinking is further corroborated by Godwin Sogolo (1993: 74) who expounds that:

The mind of the African is not structurally different from that of the Westerner... The truth is that both are similarly marked by the same basic features of the human species. The difference lies in the ways the two societies conceive of reality and explain objects and events. This is so because they live different forms of life.

From the above, it becomes translucent that the pre-natal and spiritual acquisition of destiny, among the Yorùbás is to be taken as metaphor. One has to factor in the social and biological dimensions to personality and life course. *Àdáyébéá*, in traditional Yorùbá world-view therefore makes the case very explicit for the possession of destiny that is faithful to the Yorùbá metaphysic-religious tradition and biological and sociological factors. This is striking if we recall that Yorùbás consult *Òrúnmìlà* for guidance when perplexed about life's challenges. If, as the Yorùbás believe that there is symmetry between the consultations and the recommendations, then it is the case that character and spirituality are important. In most instances, individuals are recommended by *Ifá* to amend their characters or deepen their spiritual ties. All of these are accommodated by *Àdáyébéá*. It may therefore be pertinent to develop a Metaphysics that would admit the biological and the mystical within the Yorùbá context. But this is beyond the scope of the present research.

Conclusion

From the discourse, it becomes clearer that the pre-natal and spiritual acquisition of destiny, among the *Yorùbá* is to be taken as metaphor. One has to factor in the social and biological dimensions to personality and life course. *Àdáyébéá*, in traditional *Yorùbá* world-view therefore makes the case very explicit for the possession of destiny that is faithful to the *Yorùbá* metaphysic-religious tradition and biological and sociological factors. This is striking if we recall that the *Yorùbá* consult *Òrúnmìlà* for guidance when perplexed about life's challenges. If, as the *Yorùbá* believe that there is symmetry between the consultations and the recommendations, then it is the case that character and spirituality are important. In most instances, individuals are recommended by *Ifá* to amend their characters or deepen their spiritual ties. All of these are accommodated by *Àdáyébéá*. It may therefore be pertinent to develop a Metaphysics that

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Bibliography

- Abimbola, W. 1976. *Ifa: An Exposition of Ifa Literary Corpus*. Ibadan: Oxford University Press.
- Balogun, O.A. 2007. "The Concept of Ori and Human Destiny in Traditional Yoruba Thought: A Soft-Deterministic Interpretation." *Nordic Journal of African Studies* 16(1): 116-130.
- Dasaolu, B. 2009. "Artificial Human Creation: An Examination of the Cleavage between Theology and Science." *Journal of Philosophy and Culture*. 1(1): 87-100
- Dasaolu, B. O. 2007. "Humanity and Genetic Engineering: An Ethicist's Viewpoint" *International Journal of Multi-disciplinary Research*. 2: 203-208.
- Ekanola, A.B. (2006). "A Naturalistic Interpretation of the Yorùbá Concepts of Ori." *Philosophia Africana*. 9(1): 41-52
- Ellwood, C.A. 1912. "Lombrosso's Theory of Crime." *Journal of Criminal Law and Criminology*. 2(5): 716-23.
- Fischer, A., Hacein-Bey, S., Cavazzana-Calvo, M. 2002. "Gene therapy of severe combined immunodeficiencies." *Nat Rev Immunol* 2: 615-621.
- Gbadegesin, S. 2004. "Toward a Theory of Destiny." In: *A Companion to African Philosophy*, Edited by K. Wiredu. New York: Blackwell.
- Griffiths, S. 2014. "Birth of the Genetically Modified Human." <http://www.dailymail.co.uk/sciencetech/article-2546861/Birth-genetically-modified-HUMAN-Babies-born-tweaked-DNA-UK-year.html>. Posted 27th January, 2014. Last Assessed 13th February, 2017.
- Gyngell, C. 2015. "Genetics: The Case for Genetically Engineered Babies." <https://www.theguardian.com/science/2015/may/01/fear-of-designer-babies-shouldnt-distract-us-from-the-goal-of-healthy-babies>. Posted 1st May, 2015. Last Assessed 13th February, 2017.
- Idowu, E.B. 1962. *Olodumare: God in Yoruba Belief*. London: Longman.
- Kafka, T. 2009. *Genetic Engineering*. Detroit: Lecent Books.
- Lombrosso, C. 1911. *Crime, Its Causes and Remedies*. Henry P. Horton (Trans). Boston: Little, Brown & Co.

- Makinde, M.A. 1985. "A Philosophical Analysis of the Yoruba Concept of 'Ori' and Human Destiny." *International Studies in Philosophy*. XVII (1): 50–66.
- Morakinyo, O. 1983. "The Yoruba Ayanmo Myth and mental Health-Care in West Africa." *Journal of Culture and Ideas*. 1(1): 68–79.
- Nicholl, D.S.T. 2002. *An Introduction to Genetic Engineering*. Cambridge: Cambridge University Press.
- Oduwole, E.O. 1996. "The Yoruba Concepts of 'Ori' and Human Destiny: A Fatalistic Interpretation." *Journal of Philosophy and Development* 2(1&2): 40–52.
- Oladipo, S. 1992. "Predestination in Yoruba Thought: Philosopher's Interpretation." *Orita: Journal of Religion*. XXIV(1&2): 34–51.
- Ofuasia, E. 2016. "Ori in Yoruba Thought System: A Humean Critique." *Africology: The Journal of Pan African Studies*. 9(10):185-200.
- Oyelakin, R.A. 2013. "Questionable but Unquestionable Beliefs: A Call for a Critical Examination of Yoruba Culture." *Thought and Practice: A Journal of the Philosophical Association of Kenya*. 5(2): 81-101.
- Patra, S.A.A., Andrew, A.A. 2015. "Human, Social and Environmental Impacts of Genetic Engineering." *Journal of Biomedical Sciences*. 4 (2): 1-3
- Rampa, T.L. 1980. *Twilight*, London: Transworld Publishers
- Rampa, T.L. 1978. *As it Was!* London: Transworld Publishers
- Sogolo, G.S. 1993. *Foundations of African Philosophy: A Definitive Analysis of Conceptual Issues in African Thought*, Ibadan: University of Ibadan Press.
- Stevenson, I. 1997. *Where Reincarnation and Biology Intersect*. Westport: Praeger Publishers.
- Yount, L. 2006. *Modern Genetics: Engineering Life*. New York: Chelsea House.

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