MEDICO-LEGAL ISSUES IN ORGAN TRANSPLANTATION AND THE APPRAISAL OF ITS LEGAL REGIMES IN NIGERIA

Written by ***Olusegun Durotolu***

Lecturer, Bowen University, College of Law, Iwo, Osun State, Nigeria

ABSTRACT

Human organ transplantation is as old as human history. In this paper, God is acclaimed to be the author of human organ transplantation. Meanwhile, owing to advancements in medical research, the tendency is now toward animal organ transplantation to the human organ. Also, medical advancement, most especially the preservation of human beings as neomorts for cadaveric is seen as creating serious problems for the medical practice. The ethical, legal, and jurisprudential problems that ensued in the various emerging trends of organ transplantations are the motivating factors for this paper. Meanwhile, while medical research continues on animal organs as substitutes for human organs, few of the experiments done have not succeeded in preserving the lives of the human donees. Because of the need for the preservation of life, medical efforts continue in this regard. Meanwhile, this paper addressed the above issues and appraised the legal regimes in Nigeria in terms of their inadequacies. The aim is to bring to the awareness of our legislature, the problems inherent in the present statutory provisions with the view to restate the need for the enactment of a more robust legislative instrument that would consider the current trends in medical advancements. The aim and objectives of this research work are to examine the concept of organ and organ system, the typologies of organ transplants, the jurisprudential perspective of organ transplantations, the attitudes of some religious sects to organ transplantation, the ethical issues in organs transplantation and embark on appraising the legal regimes of organ transplantation in Nigeria, both statutory and at common law given the recent decision of the Supreme Court in the case of Esabunor & Anor v. Faweya & Ors. Findings revealed that serious controversies arose on issues relating to the ethics of the medical profession, the legal implications in organ transplant matters, issues as to the timing of death,

preservation of human bodies for organ cropping and transplant, and the transplant of animal organs to human which might shape the identity of man beings and place restrictions on the human subjects of experiment freedom with the likelihood psychological effect and adverse relational matters.

Keywords: Medico-Legal, Issues, Organ, Transplantation, Appraisal, Legal Regimes, Nigeria

INTRODUCTION

History of Human Organ Transplantation

The history of organ transplantation is as old as mankind. It started from the very beginning of the creation of man by God. The Bible recorded in Genesis 2 vs. 20 - 23 thus;

> *But for Adam, no suitable helper was found. So, the Lord God caused the man to fall into a deep sleep; and while he was sleeping, He took one of the man's ribs (man's side) and then closed up the place with flesh. Then the Lord God made a woman from the rib He had taken out of the man and He brought her to the man. The man said; this is now the bone of my bones and flesh of my flesh; she shall be called "woman" for she was taken out of man.*

Here God is seen as The Creator, The Physician, The Surgeon, and The Anaesthesia. This is the first organ transplantation as recorded in the Bible. Meanwhile, the Catholic Theologians believed that to mutilate the body of one living person to benefit another represents a violation of the principle of totality. Nevertheless, though no religion forbids the practice of organ transplantation as a form of treatment, certain groups within the major religion of the world discourage cadaveric organs.

In 300 B.C., the Christian Arabs Saints - Cosmas and Damian, according to J.A. Bradly, were said to have successfully transplanted the leg of a deceased person several days earlier to replace a deceased leg of another living person.

The aim and objectives of this research work are to examine the concept of organ and organ system, the typologies of organ transplants, the jurisprudential perspectives of organ transplantations, the attitudes of some religious sects to organ transplantation, the ethical issues in organs transplantation and embark on appraising the legal regimes of organ transplantation in Nigeria, both statutory and at common law because of the recent decision of the Supreme Court of Nigeria in the case of *Esabunor & Anor v. Faweya & Ors*[1].where the court laid down a new rule relating to parental consent as regard a minor

Definition of Organ System

An organ system is a group of organs that work with one another to achieve or perform a particular task or set of tasks necessary for the attainment of good living.[1a] The organ systems present in the human body have specialist functions. But it should be noted that the organ system cannot function independently and thus they work in synergy to keep the body running at peak efficiency. All the organ systems in the body are interactive and depend on the functions of the other to carry out their functions. The body has the following organ systems.[2] i. Circulatory System ii. Digestive System iii. Endocrine System iv. Excretion System v. Integumentary System vi. Nervous System vii. Respiratory System viii. The Skeletal and Muscular System

Organs and Transplantation

The organ system is quite distinct from the organ itself. An organ is a fully differentiated structural and functional unit in a human being or animal that is specialized for some designated function[3], while transplantation is the transferring of an organ, tissue, or cells from one person to another. It should be noted that subsumed within the definition of the organ system is the circulatory system which involves the activities of the heart pumping oxygenated blood into the whole body systems. Also, we put forth the argument that inclusive in the conceptualization of organ is the transferring of tissue or cells from one person to another based on which we tend to submit that since blood contains various cells like red blood cells, white blood cells, which as soldiers of the body fighting infections, blood transfusion then is organ transplantation. The syllogism is this:

1st premise - Organ transplantation includes cells transference from one place to another

2nd premise - Blood Transfusion from one person to another includes transfusion or transference of cells from one person to another.

Conclusion - Therefore, organ transplantation includes blood transfusion.

There are more than 20 organs in the human body. The six most important human organs are as follows;[3a]

i. Skin: - It is the largest organ in the human body and functions to maintain body temperature.

ii. The brain: - The brain is the actual controller of the body. The brain stores information that allows thinking and controls vital daily functions like digestion, heart rate, and breathing. It receives impulses from nerves and allows responsiveness to pain and other stimulation through the instrumentality of the motor neuron.

iii. The heart: - The heart is another vital organ that is essential for life. The heart pumps oxygenated blood through the human body and receives deoxygenated blood in return. Without the heart receiving oxygen, other organs could not receive oxygen or have carbon dioxide removed.

iv. The Kidneys: - The kidneys are located under the rib cap on a human's back. The work of the kidneys is to filter things like salts and excess sugar out of the body to produce urine. The kidneys produce an enzyme called rennin which has a big role in regulating body pressure. A healthy person can live with only one kidney.

v. The liver: - The liver is located in the upper abdomen. The liver filters out toxins and regulates blood sugar. The liver converts sugar and stores them, only to release them when more sugar is needed in the blood. The liver also is in charge of releasing cholesterol, breaking down fats, and producing blood proteins.

TYPOLOGIES OF ORGAN TRANSPLANTATION

Since the definition of organ includes cells and since a unit of a cell is a living thing, then it is necessary to consider: bone marrow transplant, cord blood transplant, xeno transplantation, super pig transplantation, and blood transfusion.

Bone Marrow Transplant

Interestingly, the necessity for the intervention of the law in transplantation could be well explained by studying in detail, the procedure known as bone marrow transplant and cord blood transplant. The most recent types of organ transplantations include bone marrow transplantation, cord blood transplantation, and blood transfusion.

The bone marrow transplant involves the taking of cells that are normally found in the bone marrow (stem cells), filtering those cells, and giving them back to either the patient they were taken from or another patient. The goal of a bone marrow transplant is to transfuse healthy bone marrow cells into a person after his or her unhealthy bone marrow has been eliminated.[4]

Bone marrow itself is a soft spongy tissue found inside the bones, the hips, breast bone, spine, ribs, and skull. It contains cells that produce the body's blood cells. The bone marrow is responsible for the development and storage of most of the body's blood cells. Blood cells produced in the bone marrow include; the red blood cells which carry oxygen to the tissues in the body; the white blood cell which helps to fight infections and aid in the immune system (they are otherwise referred to as the soldiers of the body); and the platelets, which helps with blood clotting.

Every type of blood cell in the bone marrow begins as a stem cell. Stem cells are immature cells that can produce other blood cells. Stem cells when transplanted find their way into the recipient's marrow and begin the process of differentiation, maturing, and producing all types of blood cells that are needed by the body.[5]

The goal of bone marrow transplant is to cure many diseases such as sickle cell anaemia, and non-functioning bone marrow due to leukaemia i.e. blood poisoning, to prevent damage from a genetic disease process, lymphomas, and some solid tumors such as brain tumors, cancer of the kidney, etc.

Bone marrow harvesting involves collecting stem cells with a needle placed into the soft center of the bone marrow. Most sites used for bone marrow harvesting are located in the hip bones and the sternum. But the hip bones are mostly used because they have a larger number of stem cells. The procedure takes place in the operating room. The donor will be anesthetized during the harvest and will not feel the needle, though, on recovery, the donor may experience minor pain where the needle was inserted.[6]

The process of transplantation of the stem cells of the bone marrow could be explained in three stages[7].

i. Most often, high doses of chemotherapy and or radiation are included in the preparations. This intense therapy is required to effectively treat the malignancy and make room in the bone marrow for the new cells to grow. This therapy is often called ablative, or myeloablative, because of the effect on the bone marrow. The bone marrow produces most of the blood cells in our body. Ablative therapy prevents this process of cell production and the marrow becomes empty. An empty marrow is needed to make room for the new stem cells to grow and establish a new production system. This procedure involves exit and taking over. The new stem cells take over the blood reproduction to exit the sickle cell anaemic blood or to clean up the diseased system.

ii. After the chemotherapy and or radiation are administered, the transplant, either from bone marrow or peripherally collected stem cells, is given through the central venous catheter into the bloodstream. It is not a surgical procedure to replace the marrow with the bone but is similar to receiving a blood transfusion. The stem cells find their way into the bone marrow and begin reproducing and establishing new healthy blood cells.

iii. Supportive care is given to prevent and treat infections, side effects of treatments, and complications. This includes frequent blood tests, close monitoring of vital signs, strict measurement of input and output, weighing the child daily (if a child), and providing a protected and clean environment.

The group of specialists that might be involved in a transplant procedure are as follows; doctors, transplant nurse coordinators, social workers, dietitians, physiotherapists, pharmacists, respiratory therapists, laboratory technicians, infections disease specialists, dermatologists, gastroenterologists, psychologists, etc.[8] Thus, the process which looks seemingly simple is not at all simple, it involves the inputs of many specialists like other types of transplant and it entails extraordinary care to avoid criminal sanction and civil liabilities in law.

Umbilical Cord Blood Transplant

Cord blood is the residual placenta blood collected from the cord of the new-born. It is a rich source of hematopoietic stem cells which could be used to re-populate the bone marrow. Consequently, it provides a veritable source of healthy blood cells.[9] Cord blood could be obtained in two ways; it could be collected from the umbilical cord when the placenta remains in *utero* or from a placenta after delivery using sterile apparatus and a venepuncture procedure. The collection of cord blood in utero is invasive or intrusive and could be disruptive to the care

of the mother and the child after delivery. It should be noted that cord blood collected from a post-delivery placenta has a higher chance of contamination and requires specialist and trained staff.

After the collection, the cord blood is usually tested for transmissible infections and cell number, DLA type for donation compatibility before storage usually in the cord blood bank. Cord blood cells are stored in liquid nitrogen for up to fifteen years in the cord blood bank and not longer. The stem cells taken from the umbilical cord reproduce into mature, functioning blood cells quicker and more effectively than the stem cells taken from the bone marrow. Because they are new, they can produce more blood cells from each stem cell.[10]

The reason why the present researcher decided to explicate in detail, the procedure involved in bone marrow transplant and cord blood transplantation is to graphically illustrate the procedure to reveal the necessity for the intervention of the law in this process. First, all the specialist involved in the process owes a duty of care, both to the donor and the recipient. Second, the duty of care is imposed by law, and third, when there is a breach of such duty of care that resulted in injury either to the donor or the recipient or both, the specialist whose action is most proximate to the injury might be held liable under the tort of negligence or might face criminal sanction depending on the gravity of the injury sustained. When their acts resulting in the injury are a joint one, then they can all be liable as a joint tort feasor. Other essential human organs include the pancreas, stomach, small intestine, large intestine, and lungs. The question that is being dealt with later is whether it is legally permissible to operate on another person, remove one of the organs, and transplant it to another person?

Xenotransplantation

It is highly imperative to examine the current research about xenotransplants. Xenotransplants is a medical procedure where organs from one species are removed and transplanted into another species and it is best exemplified in the transplantation of animal organs into humans or replacement of animal organ with damaged human organs.

According to Williams, 'xenotransplants are on the cutting edge of medical science and some scientists were of the view that they hold the key to replacing organs as well as curing deadly diseases as well[11]". The proponents of organ transplantation provide us with benefits that could be derived through this medical process[12]; to wit: it enables the quicker provision of organs, it tends to save more lives, once created, the "donor strain" should be able to produce normally[13],

most eligible recipients would receive the organs earlier when they are sick[14] and It may decrease distress and suffering[15].

Despite these potential benefits, there are critical problems associated with Xenotransplantation:

i. It is unclear, whether its negative impact on the recipients' quality of life due to long-term immunosuppressant therapy and the risk of zoonotic infections could worsen the long-term outcome[16].

Recent research suggests that Xenotransplantation may be associated with the transmission of pig microorganisms such as viruses, bacteria, fungi, and parasites[17]. As a result of the recipient's immune-suppressed state; infection and pathological consequences may be more pronounced[18]. The presence of Porcine endogenous retro-virus represents a special risk as they are in the genome of all pigs and infect human cells in vitro[19]. The recipients of animal organ donation might develop a different self-image,[20] *with possible problem of identity, knowing fully well that they have been given a non-human organ*[21].

Krishna and Hepping emphasized that loss of identity might jeopardize the core principles of anatomy, which underpins all medical treatment[22].

ii. Tendency to be put under Restriction

With the requirement for vigilant post-operative monitoring, recipients may be put under restrictions concerning their engagement with others, resulting in the defector's temporary detention at home[23]. Since patients in need of organs are always motivated by the quest for survival, they may have little or no time to consider the medium and long-term effects of this medical process on themselves, their freedom of movement, and the general society[24].

iii. Expensive procedure out of the reach of the poor

Treatment via Xenotransplantation would be immensely expensive and may never be within the reach of the low-income earner and even the middle class. This could be easily discerned because of the requirement that; the production of a pathogen-free donor organ would involve rearing animals in strictly controlled environments; subjecting such animals to rigorous standards of examination and surveillance; additional costs of developing a sustainable workforce to provide transplantation services and post-transplantation surveillance[25] of the patients to pre-empt hazards on the community. The insurance providers may not cover the

expenses of a Xenotransplantation[26] and public health care providers may decline to provide this treatment as it may not be recommended by expert groups as being cost effective[27].

iv. It involves general modification

Since the process involved genetic modification, it may have immediate and long term[28] unpredictable and unfathomable negative effects on the human recipient[29] and the animals' donor.

The Super Pigs breakthrough in Organ Transplantation vis-à-vis Baboon- Favoured Transplants

Xenotransplantation, which emerged primarily as a 'science fiction' by raising human's hope that animal organs could be genetically altered with human genes to track a patient's immune system into accepting the organ as its flesh and blood is gradually being nurtured to fruition. With zero possibility of rejection. Animal organs would be so genetically altered that the human body won't even know the difference[30].

The reason for this genetic alteration was lucidly explained by Williams that one recognizable formidable obstacle to Xenotransplantation is the one posed by the human body's immune system. She points out that, even before a person is born, his or her immune system learns to detect and resist foreign substances in the body which are called antigens. These could be anything foreign to our body such as viruses, bacteria, toxins, any animal organs, and even artificial parts. She explained further that antigens trigger the body's white blood[31] cells, considered soldiers of the bodies[32], called lymphocytes – to produce antibodies. According to her, different lymphocytes recognize and produce antibodies against particular antigens. While B cell lymphocytes produce antibodies in the blood that remove antigens by causing them to clump or by making them susceptible to other immune cells, T cell lymphocytes activate other cells that cause direct destruction of antigens or assist the B cells. She explained further that transplant physicians attempt to suppress the immune system with powerful drugs, to pre-empt its ability to reject a particular organ while leaving the rest of the body's immune system intact[33]. She spoke, further, about genetic engineering as another bold step in batting organ rejection: By this, researchers are battling with the experiment with ways to insert human genes into animals' organ, so that the organ will produce proteins that the body will recognize as human[34].

In furtherance of their experimentation, Williams recorded that researchers at the University of California, San Francisco, after getting permission from the Food and Drug Administration injected an AIDS patient with Baboon bone marrow. The hope is that the Baboon bone/marrow, which is resistant to HIV and a source of immune cells, could provide a replacement for the patient's damaged immune system[35]. Also in April 1995, doctors at Lahey Hitchcock Medical Center in Burlington, Massachusetts, injected foetal pig brain cells, with the permission of the FDA into the implanted pigs' kidney of one woman and the brains of patients with advanced Parkinson's disease. The hope was that the foetal tissue would produce dopamine, which the patient's brain lacks[36]. She also noted that the first animal to human transplant took place in 1906, when the French surgeon Mathieu Jaboulay goat's liver into another, but the two of them did not survive[37].

Meanwhile, she emphasized that, of all animals, Baboons and Pigs are the most favored Xenotransplantation donors. Since Baboons are genetically close to humans, they are most often employed for initial experimentation[38]. She further stated that six Baboon kidneys were transplanted into the human body in 1984, and two Baboon livers in two patients in 1992[39]. All the patients were recorded to have died within weeks after the operation, while it was noted that they did not die of organ rejection, but died as a result of common infections common to patients on immune-suppressive drugs[40]. It was recognized that the major setback for Baboon organ transplantation for human use is that Baboon harbor many viruses[41].

Consequently, pigs appeared to be a better choice in Xenotransplantation[42] in that; they are generally healthier than most primates, they are very easier to breed as producing a whole litter of piglets is possible at a time, moral objections to its killing are few in that they are consumable as meats and most importantly, pigs and humans were said to share several physiological and anatomical similarities.[43] Nevertheless, despite the above advantages, pigs are also said to have the capability of harboring harmful viruses in their genome, thereby making pig to human transplant dangerous.

Meanwhile, at present, researchers express the confidence that they can simply remove the viruses native to pig cells, thereby repositioning Xenotransplantation. Scientist employs among others the following medical procedures; the creation of pig stem cells, genetic red pen, and balancing of genetic engineering and immune system suppressing drugs.

Alleyne recorded that the creation of pig stem cells in the laboratory, the implication of which is that pigs are considered to be genetically close to humans could be changed so that the human

body does not reject their organs[44]. Dr. Lei Xiao, of the Shanghai Institute of Biochemistry and Cell Biology, was reputed to have led the research. The aim is to use pigs as organ donors to provide organs for patients without triggering an adverse reaction from the patient's immune system. Dr. Xiao and his colleagues were acclaimed to have created stem cells – the master cells of the body which can develop into any type of cell in the body by reprogramming cells taken from a pig's ear and bone marrow[45]. Their technique, done in the laboratory was said to involve infecting the cells by exposing them to a virus that turned back their genetic clock. Breakthroughs in this experimentation could lead to the development of repairs to treat human diseases such as diabetes and many others, caused by inherited gene disorders[46].

ORGAN TRANSPLANTATIONS AND SOME RELIGIONS

It is necessary to shed light on some fundamental beliefs of some religions on the topical issue of organ transplantation. And the researcher would focus his study on Christianity, Islam, and the traditionalist. In the discussion about the adherents of traditionalist beliefs. The paper would focus on the Yoruba traditional belief that centers on the *Ifa oracle.*

Christian and Organ Donation

Oliver wrote that the Christian faith accepts organ transplantation, though there are different nuances of opinion. Most Anglican, Catholic, and Protestant scholars seem to agree that organ donation is an altruistic act of selflessness and endorse transplantation. Pope Benedict XVI has publicly endorsed organ transplantations. Pope, John Paul II, also publicly supported organ donation. The Church of England takes the support for organ donation even further and declared organ donation a Christian duty in 2007. Another example of the positive view of organ donation by Christianity is the 1990 joint declaration of the Catholic and Protestant Church in Germany, which also encouraged organ donation. All major protestant denominations support organ donation including the Pentecostal Church and Presbyterians. The same seems to apply to Eastern Christianity. In 2005, the head of the Greek Orthodox Church, Archbishop of Athens, and All Greece Christodoulos announced that he and the members of the Holy Synod had all signed organ donor forms. Neither the Anabaptists, such as the Amish, nor the Brethren and Mennonite Churches seem to have any particular views on this issue, nor any specific objections[47].

He further stated that Christian Science is a non-Trinitarian religious group founded by Mary Baker Eddy in 1866. According to Christian Science, the principal way of healing is through prayer, and members are usually against most, if not all, treatments offered by modern medicine[48]. This includes vaccination, and outbreaks of measles have been reported, as has been increased mortality in general. However, current guidance on the use of modern medicine is more liberal and stipulates that there is no biblical or church mandate to forgo medical intervention, nor do Christian Scientists believe that it's God's will that anyone suffers or die[49]. He reiterates the fact that the issue of organ donation has been discussed explicitly by the Christian Science Board of Directors, and organ donation and transplantation is seen as a personal choice. The Jews Christians are a small Christian group that practices communal living. Importantly, members believe that giving up an organ to save someone's life is an exemplary act of devotion to God and human kind[50].

Islam and Organ Donation

On Islamic belief, Oliver further made it clear that violation of the human body, whether living or dead, is forbidden in Islam. However, altruism is also an important principle of Islam, and the Qur'an placed a high premium on any action to save a life. 'Whosoever saves the life of one person it would be as if he saved the lives of all mankind' (chapter 5:32). Thus comes the necessity for reconciliation of the two positions. In this dilemma, the principle that reconciles the two is 'necessity overrides prohibition' *(al-darurat tubih al-mahzurat)*. This principle has been used previously to approve the use of pork insulin and porcine bone grafts. He stated further that, in a formal decision in 1996, the UK Muslim Law Council issued an *ljtihad* (religious ruling) that organ transplantation is entirely in keeping with Islam. Accordingly, Muslims in the UK may carry donor cards, and live donation is seen as an act of merit. Previously, the Islamic jurisprudence Assembly Council in Saudi Arabia approved deceased and live donations in a landmark decision in 1988. Similar formal rulings are in place in, among others, Egypt, Iran, and Pakistan[51].

According to Oliver, although internationally most Islamic scholars endorsed organ donation, many individuals within the faith are still reluctant, particularly regarding cadaveric donation. Thus, most transplants in many predominantly Muslim countries are still live donations. Islam like all religions is not monolithic. Thus, there are some discrepancies between Indo-Asian and Arab Muslim scholars in that the former disapproves of organ donation[52]. Muslim burial

customs deserve consideration. Since it is traditional for Muslims to be buried within 24hrs, a lengthy organ retrieval procedure may raise a serious issue. It is also noteworthy that religious concerns play a role even among Muslim physicians. He refers to a survey in 2005 in Turkey that showed that as many as 21% of doctors cited religious concerns as a reason not to be more proactive about organ donation[53].

On the issue of Xenotransplantation, the majority of Muslims, the world over considered some animals such as pigs as ritually unclean, thus, the possibility of treating recipients of organ donation as unclean is possible[54].

Traditionalist and Organ Donation[55]

Meanwhile, there also exists the traditionalist view of organ transplantation. In an interview that I conducted with one of the most prominent. *Ifa* priests in Ila Orangun,(a prominent town in the Yoruba Land of Nigeria.) by the name *Olagunju Adedeji*, on whether organ donation could be carried out in the traditional African society. He nodded yes. But according to him, this cannot involve physical operation on both donors and recipients. It involves intercession through sacrifice. According to him, *Olodumare*, (God in Yoruba belief) is the custodian of every part of human beings. When such sacrifices are made following instruction through the divination by casting cowries on Ifa platter (a system of divination inherited from the ancient city of Nineveh) . The problem would be placed before and revealed through the body of esoteric knowledge. Each *Ifa* corpus *(odu*) has stories connected with it, according to which an Ifa priest would have clue to the types of propitiatory sacrifice to prepare to achieve the desirable results.

According to him; even God could give a whole human being to the barren through this process and therefore, the issue of organ replacement is only an act of Olodumare, being the creator and the possessor of all organs in the human body. Through this process, the operation which involves the work of God and His emissaries called Irunmale – thousands of being from heaven – would be the one to carry out the operation on the patient spiritually. The week organ is retrieved and a new one put in place. As the result, the patients get well again. According to him, when *Oduduwa* got to *Ife, Okanbi* did not accompany him during the great migration that led to the settlement in Ife. At Ife, Oduduwa could only give birth to female issues. Consequently, he consulted *Orunmila*, the custodian of *Ifa* Oracle. His problem was placed before the body of esoteric knowledge and there appeared the sign of '*Owonrin Meji*' otherwise

known as '*Orangun Meji'(two crown Princes)*. Acting according to instruction; *Oduduwa* carried a sacrifice prepared according to instruction early in the morning to the Eshiminrin river and the prohibition was that he should not look back or talk to anyone. He said Oduduwa (the progenitor of the Yoruba race in Nigeria) acted according to instruction and as he placed down the sacrifice on turning back, he was confronted with the towering figure of a pretty beautiful woman with beads of assorted colours used to plaint her heads after the fashion of a crown. At that, *Oduduwa* emotionally inquired, *ADETIRIN*? Meaning, how cometh the crown? He eventually married the woman and the woman gave birth to the first son at Ife namely: *Fagbemila Ajagunla, Orangun(the founder of Igbomina tribes in Yoruba Land of Nigeria) of Ile Nla. 'Ile-Nla'* means the big house. This is shortened to mean Ile Ila, where the descendants of the first son of *Oduduwa* in *Ife* inhabits. Thus, if God can give a whole son, to replace a simple organ is a matter of obedience and the taking of the appropriate step. Thus, for the traditionalist of Yoruba conception, the process is spiritual and it only involves *'Olodumare'* (God) and the *Irunmale (many spiritual beings)*. Whilst for the medical profession, it is a physical process through operation involving retrievals of organs from donors and transplantations to the recipients.

MEDICAL PROFESSION AND HUMAN ORGAN TRANSPLANTATION

Meanwhile, Berman[56], rightly observed that, for several years, the medical profession has been able to retrieve human organs from donors' bodies and implant such organs into the body of recipients. Such transplantation which involved organs which are very vital to human existence as the human heart; has created a new problem of greater dimensions both for the medical and the legal profession. The question is, what are the ethical aspects and legal aspects of human organ retrieval and its subsequent transplantation. This would lead us to consider the following pertinent issues relating to organ transplantations to wit; the definition of organ and some typologies of organ transplantation, the jurisprudential considerations, the Ethical consideration and the Legal Definition of Death, and a critical appraisal of the legal Aspects of Organ Transplantation law in Nigeria.

Medical Ethics

Medical ethics are considered an accepted code of behavior among members of the medical profession which consists of good manners and a civilized pattern of behavior in general[57]. Thus, the profession itself requires a good working knowledge of such issues as, informed consent, truth-telling, confidentiality, and patient rights. While truth-telling demands a high level of integrity and honesty in all ramifications, ethics regarding consent requires among other things that; a minor cannot give valid consent to suffering harm even when done in good faith. Conversely, a person above the age of 18years can give valid consent to suffer any harm from an act, not intended or known to cause death and done in good faith for his benefit. Meanwhile, where a minor is emancipated i.e. lives independently without parents or guardianship, physically, financially, or otherwise, a doctor may treat such a minor without parental consent, if such treatment is carried out in the minor's best interest and according to legal opinion medically justifiable. This is so, most especially if the medical intervention is of emergency in nature[58].

It is apparent that in most life-threatening emergencies, patients are unable to express their consent simply because they are either in shock or unable to express themselves, in such a situation. It is presumed that such patients would give their consent if they are able, consequently, it is customary for the doctor to treat such patients based on "an implied consent. The alternative is death or permanent disability. Finally, in the case of a psychiatrically disabled parent, a surrogate decision maker's consent is required[59].

Privileged Communication

These are information known by a medical doctor concerning a person which can only be divulged by a doctor to protect the interest of the community or society at large[60]. For the revelation of such information to be bonafide; there are the requirements that:

i. the information should only be sent to the concerned patient and
ii. the information could be sent to the affected authority who must maintain its confidentiality from all other persons.

Anything contrary to these is unethical. If such a patient's secrecy is revealed to just anyone, the doctor may be charged for divulging his patient's secrecy. Such privilege communications include;[61] information about a patient suffering from a sexually transmitted disease, information about the infectious disease of some categories of employees which might affect

others in the workplace, information about the non-infectious disease of some specific categories e.g. a person suffering from defective visual acuity may not be engaged as a driver or a heavy machine operator, Information about the risk of contamination to the public in general and information about the outbreak of communicable disease. Thus, in the case of an organ donor whose special ailment could worsen the conditions of the donee of the organ, a medical doctor could reveal such privileged information to the donor and also to the donee if they are related.

Medical Negligence

Sharma conceptualized medical negligence to mean: *"The omission to do something which a reasonable man would do or doing something which a reasonable and prudent man would not do".* He further posits that medical negligence could mean failure to perform the duty to exercise a reasonable degree of skill in the treatment of the patient[62]. Meanwhile, for a charge of medical negligence to abound, three essential elements need to be proved; a duty of care must be owned, there must be a breach of the duty of care either by omission to do an act or by the commission of an act and damage must be suffered by the person to whom the duty of care is owned.

As a matter of law, in the absence of damage, the action for negligence is not maintainable. Consequently, the three requirements are cumulative. It should be noted that the standard of care expected is the standard expected of an ordinary, competent practitioner. A lesser degree of care cannot be a ground for medical negligence. There must be a lack of competence, inability to provide care, and lack of average skill[63]. A doctor must, therefore, be well informed about recent developments, ignorance of which may prompt an allegation of negligence.

Medically, it should also be noted that a doctor who admits a patient does not promise to make an adequate diagnosis. The responsibility is fulfilled when he exercises reasonable care in the course of the treatment. He does not guarantee a cure, nor negligence because of only errors of diagnosis[64]. Meanwhile, this is not an absolute assertion, in that if the diagnosis was palpably wrong or where inadequate steps were taken to make the diagnosis, the doctor may be in for negligence e.g. erroneous interpretation of C.T. scan, MRI, or radio rams could give rise to an action in negligent[65]. Clear cases of negligence include the followings; retention of swabs or packs, operation on the wrong patient or the wrong part of the patient, administration of a wrong substance, paralysis of the hand, due to negligent splinting,[66] etc. Finally, where the rule

of *"Res Ipsa loquitor"* applies, meaning where the facts of negligence speak for themselves, a patient need not prove negligent.

Diagnosis

The doctor may be found negligent. Erroneous interpretation of radiogram or C.T. Scan/MRI has been held negligent. However, the defense Counsel may plead any or many of the following arguments:

1. that, he owns duty to the patient
2. that, he discharged his duties per the prevailing standard of medical practice.
3. that the damage could be done to the act of any other person who was also concerned with the treatment.
4. that, the damages were due to a third party who interfered in the treatment without his knowledge and consent.
5. that, the patient did not follow the advice properly or it was a case of contributory negligence.
6. that, the damage complained off is an expected outcome for the particular type of the disease suffered from.
7. that, it was a case of reasonable error of judgment.

Determination of Death

According to Berman, there is the need to formulate the definition of death which would serve as a guide to a doctor who is involved in the removal of the heart to avoid civil action and criminal liability. Berman considered the following standards in determining the legal definition of death, the traditional standard, the finality standard, the same test application, and cessation of brain wave activity.

The Traditional Standard

According to the traditional standard, cessation of heartbeat and respiration forms the standard determinant of the timing of death. This followed the Definition according to Black's Law Dictionary which defined death as;

> *The cessation of life; the ceasing to exist; is defined by physicians as a total stoppage of the circulation*

> *of the blood, and a cessation of the animal's vital functions consequent thereon, such as respiration, and pulsation, etc*[67].

The Finality Standard

Meanwhile, the finality standard took cognizance of the fact that the concept of death is one of finality and with the present ability of the medical practitioners to revive the heart after it has stopped beating. The implication is to legally move the timing of death to the point when cessation of heartbeat becomes irreversible. This led to the adoption of Houts' definition of death[68].

> *Death is the final and irreversible cessation of perceptible heartbeat and respiration. Conversely, as long as any heartbeat or respiration can be perceived, whether with or without mechanical or electrical aid, and regardless of how the heartbeat and respirations were maintained, death has not occurred.*

Same Test Application

The combination of the traditional standard and the finality standard appeared to be two sides of the same coin. It makes applicable the same standard, that of cessation of heartbeat and respiration as Berman rightly observed[69].

Cessation of Brain Wave Activity

Meanwhile, as a result of the inadequacy of the above standard, the necessity for a more reliable standard was canvassed. Thus, the above standards were replaced and cessation of brainwave activity is proposed as a more reliable index of Death. The investigators who canvassed this view were of the view that death occurs when electrical brain activity measurable on electroencephalography (EEG), ceases[70].

Historical Perspective

Despite this development, Berman puts forth the question that, 'even if the cessation of brain wave activity were accepted as a more reliable determinant of death, the question that remains is as to the period for which cessation must persist before we may conclude that death has occurred. Since there can be the resumption of the brainwave activity after some period of time[71], as the French National Academy of Medicine proposed some years ago that a person be considered dead when the EEG has reflected no brain activity for 48 hours[72].

The concept of death is a complex one, that needs redefining and this according to Mattioli has contributed to a historic shift in the legal meaning of death. According to her, in ancient times, death was thought to occur *when the soul left the body, and since breathing is considered the interface between the soul and the body*[73], the ability to breathe is given as the ease of life. Thus, cessation of breathing was the major criterion of death. Mattioli[74] historical perspective reiterates the fact that the definition of death changed from a primary spiritual concept to that of the biological formulation after Harvey discovered blood circulation in the seventeenth century and the ability to monitor the heart in the eighteenth century. According to her, in consequence, the heartbeat and spontaneous breathing criteria of death became an index for the determination of death in the twentieth century.

Continuing on this historical lane, she stated that in the late 1960s, technological advancement pushed a new index of death. Thus, with the help of a life-supporting machine that makes artificial maintenance of respiration and blood circulation possible, patients who seemingly lost brain functions were kept alive, a development that rendered obsolete the cessation of breathing and heart-beating criteria as determinants of death[75].

However, faced with the dilemma that physicians needed to remove organs while circulation and respiration were ongoing, a 1968 Harvard Medical School Committee recommended another criterion of death based on brain activity i.e. brain death. This implies that the brain and brain stem have irreversibly ceased functioning, the effect of which is to put a final halt to respiration and circulation or heart function. Despite the unquestionable success of this development, Mattioli observed that this has not stopped the debate about a new definition of death, as over the years, there has been a growing development to further widen the legal definition of brain death. To this extent, therefore, she made it clear that current development goes beyond whole-brain death as she posits that among the legally dead are those who lost

higher brain functions. This according to her is referred to as cerebral death or neocortical death[76].

The interesting aspects of Mattioli's historical perspective lie in the revelation that, this neocortical death standard could significantly increase availability and access to organ transplants because patients declared death under a neocortical definition could be biologically maintained for years as opposed to the short timing of a few hours or days as in the case of whole-brain death. More importantly, because of their ability to breathe on their own instead of through artificial respiration as brain dead patients do, they can be used as neomorts far more easily[77].

The Jurisprudential Perspectives in Human Organs Transplantation

- **Question of Utilitarianism**

Firstly, Xenotransplantation touches on the question of utilitarianism[78]. Utilitarianism according to Bentham[79] is the philosophy that emphasizes the greatest good, to the greatest number. It also touches on the question of public protection. Thus, utilitarianism takes cognizance of the reasonable interests of society in good outcomes, fairness in the distribution of resources, and the prevention of harm to others. Meanwhile, there are said to be limited to the utilitarian argument for Xenotransplantations, since as noted earlier they would be immensely expensive[80] and beyond the reach of many.

- **The Deontological Perspectives**

Second, from a deontological perspective, comes the assertion that animals have rights similar to those considered appropriate for a man. Animal rights lobbyists would go through greater suffering in the forms of isolation, monitoring, and investigations and undergo genetic modifications[81] *the effects of which are decidedly detrimental to animals*[82].

Nevertheless, consequentialists may view the suffering and death of an animal as acceptable for the betterment of a human patient, as they would judge the morality of action primarily by its result. Thus, the argument to the effect that potential benefits and improvement in human welfare arising from Xenotransplantation may justify the loss of an animal's life. Our Lord Jesus demonstrates this consequentiality philosophy in Luke 8:26 – 40[83]. The owners of the pig were not recorded to confront Jesus Christ and the people were extremely happy, Joy on earth

and in heaven over one human soul that was saved than the oven 200 herds of swine that drowned in lieu. Finally, Xenotransplantation has significant ethical consequences[84] in that; it involves the question of pressure to consent. Compulsion seems to have negative autonomy and validity of consent.

- **The Nature of Human Soul and Body**

Man is known to be a sacred being. The body of man is known to be sacred as distinct from the body of an animal. This is because the human being is a composite of soul and body. The uniqueness of man, of all living creatures, is made more pronounced by the nature of the soul itself. According to Saint Thomas Aquinas, in his *Summer Theologica*[85] to seek the nature of the soul, we must premise that the soul is the first principle of the life of those things which live. For we all living things "animate" i.e. have soul, and those things that have no life are "inanimate". The principle of intellectual operation which we call the 'soul' is a principle both incorporeal and subsistent. Utilizing the intellect, man can know all the corporeal things. Everybody has a determined nature. The intellectual body is indeterminate and it is, therefore, impossible for the intellectual principle to be a body. The intellectual principle which we call the mind or the soul or the intellect has an operation "per se" apart from the body since only that which subsists can have an operation "per se" We must, therefore, conclude that the human soul, which is called the intellect or the mind; is something incorporeal and subsistent. Now, the vexing question is; does that mean the souls of brute animals are subsistent if a man is the same 'genus' as other animals?

Plato distinguished between intellect and sense; yet, he referred to both as an incorporeal principle, maintaining that sensing, just as understanding belongs to the soul. As such, this Platonian conceptualization implies that even the souls of brute animals are subsistent.[86] However, Thomas Aquinas was quick to infer that as the souls of brute animals have no "per se" operations, they are not subsistence; for the operation of anything follows the mode of its being.[87] From this, there lies the thesis by the great Catholicism's thirteenth-century philosopher, St. Thomas Aquinas, a great advocate of the transplantation of tissues and organs from animals[88]. Aquinas thought that a full human soul, which is essential, and intellectual, cannot be the form of a creature that has never had the material shape necessary for even the most rudimentary stage of thought of sentience. Using the canon of expression: *Persona*

Signification id quod est perfectissimum in total natura salicet subsistent in natura nationali, he defined the term person as "the most perfect thing in-universe".

Some philosophers even thought that the end of the soul is the same as that of an angel – namely – eternal happiness. Therefore, they are of the same species and that there is nothing nobler either in an angel or in the soul than their intellectual nature and that the soul and the angel agree on the ultimate specific difference; which makes them belong to the same species. They added that only the natural operations of the soul and that of the angel are different. While Angelic minds have simple and blessed intelligence, not gathering their knowledge of the Divine from visible things, is contrary to the soul.[89]

From this special nature of human beings arises the need to protect them against abuse of their dignity. Throughout the history of philosophy, the right to life is fundamental. It is a right guaranteed by God Almighty Himself. However, the rights of man transcend the right to human dignity during his lifetime, the right continues even in death, as the human body needs dignity. Concerning the nature of human rights, Mattioli stated that *"these rights are absolute, inalienable, not to be commoditized and are considered necessary for life"*. Mattioli,[90] further classified these personnel rights into three, namely; the right to physical integrity, the right to intellectual integrity, and finally, the right to moral integrity. According to her, the last in this category concerns general civil rights whilst the second one relates to intellectual property law which deals with intellectual properties that are endured by authors, playwrights, artists, etc. The first one, which perhaps is not the least the matter of importance, prompts up the present debate i.e. The right to physical integrity. This is to say that, the human body is to be treated with dignity. In her words, the body is a composition of the corpus and soul that encompasses the essence of life. She further divided the right to physical integrity into three namely; the right to life, the right to a living body, and the right to a dead body. Her work further reiterates the inseparability of the human body, dead or alive. She formed the view that inherent in human generosity is the thesis that human organs are too precious to be commodified and that there could only be gratuitous donations. Having it at the back of our memories that human beings are social animals, the tendency to be altruistic and to solidarize with one another during moments of trouble and trials is very common in the nature of man.

In essence, from the very onset, the human right to his body is not a justification to put up one's organ for sale. The prohibition is fundamentally based on the traditional sense of respect owned by the human person. She opined that as long as the human body has a transcendental value

that goes beyond life and death, the intangibility of the human body constitutes legal protection for the human body when alive and in death. Consequently, she rightly observed that; the law must also protect the corpse. If a living person cannot be an object of commodity, a dead body is also good out of commerce or extra commercial. This is to say that the human body's intangibility transcends living[91].

- **Arriving at the Truth sometimes Adventure in Futility**

Firstly, the word jurisprudence has its origin in the Greek words: '*Juris',* meaning court, and *'prudence'*, meaning knowledge. Thus, apart from the fact that the court seeks knowledge of the truth, it also disseminates knowledge on the types of techniques they adopt in arriving at their just decisions. One of the paramount legal dilemmas is the fact that in any matter relating to giving evidence concerning the liability or otherwise of a medical doctor before the court, the court needs the opinion of an expert in the medical profession. The question is; in a situation where there is solidarity among members of the profession, how could the court determine this issue or unveil the truth?

When it comes to evidence relating to giving expert opinions on a medical issue, the doctors are always called in to assist the court. This is the beauty of forensic medicine, which deals with the application of knowledge of medical and paramedical sciences for the administration of justice in the law courts[92].

Thus, it is apparent that medical practitioners have to submit a medico-legal report in both civil and criminal proceedings along with their opinion after conducting a series of investigations to the court which carries a great legal importance[93]. Apart from oral interviewing during examination-in-chief, cross-examination, and re-examination which are oral evidence before the court, documentary evidence that a medical practitioner may provide are as follows; medical certificate, Death certificate, Birth certificate, Medico-legal reports, and dying deposition A medico-legal report consists of medico-legal certificates regarding injury, post mortem certificates, which could only be issued by a medical officer designated and authorized by the government[94].

The problem for the court in this area is, in a situation where there is a concoction, most especially when members of the profession are acting in solidarity, what value should the court attach to this kind of evidence? Action in solidarity makes the culprit medical doctor the same

person with the witness of favour, rather than of truth. Obviously, for the court, arriving at the truth may be a tedious exercise and an adventure at impossibility.

- **The Jurisprudential Problem Between Law and Moral**

There lies the complex jurisprudential problem between law and moral traditions. As Mattioli puts it[95], this new definition i.e. neocortical death should be rejected, as long as thousands of breathing neomorts in hospitals would be used as living banks for organ donations, transplantations and experimentation. She observed that treating people in a permanent state of cadavers creates a wide range of ethical dilemmas and raises ethical questions such as; what should be done with the corpse? Should burial or cremation takes place while respiration continues? Would it be homicide if a family member suffocated a relative who had been vegetative for months? etc. Thus, on the realization that this is indicative of serious tension between legal and moral traditions, she suggests that it is more appropriate to keep the actual definition of death at whole-brain death but not to encompass neocortical death.

Meanwhile, as she puts it, an important reason for rejecting the neocortical view is the prerequisite that any standard to be taken should be real not near real. That is, it must reflect "scientific knowledge and clinical reality". Since the criteria for whole brain death are highly reliable, though report surface of brain death patients returning to life." She started further, that there is concurrence among experts that, such instances which most frequently occur when organ transplantation is contemplated could be attributable to a lack of proficiency or care in correctly applying the criteria.

It should be noted that "the corresponding situation concerning neocortical death is far less clear as Neuroscientists agree that functions such as cognition and consciousness result from complex inter-connection between the brain stem and the cerebral cortex. Consequently, since it is impossible to be certain that with the short down of specific areas of the brain, a complete loss of cognition function occurs, the higher brain may well exist only as a metaphoric concept, not in reality. Thus, the impossibility or difficulty of formulating reliable diagnosis criteria is a principal obstacle that prevents the adoption of neocortical death as a standard,[96] she argued. Nevertheless, Dr. Schwab, the Director of Massachusetts General Hospital Brain Wave Laboratory in collaboration with Sidney Rosoff, a New York Attorney, has worked out a set of guidelines to define the timing of death for organ transplantations[97]. The three standards which

are based on the patient being anesthetized, un-drugged, and at room temperature are as follows;

i. First, there must be no reflexes and the pupils must be dilated and fixed,

ii. Second, there must be no breathing and no spontaneous spasms or muscle movement and

iii. Third, there must be no active brain wave, and notably, these multiple standards- must prevail for a minimum periodicity of at least twenty-four hours; since there are cases where there is a flat brain wave that suddenly comes back.

Finally, a person who conformed to these standards could be said to be irreversibly dead. The additional requirement that this standstill death condition must persist for at least 24 hours would irrefutably render the deceased organs unsuitable for transplantation. Based on the above premise, it is very easy to infer that any doctor who crops the organ before those conditions, might be liable for civil sanctions or criminal liability. Consequently, Berman concluded that "it is imperative that a definite timing and workable standard for the determination of an index of death must be established not by the legal profession, but by the medical profession, who are experts in that field. Absolutely an impossible adventure to attain because seems there is no way the organs of a completely dead human can be useful for transplantation and to retrieve an organ from a person before the complete cessation of life is akin to murder. This is a situation where the law emerges with a big stroke.

- **The Legal Implications**

To start with, for Xenotransplantations generally and specifically superpigs transplantation, there are serious legal implications. Firstly, as a result of some revealing evidence that the recipients of animal organ donation possibility of developing a different self-image, the risk of zoonosis to the recipient[98], there is the requirement for vigilant post-operative monitoring. Thus, the recipient might be quarantined. In such a situation, their movement would be restricted and further restrictions would also be placed on their physical relationships, they would be prevented from carrying out their routine day-to-day activities and socialization[99]. This is to pre-empt possible risk to the wider public and therefore, the necessity to prevent their engagement with others.

The question is; can a person ever consent to a future restriction or deprivation of their inalienable rights. Patients could challenge the legality of the restriction placed on them which

violates their constitutionally guaranteed basic human rights and which negates the principle of the rule of law?

Another legal problem is that, where such patients succeeded in their action on such Xenotransplantation which long-run effect at present is indeterminate, and such patients have resulted in genetic disorder in their partners, can such people maintain an action in tort against the medical doctor? First, by the ethics of the medical profession, information concerning the health conditions of the patient is considered privileged information which could not be revealed. However, where the general condition of patients could be so devastating, such as where patients who are under observation, sought to be discharged against medical advice, the best way for the medical doctor to escape liability is to make such patients sign an undertaking that 'having sought to be discharged against medical advice, such patient would bear the damages caused to others in according to such decision to be discharged against medical advice. Meanwhile, we should add quickly that where the medical doctor knew that such a decision could put the public in danger of health risk, the doctor owns it as part of their duty to the public to put the public on alert, and such could constitute a defense to privileged communication.

Another important legal issue is; can the patient sue the medical doctor under the tort of negligence? As Krishna et.al answered 'autonomous decisions making and informed consent may be put at risk by other factors surrounding Xenotransplantation. The decision to embark on Xenotransplantation may be primarily driven by an instinctual wish to survive due to a lack of other viable alternatives[100], without ruminating on the need for the patients to consider the short, medium, and long-run effects of this medical procedure on themselves and the larger society[101]. Thus, in this situation, it may be advisable for the medical profession to consider approaching the issue of consent by entering into a binding contract with the patient that would span over a long period. However, where the restriction is taking a longer period, it is reasonable to consider the fact that the patient has the right to withdraw if not, entering into such a de-facto contract may amount to a deprivation of human rights. The patient could reasonably argue that they have agreed to the restriction placed on them under duress and in the absence of any other viable alternatives. Another legal issue is the question of animal rights. Surely, genetic modification can have both immediate and long-term negative effects on animals. Deontologists considered that animals ought not to be deprived as animals have rights similar to those considered appropriate for human beings.

Furthermore, since the procedure itself is necessarily a complicated one; one that involves many experts in the medical profession, there must be no negligence along the medical process continuum, otherwise, such a negligent medical profession whose act endangered the recipient may be in for negligence and where the combination of their negligent act caused or occasioned the hazards to the patient, such medical personnel may be held liable as a joint tort-feasor either at the instance of the patient himself or the instance of their personal representatives.

In concluding this part, apart from the above legal issues, there are also serious ethical considerations. On an individual level, the question of pressure to consent negative autonomy, the validity of the consent, and the possibility of patient's future restriction posed serious ethical problems. At the societal level, the question of cost and benefit analysis, the risk from zoonotic infections, and the question of animal rights need to be considered serious ethical issues. Also, some segments of society may have opposing views concerning animals being used as donors. For illustrative purposes, religious sets such as Islam and Judaism may feel that pigs are ritually unclean and consequently, recipients may be considered outcasts when they harbor what they considered an unclean animal organ.

Finally, we submit with due respect that because of the stage of this experimentation human beings should not be considered a candidate for experimentation via, animal organ transplantation except under an extreme danger of death where there is zero possibility of survival.

The Legal Aspect of Human Organ Transplantation in Nigeria

Considering the legal aspect of Human Organ Transplantation in Nigeria, two legal regimes both by statute and common law shall be considered. By statutes, the Corneal Grafting Act, Cap. 29, Laws of the Federation of Nigeria 1990, and the 2014 Nation Health Act would be considered. At common law, the general position as regards procurement of patient's consent and the nascent supreme court of Nigeria decision would also be considered.

- **The Corneal Grafting Act, in Nigeria**

The first legislation to be considered on organ transplantation in Nigeria is the Corneal Grafting Act, cap 29, Laws of the Federation of Nigeria 1990. This act, according to its preamble, makes provisions for the use of the eyes of a deceased person for therapeutic purposes.

Section 1(1) of this act states that

> *If any person, either in writing at any time or orally in the presence of two or more witnesses during his last illness, has expressed a request that his eyes be used for therapeutic purposes after his death, the person lawfully in possession of his body after his death may, unless he has reason to believe that the request was subsequently withheld, authorize the removal of the eyes from the body for use for therapeutic purpose.*

Under S. (2) the person who is lawfully in possession of the deceased body may authorize the removal of the eyes or withhold the authorization if he believes that (a) the deceased objected to his eyes being dealt with and had not withdrawn it or (b) the surviving spouse or any serving relations of the deceased objects to the deceased eyes being dealt with.

Moreover, the virtue of section (1) (3) the authorization of the person in possession of the deceased's body constitutes a warrant for the removal of the eyes, whilst the removal could be effected by a registered medical practitioner, upon satisfaction after his examination that the deceased is dead.

Under S. 1 (4) where the person who is entitled to give such authorization has reason to believe that a coroner's inquest may be required, he may refuse to give such authorization for the removal of the eyes. By S. 1 (5) person entrusted with the body for this purpose of interment or cremation cannot give authorization.

As a matter of law, S. 1 (1-5) when analyzed, constitutes the requirement for authorization are listed serration:

i. the deceased must during his life time expressed his willingness to have his eyes be used for therapeutic purposes after his death.
ii. this intention must be expressed in writing at any time or such intention might also be expressed orally, but, in this case, such parol express of intention must be in the presence of two witnesses during his illness.

iii. the authorization to remove the eyes can only be given by the person in lawful possession of the deceased body.

iv. the person in possession must have reason to believe that the donor had not expressed an objection to the removal and not withdrawn it.

v. the surviving spouse or any surviving relative of the deceased must not object to the deceased eye's being removed. Where there is an objection from either the spouse or any of the relations of the deceased, the authorization would be negative. The expression of dissatisfaction of the spouse or any relation thus suffices to nullify the intent of the donor and that of the person in custody of the body.

vi. authorization by the person in custody of the body, the spouse, and the relations shall thus constitute the warrant for the removal of the eye of the deceased for therapeutic purposes. It is submitted that this interpretation is the only reasonable inference that one could give section 1 subsection 3 given the contradictory provisions of S. 1, 2 (a and b) which stipulates that where the person in possession of the body reasonably believes that the spouse or any relation of the deceased objects to the removal, he may withdraw the authorization. Although, it could be quickly added that the word may imply that the person in possession may exercise his discretion since it connotes that the section is not a mandatory provision.

vii. the removal can only be effected by a registered medical practitioner dully registered under the provision of the Medical and Dental Practitioner Act by S. 2 of the Act, such medical practitioner must be sure, that based on his examination that the donor is dead.

viii. the person in custody of the body must not believe that a coroner's inquest may be required and

ix. the authorization must not emanate from a person who is entrusted by another person to be in charge of the interment or cremation of the body of the deceased. Such persons are not within the purview of the person in custody of the body of the deceased.

Meanwhile, S. 1 (6) adds the qualification that deals with a body acting on behalf of the person having the control and management of the hospital or other person designated to give authorization. The act did not render unlawful any lawful dealings with the body of the deceased person.

It is here submitted that both the Corneal Grafting Act and the National Health Act are far from being desirable specific legislation that deals with organ transplantation generally. It is considered pertinent to look at some important provisions of the National Health Act 2014.

Conclusively, corneal grafting refers to an operation in which abnormal corneal tissue is replaced by a healthy donor's cornea. It is the most widely practiced form of the clinical act of grafting. Corneal disease is a common cause of blindness worldwide and Nigeria, is no exception[102], It is a treatment option to reduce the prevalence of blindness and visual impairment as a result of corneal disease which is prevalent in the developing world such as in Nigeria.[103]

Organ Donation: Appraisal of the 2014 National Health Act in Nigeria

The National Health Act 2014, promulgated by the National Assembly and assented to by President Goodluck Jonathan is said to be a legal framework to improve medical services in Nigeria. In this paper, we are going to consider some important provisions of this Act that dealt with Organ transplantation. The provisions are to wit, Sections 51 (1-3), S. 48 (1-4), S. 20 (1) S. 13 (1-2) S. 43 (e), and S. 45 (1-3) of the National Health Act 2014. In S. 51, of the Act states that;

First, a person shall not remove tissue from a living person for transplantation in another living person or carry out the transplantation of tissue except

(a) In a hospital authorized for that purpose

(b) On the written authority of

(i) The medical practitioner in charge of clinical services in that hospital or any other medical practitioner authorized by him or her or

(ii) In the case where there is no medical practitioner in charge of the clinical services at that hospital, a medical practitioner is authorized thereto by the person in charge of the hospital.

Second, the medical practitioner stated in subsection 1(b) shall not be the lead participant in a transplant for which he has granted authorization under that sub-section. Third, for transplantation, there shall be an independent tissue transplant committee within any health establishment that engages in the act and practice of transplantation as prescribed.

Six legal problems were created by this very provision that needed to be addressed. First, S. 51 (1) only states that 'A person shall not remove tissue from a living person for transplantation

in another living person or carry out the transplantation of such tissue. This implies that the tissue or organs of a *person certified clinically dead* could be removed. Thus, it is submitted that it would be legal to remove the organ of a person who was certified clinically dead going by the maxim *expressio unio est, excluxio alterius*, meaning the express mention of one thing means the exclusion of all other things not mentioned.

The second legal issue raised by the statutory provision is that S. 51 (1) (1) only refers to the need to obtain the written authorization of the medical practitioner in that clinical service and arbitrarily ignored the written consent of the donor. Most importantly, the provision failed to address the need to obtain the consent of the parents or guardians in the case of a minor donor. Third, the provisions failed to address the qualification and specialization of the medical practitioners who are to partake in the process that leads to organ retrieval, preservation, and transplantation. Thus, in the event of any serious litigation, this might lead to serious jurisprudential problems in the process of knowing the actual intention of the legislature in this regard.

The fourth issue relates to the issue of delegated authority. In the likely scenario that the person who removed the issue got the written approval of a medical practitioner authorized by the medical practitioner in charge of clinical services and such authorization was wrongly issued to a wrong person who in conjunction with other experts in the medical field committed a negligent act which led to the death of the donor or the recipient, how could the court resolve the riddles of litigation in such a situation? In the situation, where the medical practitioner authorized by another medical practitioner in charge of the medical practice issued authorization to an incompetent person, it is submitted that the error of the person delegated should be imputed to the medical practitioner in charge of the medical service based on the principle that he who does an act through another does it himself. Thus, the canon of expression *qui fasit per alium, facit per se*, should be fully applicable. In the second case of the person or the medical practitioner who removed the organ, where such person's negligent act resulted in the death of the donor or recipient, such person might be held liable to pay damages under the tort of negligence. It is further submitted that, where the issue of joint operation came to the fore and the negligent was as a result of the negligent act of a member of that team that carried out the operation, it is submitted that the person whose act is most proximate to the act constituting the negligence ought to be held liable. However, where such a person was acting

under the instructions of the head of the team, then the head of the team ought to be vicariously liable in tort.

Furthermore, S. 51 (2) provides that "the medical practitioner stated in subsection 1 (b) i.e. the medical practitioner who is responsible for the issuance of the authorization as head of clinical services shall not be the lead participant in a transplant for which he has granted authorization created an ambiguous situation. Though the position of the law is that a person in authority cannot authorize himself but in a situation where the medical practitioner in charge of the medical service is the most competent specialist to do the job, what should be the next line of action? The best option is that there would be a circumvention of the law. In a situation, where the interpretation of this section resulted in a legal tussle, the court will have to go through the rigour of the golden rule of interpretation to decipher the actual intention of the drafter of this law.

Finally, S. 51, which excludes entirely the consent of the donor, implies that the doctor acting unilaterally could legally remove the organ of a patient who is an unwilling donor for transplantation.

Meanwhile, the proponents of this statutory provision might put forth the argument that S. 48 has dealt with the issue of DONOR'S consent. To this extent, therefore, it is pertinent to examine the provisions of S. 48 of the National Health Act which provides as follows;

(1) Subject to the provisions of S. 53, a person shall not remove tissue, blood, or blood product from the body of another living person for any purpose except;
   (a) With the informed consent of the person from whom the tissue, blood, and blood product is removed granted in the prescribed manner.
   (b) That the consent clause may be waived for medical investigations and treatment in emergency cases and
   (c) Following prescribed protocol by the appropriate authority.

(2) S. 48 (2) A person shall not remove tissue that is not replaceable by natural processes from a person younger than eighteen years.

(3) A tissue, blood, or a blood product shall not be removed from the body of other living persons for purposes of merchandise, sale, or commercial purposes.

(4) A person who contravenes the provisions of this section or fails to comply therewith is guilty of (a) in the case of tissue, a fine of ₦1000, 000 or imprisonment of not less than

two years or both and (b) in the case of blood or blood products, a fine of ₦100, 000 or imprisonment for a term not exceeding one year or both.

The inconsistency created by the above provisions could be seen by reading S. 48 (1) (a) & (b) together, which is to the effect that, subject to the provisions of S. 53, a person shall not remove tissue, blood, or blood product from the body of another living person for any purpose except with the informed consent of the donor granted in prescribed manner and (b) except that the consent clause may be waived for medical investigation and treatment in emergency cases. It is further submitted that, if the informed consent of the donor could be waived for medical investigation and treatment in emergency cases, and the statute failed to define what constitutes emergencies, the implication is that the provisions gave the medical practitioners a wide latitude to define what constitutes an emergency. Thus, it implies that the organs of a person who was involved in an accident, or who was in a temporary state of a comma could be removed with impunity by a greedy doctor. This provision left much to be desired as the antecedent i.e. S. 48 (1) (a) denied the consequent, i.e. S 48 (1) (b) and the consequent denies the antecedent with the logical arguments that S. 48 (1) (a) and S. 48 (1) (b) negative each other. The result is zero provision for the donor's consent. To make the matter worse, S. 20 of the Act declares that emergency services are free in the section provides thus;

S. 20 (1) A health care provider, health worker, or health establishment shall not refuse a person emergency medical treatment for any reason whatsoever. It is submitted, here that, with the provisions of this act, many Nigerians would die of organ pouching which negates the right to life and the right to the dignity of a human person guaranteed under the Fundamental Human Right of the 1999 constitution of the Federal Republic of Nigeria.

Applicability of Leges Priores Rule to section 48(1) a & S. 48(1)(b)

To buttress our position on zero provision for donor's consent, it is submitted that, with special regard to the provisions of S. 48 (1) (a) and S. 48 (1) (b), the canon of interpretation, Leges *posteriores contrarias abrogant* applies. Meaning, that when two laws or legal instrument conflicts, subsequent, laws repeal prior conflicting ones. This maxim also applies to contrary provisions of the same statute.

Another objectionable provision of the National Health Bill Act is S. 13 which lays standards to be conformed with to acquire a health facility. S 13 (1) without having a certificate of standards, a person, entity, government, or organization, shall not,

(a) Establish, construct, modify or acquire a health establishment, health agency, or health technology.

(b) Increase the number of beds in or acquire prescribed health establishment or health agency.

(c) Provides prescribed health services or

(d) Continue to operate a health establishment, health agency, or health technology after the expiration of 24 months from the date this Bill took effect.

> S. 13 (2) the certificate of standards referred to in subsection (1) of this section may be obtained by application in a prescribed manner from the appropriate body of government where the facility is located. In the case of a tertiary institution, the appropriate authority shall be the National Tertiary Health Institutions Standard Committee acting through the Federal Ministry of Health.

On the above provision, Philip Njemaeze expressed the view that no hospital owned by Nigeria could comply with the laid down standard requirements. He observed that, a meeting was held at the instance of General Electric (GE) a major partner of the Bill Gates Foundation to seek collaboration with the Association of General and Private Medical Practitioners of Nigeria (AGPMPN) on the project of organ donation and that though, no partnership agreement was reached, but that as far as confirmation to standard was concerned, such hospitals must be built according to the International Building Code of Hospitals. He pointed out that, the certificate of standards for hospital buildings is based on the International Building Code of Hospitals, which has very stringent standards that no hospital in Nigeria could comply with. Such standards include the requirement that the plumbing must be with conduit, all wiring must be with conduit, high floor to roof height, wide window width, 24 hours of lighting, 24 hours of air conditioning, and 24 hours of water, specific humidity, airflow purification, etc. These standards could only be met in the advanced countries of the world, he submitted. On the above premise, Phillip Njemaeze[104] suspected that the National Health Act 2014 is a trap, set for Nigerians by some citizens of the Western world, schemed through the Nigeria National

Assembly to make Nigeria a haven for organ pouching for onward transmission to their countries to meet the high demand for organ transplantation[105].

Njemaeze raised an alarm concerning the process of human Egg Trafficking for cloning and using his words, we quote him verbatim. "The world Billionaires under the aegis of the Bill Gates Foundation have uncovered a new way to become trillionaires. By developing the human organ tissue cloning market. It is estimated that the human tissue world yield 30 trillion U.S Dollars for the western economies within the next five years of operation. To clone a tissue-like heart, you will need to collect the nucleus that stores all the genetic materials of the heart of the sick person and place it in an ovarian egg obtained from a woman through in vitro fertilization and grow it into a heart that can be transplanted to the sick person. To perfect the process, you will need at least 100 million ovarian eggs from at least 10 million Nigerian women. These ten million women would die in 2 – 3 years from the complications. These ovarian eggs have to be produced through Nigerian women"[106].

He suspected that to achieve the above purpose, the drafter of our law excluded ovarian eggs and sperms from the definition of tissue in the National Health Act of 2014 so that the consent clause (*which is non-existent*) may not apply to pouching of ovarian eggs[107].

The Interpretation Act defines tissue to mean, human tissue, and includes flesh, bones, a gland, an organ, skin, bone marrow, or fluid but excludes blood or a gamete[108]. To further worsened the situation, the provisions of S. 45 of the Act ousted the jurisdiction of the court with special regard to industrial disputes in health services. S. 45 provides that;

> *Pursuant to subsection (2) of this section, industrial disputes in the public sector of health shall be treated seriously and shall on no account cause the total disruption of health services delivery in public institutions of health in the federation or any part thereof.*

S. 45 (2) Where the disruption of services has occurred in any sector of the National Health system, the minister of Health shall apply all reasonable measures to ensure a return to normalcy of any such disruption within fourteen days of the occurrence.

The first objectionable feature of the provision of this section is that it ousted the jurisdiction of the Industrial Arbitration Court in the resolution of the crisis between health workers and their employers. What is the meaning of the hairy words "shall apply all reasonable measures." This phrase gives the minister enormous power to use his subjective sense of judgment to halt any industrial action by health workers. If the minister in interpreting this phrase sacked all Nigerian specialists within the establishment, are we going to be at the mercy of the foreigner? Such is the fear being entertained by the likes of Njemaeze[109].

Secondly, the drafter of the National Health Bill 2014 failed to consider the Federal Nature of the Nigerian Constitution. If the provision of S. 45 (2) considered that industrial disputes in the health sector be treated seriously and should not cause the total disruption of the health services delivery in Public Institutions of the Federation or any part thereof which include the component states in Nigeria, why should the Act endow the Minister for Health with absolute monolithic power to get the dispute resolved? Why not the State Commissioner for Health in their respective states or any other officer designated?

Advocating For a New Legal Regime for Organ Transplantation in Nigeria

As a result of the inherent anomalies in the National Health Act 2014 as explained above, a new legal regime is considered necessary for organ transplantation in Nigeria. Presently, no specific law had been passed by the National Assembly backing organ transplantation in Nigeria apart from the one loosely provided for in the 2014 National Health Act. The situation in Nigeria is, furthermore aggravated by the fact that the National Health Act 2014 excludes cadaveric donations. Consequently, the present law should be completely abrogated, while a new organ transplantation law must be promulgated. Such a new legal regime should take care of the following issues, which are very crucial to lawful organ transplantation.

i. Only well-equipped health institutions with all the requisite technology and highly skilled medical practitioner should be allowed to carry out human organ transplantation.
ii. Such organ transplantation must be carried out in good faith, taking cognizance of the interest of the donor regarding the dignity of his personhood and the need for such Donor to enjoy good living should be taken into consideration.
iii. The consent of the donor must be given priority over that of the medical practitioner.
iv. In the case of a minor donor, the consent of the minor and that of his parents or guardian must be sought before the operation.

v. The law should make it mandatory for the medical practitioner to explain in full detail, the requirement of the procedure, the risk involved in the operation, and the health implications for the donor and reveal every detail of the information considered necessary for the donor and any other person acting for the donor, to enable them to form an intelligent conclusion whether to go on with the donation or not.

vi. Such consent should not be waived except in the case of total unconsciousness and where such operation is considered necessary in the best interest of the patient based on reliable medical examination.

vii. Such waiver should only concern life-threatening emergencies where the patient is incapable of expressing their consent.

viii. The bill should consider both civil and criminal liability for medical negligence for any careless acts of the medical practitioner. While in the case of gross abuse, imprisonment without the option of a fine should be considered along with withdrawing the license to practice of such medical practitioner.

ix. Of paramount importance, the new act should consider the borderline for cessation of life for cadaveric transplantation.

x. The act should consider the granting of limited property rights to the donor, which gives the donor the right to direct and make a conditional donation of the organs. However, it is pertinent to state that such a wish must be expressed by the deceased through the written instrument, witnessed by two persons while he was alive. By this, the deceased could be said to be speaking from the grave.

xi. The rights of living donors to donate their organs to their relatives should be considered inviolable provided there is perfect compatibility for successful transplantation.

xii. The act must provide that the act of donation of the donor must be willful, Intentional, voluntary, and without any iota of coercion with the full knowledge of the consequences of the donation.

xiii. The law should also consider the establishment of at least two bodies of experts consisting of men and women of unquestionable integrity to regulate the activities of the medical profession and the medical practitioners to ensure the non-commercialization and trading of organs within and outside the country and to ensure that only specialist of intimidating credentials and with an unimpeachable record of successful organ retrieval and transplantation are licensed for the operation.

xiv. The law should take cognizance of conflict of law situations most especially where the illegal deal involved commission in two separate states, the law should among other things completely outlaw human organ tissue cloning through the use of in vitro fertilization using women as instrumentalities for the procedure.

Finally, last but not the least, the law should permit living donors taking their interests into full consideration to willfully donate their organs for keep in the national organ bank preserved as public resources and allocated through impartial justice rationale for a recipient who is considered as a matter of priority to be in urgent need of such organ. A body of experts should be appointed to draft the organ transplantation bill, which we hope would solve the perennial problems associated with the present law which left much to be desired.

The Common Law Regime

Apart from the above statutory regime, also exist the regime at common law. For proper elucidation, the factual situation of the case of *Esabunor and Anor v. Dr. Tunde Faweya and 4 Others*[110] would be considered fully. In this case, the second appellant is the mother of *Tega Esabunor*, the 1st appellant. The second appellant gave birth to Tega on the 19th day of April 1997 at the Chevron Clinic, Lekki Peninsula in Lagos. Within a month of Tega's birth, he fell seriously ill and was taken back to the same hospital for urgent treatment. The first respondent, Dr. Tunde Faweya who was in charge of the treatment believed that Tega urgently needed blood transfusion. The 2nd respondent and her husband made it clear to the Doctor their objection to blood transfusion as a member of Jehovah's Witness, and also because of the several hazards associated with blood transfusions like the possibility of contracting Aids and Hepatitis, etc. Dr. Tunde Faweya remained unyielding. In consequence, learned counsel for the Commissioner of Police, Lagos State brought a motion ex-parte before the 5th respondent as Chief Magistrate. The motion was brought under S. 27(1) and (30) of the Children and Young Person's Law, Cap 25, of Lagos State.

After hearing the case, the Chief Magistrate granted the order to administer blood transfusion on Tega, the first appellant. Dr., Tunde Faweya administered a blood transfusion and Tega got well and was subsequently discharged. Thereafter, the parents appealed to the High Court and further to the Court of Appeal seeking the vacation of the order made by the Chief Magistrate,

but, failed in both courts. Thereafter, the Appeal was later brought to the Supreme Court. Learned Counsel for the appellant inter-alia canvassed the following arguments:

i. that the court of Appeal erred in holding that the second appellant's refusal to give consent for the administration of blood on Tega, amounted to an attempt to commit a crime, such as could occasion Tega's death.
ii. that the court of Appeal misdirected itself when it failed to give the finding that the Chief Magistrate exceeded its jurisdiction and that there were fundamental errors on record before the Chief Magistrate Court an account of which the Court of Appeal ought to set aside the decision of the High Court and also quashed the proceedings and the order of the Chief Magistrate Court.
iii. that the appellant was not heard before the Originating Motion ex-parte was heard and in consequence, the proceedings before the Chief Magistrate Court were null and void.

Learned Counsel for the respondents submitted that:

i. the 5th respondent had inherent jurisdiction to prevent the commission of offenses such as causing the death of Tega and there was enough evidence beyond the limit to prevent the commission.
ii. that the law allowed the 2nd appellant to be heard within a short time, which opportunity they failed to explore and thus, she was not denied a fair hearing.
iii. that the Doctor obtained a valid Court order to administer treatment on Tega, which treatment he lawfully administered.
iv. that where the court is confronted with having to balance the right of a child to life against the right of his parent to veto such right in vindication of their religious belief, the overriding consideration should be: what is the best interest of the child.

Against the above background, the Supreme Court held that:

i. a child is incapable of exercising the consent as per the particular type of treatment to be administered to him.
ii. that the Chief Magistrate had jurisdiction over the matter.
iii. that the Court of Appeal did not misdirect itself in that there is evidence to justify the finding.

iv. that it is so obvious that the commissioner of Police intended to prevent the commission of an offense and when an action is brought before a Chief Magistrate Court, he has inherent jurisdiction to prevent its commission, and consequently, both the High Court and the Court of Appeal were correct in affirming the decisions of the Chief Magistrate Court.

Delivering the lead judgment, Olabode Rhode-Vivour, J.S.C. laid down the following principles;

> That an adult who is conscious and in full control of his mental capacity, and of sound mind, has the right to either accept or refuses blood *transfusion*. The hospital has no choice but to respect their patient's wishes. When it involves a child, …… different considerations apply and this is so because a child is incapable of making decisions for himself and the law is duty-bound to protect such a person from abuse of his rights as he may grow up and disregard those religious beliefs. It makes no difference if the decision to deny him a blood transfusion is made by his parents.

His lordship further stated that:

> When a parent is loco parents refuse blood transfusion or medical treatment for her child on religious grounds, the court should step in, and consider the baby's welfare, i.e. saving the life and the best interest of the child before a decision is taken. These considerations out-weight the religious beliefs of the Jehovah's Witness sect. the decision should be to allow the administration of blood transfusion, especially in a life-threatening situation.

Analyzing this case, it is submitted that the case answered the fundamental question of: what step should those in medical practice take when confronted with situations when the parent of a minor or those in *loco parentis* to a minor, refused blood transfusion or organ transplantation for a minor? The tenor of this case, for the medical practitioner, is to promptly report to the Commissioner of Police, either through a statement at the Police Station or through a petition, acting through a Legal Practitioner to the office of the Commissioner of Police. The office of the Commissioner of Police must thereafter be guided to take the giant stride of bringing an ex-parte application before a Chief Magistrate Court for an order to give the appropriate transfusion or transplantation or to apply the appropriate treatment in the best interest of the minor.

The legal regime of common law is that; first, an adult has a right to either accept or refuses a particular treatment provided such adult is of sound mind with the requisite capacity. In this situation, the medical practitioner has no choice, but he has to comply with the wish of the adult in question[111].

Also, at common law, a minor is without the requisite capacity to make decisions as to whether to refuse or accept a particular treatment, such a treatment must be made on behalf of the minor by the parents or those in *loco parentis*. As a general rule, such decisions by the parent or those in loco parentis are final. However, according to the Supreme Court of Nigeria in this case, the general principles of common law could not be seen in any absolutist categorical sense. The court, therefore, in formulating new exceptions to the general principles distinguished the jurisprudential question between law and religion. Thus, where the law roars, religion must tremble. To this extent, therefore, in the best interest of Tega, the minor, in this case, the Jehovah's Witness religious' belief as to no organ transplantation or blood transfusion must give way when it concerns the decision to save the life of a minor. The decision is that of the law and beyond the parents or those in *loco parentis*, when both failed to make the right decisions in the best interest of the minor, using religious belief as a subterfuge. The test is in the best interest of the minor.

CONCLUSION

From the beginning, the first recorded transplantation by God Almighty as recorded in the book of Genesis was based on two principles; happiness for the donor and life for the recipient. The aim and objectives of this research work were entirely fulfilled from unit 1 of the research work to unit 4, wherein the words organs and organ system were conceptualized, the typologies of transplantation were discussed, the attitudes of certain religious sects were illuminated, whilst the ethics of the medical profession were explained with lucid clarity to determine the extent of culpability of those involved in medical practice. The focus of the researcher in unit 4 was centered on the jurisprudential problems encountered in determining the definition of death based on confusing criteria proposed by the medical profession. Also, a thorough appraisal of the legal regimes in Nigeria formed the focus of this paper. Conclusively, given recent developments in medical research and the existing anomalies in the existing statutory provisions, we recommend a new statutory legal regime for Organ transplantation in Nigeria as the present laws left much to be desired.

ENDNOTES

- DUROTOLU OLUSEGUN, LL.B, BL., LLM, PGD. M.SC. (PEACE STUDIES) FCIM. M.PHIL,Ph.D.

1. What is the definition of organ system *retrieved 26/10/2015 www.ask.com.science*.
1a. Ante
2. Vital organs in the body system *retrieved 26/10/2015 www.brighttube.education*
3. Abubakar A. Bakar et.al (2012) Organ Transplantation, legal, Ethical and Islamic perspective in *Nigeria Journal of Surgery*, July-December 2012 18 (2) p. 53 – 60
3a. *Ibid*
4. Online medical Encyclopedia, *retrieved from http://www.urmc.rocbester.edu.encyclopedia* on the 18th day of July 2021.
5. *Ibid*.
6. *Ibid*.
7. *Ibid*.
8. *Ibid*.
9. *Ibid*.
10. *Ibid*.

11. Williams, R.D (2015) Organ Transplant from Animals: Examining the Possibilities: Cockrell School of Engineering, Univ. of Texas, Austin. (*retrieved on the 10th day of Nov. 2015 at http://apps.engrs.utexas.edu.)*
12. Krishna, M; Hepping, P. *British Journal of Medical Practice* (BJMP) 4 (3) p. 425
13. Alleyne. R (2009) Animal to Human Organ Transplant Corne closer after Genetically Modified Pig Breakthrough: *retrieved on the 11th day of October 2015 at http://www.telegraph.co.uk/new/science*.
14. *Ibid*
15. *Ibid*
16. Krishna, M., and Hepping, P. op.cit
17. *Ibid*
18. *Ibid*
19. *Ibid*
20. *Ibid*
21. Italicized mine
22. Krishna, M and, Hepping, P. op cit
23. *Ibid*
24. *Ibid*
25. *Ibid*
26. *Ibid*
27. *Ibid*
28. *Ibid*
29. Emphasis mine
30. Ibid.
31. Rebecca D. William *op.cit* p. 1 – 3.
32. *Ibid* p. 2 (32) Italised mine
33. Rebecca D. Williams *op.cit* p.2.
34. *Ibid*
35. *Ibid.*
36. *Ibid.*
37. *Ibid*
38. *Ibid*
39. *Ibid*
40. *Ibid*
41. *Ibid*
42. *Ibid*
43. Engelking, C(2012): Gene Editing could make Pig – to – Human Organ Transplant Feasible., *(retrieved from http://blogs.onscover magazine).*
44. Alleyne. R. (2009) ante

45. Ibid
46. Ibid
47. Michael,O. et.al (2010) Organ donation, transplantation, and religion *retrieved from http://ndt.oxfordjournals.org*. on the 10th day of November 2015. P. 11-13.
48. *Ibid.*
49. *Ibid.*
50. *Ibid.*
51. *Ibid*.
52. *Ibid*.
53. *Ibid*.
54. *Ibid*.
55. An Interview with Olagunju Adedeji, Ifa Priest
56. Sharma, R.K. (2006) Forensic Medicine and Toxicology (*Medical Jurisprudence* p.2)
57. Ibid.
58. *Ibid*.
59. *Ibid*.
60. *Ibid*.
61. *Ibid.*
62. *Ibid*.
63. *Ibid*.
64. *Ibid*.
65. *Ibid*.
66. *Ibid*.
67. *Blacks Law Dictionary* (1951) 488, (4th Ed)
68. Honts, M. (1967), Death. (1967) 103 (4)
69. Berman, E.Z. *op. cit* p. 751
70. Hamlin (1964) life or Death, 190 J.A. M.A. p. 112
71. Berman, E.Z. *op. cit* p. 753
72. *The New Republic*, March 16, 1968, at p.7
73 Underlined mine
74. Maria Christina Maltioli *op. cit* p.3
75. Mattioli,C.M.*op.cit* p.3
76. Berman, Z.M. *op. cit*.
77. Saint Thomas Aquinas: *Summer Theological* London: Burns Oates & Washbourne, 1912. Learn more about these citation styles: APA (6th ed.) ...p. 488 – 509
78. Murali Krishna and Peter H. *op.cit*
79. Jeremy Bentham
80. Karishma, M, Hepping, P. *op.cit*

81. *Ibid*
82. Italics mine
83. New International Version of the Holy Bible
84. Khrishna, M, Hepping, P. *op.cit*
85. Saint Thomas Aquinas, *Summer Theologica*, London: Burns Oates & Washbourne, 1912. Learn more about these citation styles: APA (6th ed.) ...
86. *Ibid*
87. *Ibid*
88. *Ibid*
89. *Ibid*
90. Mattioli,M.C.(2015) Legal Aspects of Transplantation of Organs (retrieved from *http://www.hottopos.com/harvard*, on the 6th day of September 2015) p. 18.
91. *Ibid.*
92. *Ibid* .
93. *Ibid* .
94. Alleyne. R. (2009) ante.
95. Ibid
96. Rafindadi et.al (2011) Corneal Grafting Surgery at ABU Teaching Hospital, Shika – Zaria: A Preliminary Review. *Journal of Pharmaceutical and Biomedical Science* 2011, 19 (19). P. 1 – 4.
97. Van Andel, M.V., Worst J. Singh 1. (1998) Artificial Corneas for Third World. Anales del Institute Barraquer, 28, 177 – 179.
98. Murali Krishna, Peter Hepping *op. cit*
99. *Ibid*
100. *Ibid*
101. *Ibid*
102. Rafindadi et.al. (2011) Cornel Grafting Surgery at ABU Teaching Hospital, Shika – Zaria: A Preliminary Review. *Journal of Pharmaceutical and Biomedical Science.* 19 (19) p. 1-4.
103. Van Andel M.V., Worst J. Singh I. (1998) Artificial Corneas for Third World. *Animal del Institute Barraquer*, 28, 177-179.
104. Njemanze. P. (2014) killing of Nigerians in a plot of Organ Transplant Tourism: Special Reports Published on Tuesday 30 December 2014 *retrieved from http//www.elombar.com* on 15th July 2015 p. 1 – 17
105. *Ibid*
106. *Ibid*
107. *Ibid*
108. *Ibid*
109. *Ibid*
110. LER (2019) 2019/SC/97, LQR (8/3/2019) SC.

111. *M.D.P.D.T. v. Okonkwo* (2001) 7 NWLR (pt. 711) p. 206