



# Biblical Bioethics And The Challenge Of Biotechnology To African Christianity

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## ABSTRACT

The destruction of innocent human life through abortion and euthanasia had been the major bioethical issues confronting Christians at the beginning of the twenty-first century but over the last forty years Christians in Africa in particular are confronted with a range of new and troubling bioethical dilemmas as a result of technological advances. Instead of the destruction of human life, we are now concern with the issues of creation and manipulation of human life. The current biotechnological revolution has focused our attention on new technologies related to human life itself, with the idea of creating, manipulating, and even controlling life. Seemingly, the goal of the new biotechnologies is to *make life better*, but this phrase can have different meanings. But the meaning that has undertones that are more ominous: *that of manufacturing new human beings better than the original*. The major question that underlies the biotech's *make life better* involves our basic definition of human life. What does it mean to be human? To whom do we choose to assign value? Who decides, and who benefits? Biotechnology research and progress is leading us to a *Brave New World*, where we can decide ahead of time what a person is going to be and where human dignity, human freedom and human rights are out-dated and that pose challenge to African Christianity. Christianity is not antiscientific revolution but simply wants that revolution ties to biblical moral truth. This paper attempts to get a grip on biotechnology and biblical bioethics considerations that go along with it. The thesis of this paper is that as we advance, bioethical reasoning base on the biblical meaning and value of human beings must precede and guide biotechnology.

**Keywords:** Bible, Bioethics, Biotechnology, Africa, Christianity

## INTRODUCTION

The issues surrounding creation, manipulation of human life and/or human cloning have focus our attention on the significance of the human race to what has been called *the biotech century* – that is bioethical dilemmas in the biotech century. We are grateful that biotechnology offers new treatments for some of the most dreaded diseases. However, the same technology can be used either for good or ill. Scientists in many countries are already working to clone human beings, either for embryo experiments or for life - birth (Smith, 2004). Biotechnology raises great hopes for technological progress; but it also raises profound moral questions, since it gives us new power over our human nature. It poses in the sharpest form the question, what does it mean to be human?

*Biotechnology* is the scientific processes that enable human being to develop new prescription drugs, to develop artificial heart valves, to break down cell structure, to be able to see the structure of DNA (deoxyribonucleic acid: the acid that carries genetic information in a cell), and a host of other scientific and genetic feats that were unimaginable in the time past. It also includes technologies surrounding cloning, genetic engineering and embryonic stem cell research. In a myriad of ways, biotechnology has been a huge blessing to humanity – that is, the advances in medicine and medical technology that improve the quality and the length of human life.

*Bioethics* deals with right conduct in biotechnology and this is really where Christians have a particular responsibility. This is very vital because we can never separate science from morality.

Christians should never be anti-science or anti-progress but should welcome biotechnology for its great advances in human progress. However, Christians in Africa should insist that bioethics have equal stature with biotechnology. We need to be able to look at what is right and wrong in the conduct of science. *Ethics* deals with what we ought to do and ought not to do. *Science* tells us what can be done, not what ought to be done. Christians should listen to science when it tells us what can be done, but technology must always be tempered by the ethics of what ought to be done. This is the province of moral and ethical judgment of biblical bioethics, which Christians must use to evaluate biotechnological advances (Colson and Cameron, 2004). The study will briefly review the biotechnological advances that lie behind these bioethical dilemmas.

### **HUMAN REPRODUCTIVE TECHNOLOGICAL ADVANCES**

Modern technology has created new biomedical ethical issues. It has advanced from the deliberate killing of babies to the artificial creation of embryos for married couples in desperate need of children. Medicine is now able to afford hope for the hopeless couples who have infertility challenges or childlessness. While some are killing innocent babies, others are hunting for babies, what an irony of life. Human infertility is a couple's failure to conceive after one year of unprotected intercourse (Clark and Rakestraw, 2003). In order to overcome infertility a variety of modern fertilization techniques have been developed. Apart from medical and surgical techniques, a more advance method known as biogenetic engineering has been introduced in order to help infertile couples to have offspring.

The normal and natural procreation is an active involvement of the man and his wife and this requires the man's sperm, the woman's egg, fallopian tubes, which link her womb where the foetus develops. In other words, the sperm, egg, fallopian tubes and womb are the natural channels of fertilization through coitus. However, in some occasions, one or more of these elements may be in some way defective, which may demand for reproductive technologies. For instance, a man may be affected by low sperm count or blocked sperm ducts, which in some cases caused by chemicals such as insecticides. A woman may have blocked fallopian tubes or scarred tissue in the ovaries or uterus caused by venereal diseases such as gonorrhoea and Chlamydia. Most women lose their fertility due to sexually transmitted diseases. Stress also can cause infertility in both men and women. Some couples postpone pregnancy for one reason or the other until the middle or later thirties when it is generally more difficult to conceive (Clark and Rakestraw, 2003). Thus, artificial insemination, test-tube babies, surrogate mothers, organ transplantation, organ harvesting, gene splicing, and cloning are all medical realities of treating cases of infertility.

### **BIOETHICAL CHALLENGES AND QUESTIONS OF BIOTECHNOLOGY**

The ranges of new and troubling bioethical dilemmas raised by the technological advances are concerning the creation and manipulation of human life, the nature of parenthood which is at stake, fabrication of superior human beings, and prospect of new therapies that will dominate ethical concern. There is much other bewildering range of the issues, but we identified only these four of the recurrent ones.

**Creation and Manipulation of Human Life:** Advances in human technology collapse the distinction between natural and artificial. There is no more distinction between natural procreation and genetic procreation of human being. As technology advances, genetically engineered humans expand in importance and the natural procreation through husband and wife diminishes. In the past, we can divide the world into objects that were natural – part of the givens of the natural world, and objects that were artificial – originating from human purpose and human made craft. Technology collapsed this distinction and now every natural thing including human being is seen as a raw material, waiting to have something made out of it. We have done so much to modify the natural environment and surround ourselves with the products of our invention; we are now trying to manipulate our own natural human bodies. Our human bodies can be regarded as raw material, as potential for modification or enhancement according to our own desires (Stott, 2006).

We have the power to breed *superior human species*. Technology promises to improve on our human design. The humanists objected that opposing genetic engineering, cloning, and gene splicing retards scientific progress. Thus, scientific progress has been absolutized as the norm by which all else is

justified. However, biotechnology is not morally normative. Technological progress is not necessarily ethical progress. At times it is ethical regress instead of progress. It deals with what is, not with what ought to be (Geisler, 1995). Therefore, biotechnology must stand to be judged by biblical bioethical norms and not otherwise.

**The Nature of Parenthood at Stake:** Biotechnology changes the nature of parenthood by offering new opportunities for parents to exercise control over the process of procreation. A child may no longer be vied as a mysterious gift; rather it will be a product of human planning and ingenuity. Parents can now use sophisticated genetic techniques to screen embryos for desired characteristics. With the development of In Vitro Fertilization (IVF), each genetic child can now be regarded as the product of four components: an egg source, a sperm source, a womb or uterus, and one or more caregivers after birth. In other words, such a child may have three mothers: a *genetic mother* – the source of the egg, a *carrying mother* – the provider of the uterus and a *social mother* – the one providing care after birth. We can select the donor of the gamete that goes to make an embryo. We can test embryos to select the one that has the optimal genetic potential. We can clone or produce an identical twin by nonsexual parenting (Geisler, 1995; Stott, 2006).

It is not an exaggeration to say that biotechnological advances have changed forever our perception of human reproduction and parenthood. Eventually, selecting the best embryo will be seen as an essential part of responsible parenthood. Parents would see it as a duty to themselves and to their future child to give him or her best possible genetic start in life. Now with embryo testing and selection, and with reproductive cloning, a child becomes a commodity, the one couple has chosen, the one who reflects their wishes and desires, thus changing the nature of parenthood. With reproductive technology, we now are turning be-getting into making, procreation into manufacture – simply a fabricated child or factory baby. “When we manufacture offspring according to pre-set specifications, we are violating a fundamental aspect of human procreation. We are treating our children as our *creatures*” (Doerflinger, 2004).

**Fabrication of Superior Human Beings:** Biotechnology offers the possibility of solutions to the age-old problems of humankind. We have been struggling with the limitations that stem from our physical nature such as the human realities of aging, illness, infertility, disability, frailty, depression, death. Amidst these realities, we struggle to learn wisdom, insight and acceptance. This is our human nature, the way God created us. However, in our contemporary, biotechnology is offering solutions to these age-old problems. We now have the technology to face these painful realities instead of passive acceptance and resignation. We are breaking free from the limitations imposed by our physical nature (Stott, 2006). Many believe that because humans have advanced to such a technological level, they have a duty to create a superior race that is genetically engineered human beings.

Sperm banks, artificial insemination, and surrogate mothers now make it possible to breed superior humans. The ultimate result is a human being totally engineered to specifications, the creation of a superior breed. Through prenatal tests, genetically impure offspring can be aborted. The final goal is for a completely fabricated superior human being (Geisler, 1995). Enhancement technology promises “a new form of post-human beings, beings who may have indefinite health-spans, much greater intellectual faculties compared with current human beings, new types of sensory awareness and enhanced control over their intellectual and emotional functioning” (Stott, 2006). Do we have the right to create human life? Is human being sovereign over life? These are some of the moral questions for Christians in Africa to ponder about.

**Prospect of New Therapies will Dominate Ethical Concern:** Therapeutic advances resulting from research on human embryos seem remarkably modest. New biotechnological techniques for genetic screening of embryos have been developed, but the wonderful promise of new therapies is not yet actualized. However, when the possible future benefits of research are weighed against ethical concerns about the manipulation of embryos in a simplistic utilitarian analysis, it is the prospect of new therapies that will always dominate no matter the speculation. However tempting it may be, however spectacular the results are, we must not resort to unethical restoration. We are not at liberty to improve on the fundamental nature of our humanness. We are called to use biotechnological advances to preserve and protect the divine nature, to maintain and preserve the creation order embodied in the structure of the human body. Any new therapy that is intending to be enhanced, aimed at producing children who have stronger limbs, better growth and quicker brains is stepping

over the limits of human responsibility and is unethical. Just like what John Wyatt (2006) rightly observes, “The new biotechnology is forcing us to reflect more deeply on the natural order given at creation. What does it mean to be human? What are the limits which are laid down by the physical structure and the moral order of our creation?” We need to be able to look at what is right and wrong in the conduct of the so-called new therapies. We need to insist that Christian bioethics have equal stature with biotechnological therapies, that the end does not justify the means.

### **BIBLICAL BIOETHICS AND BIOTECHNOLOGY**

The current biotechnological revolution which relates to human life itself, with the idea of creating, manipulating, and even controlling life poses a challenge to biblical Christianity. The goal of this new biotechnologies is to *make life better*, but this phrase can have different meanings. This could mean to make life easier by improving overall health and vitality, by treating or preventing disease, by extending the lifespan or even by enhancing physical or mental abilities. A second meaning from that phrase could be one that has undertones that are more ominous: *that of manufacturing new human beings better than the original*. The major question that underlies the biotech’s *make life better* is a challenge to the biblical concept of human life.

Christians in Africa need to get a grip on biotechnology and biblical bioethics considerations that go along with it. As we advance, bioethical reasoning based on the biblical concept and value of human beings must precede and guide biotechnology. We have a moral compass, the Bible, which should inform all our decisions regarding right and wrong. The Bible is God’s revelation of the unchanging moral principles that should guide the lives of those who follow His Son, Jesus Christ. To elicit such norms, it is very vital both to pay attention to explicit biblical statements and to look for biblical themes that can inform our decision-making. We will discuss only five major themes as regard to biblical concept of human life.

**The Sovereignty of God over Human Life:** In biotech advances, we must recognize primarily the sovereignty of God over human life. God created every living thing and human being in his image and likeness (Gen. 1:21, 27). God controls both life and death. He gives life and he takes it away (Job 1:21). From dust we come, and to dust we return (Gen. 3:19). He kills and makes it alive (Deut. 32:39). In other words, the Lord gives blessings and he allows suffering. Our relationship with him is not based on his gifts or his blessings but his character and his love for us (Blackaby, 2006). We are not our own but his. God made us and we belong to him. Therefore, human beings have no right to seek control of human life, to try to “advance” its evolution or to tinker with it genetically (Geisler, 1995). We can learn a lot about the way God wants us to treat our human life by considering the way we have been made. Human beings are uniquely made in the image and likeness of God. This sets us apart from all other creatures that were made “according to their kinds” (Gen. 1:21, 24-25).

The biblical revelation informs us that human beings are not self-explanatory. We derive our meaning from outside ourselves, from God in whose image we are made. We are not autonomous individuals, creating ourselves constantly by the decisions and choices we made. We should recognize and admit that human life is grounded in and sustained by God. So biblical bioethics, the way we are called to treat human life, is derived from biblical anthropology, the way we are made (Stott, 2006).

**The Dignity and Value of Human Life:** Human value and dignity, from a biblical perspective, do not depend on what we can do nor have the potential to do. Being human gives us value and dignity and entitles us to protection and life because to be human is to be created in the image of God. The dignity and value of human life is at the heart of biblical bioethics because humans are made in God’s image and are the crown of his creation. We are created in the image of God and that is why murder is such a heinous crime, for it is killing God in effigy. “Whoever sheds the blood of man, by man shall his blood be shed; for in the image of God has God made man” (Gen. 9:6). Human beings, at whatever stage, should be accorded that respect and honour and not to be treated as raw materials or commodities (Colson, 2004; Geisler, 1995). At various stages of human development in life, we are still God’s image, the basis on which we ought to treat our fellow human being equally with value and dignity.

The reality of sin and the fall does not change this fact, or reduce the value and dignity of humanity made in the *imago dei*. We retain the image of God at various stages of human life, even in our fallenness (Gen. 9:6). Sin has corrupted the image, which brought about various sicknesses and

diseases that technology and medicine are trying to improve upon. We recognize that the overwhelming majority of those who want these new technologies developed do so with good motives: treatments for debilitating disease, avoidance of suffering, and asexual child birth – these are good things that we all value and ought to. However, we need to ask whether we should seek these things at the cost of another human’s life (Megan Best, 2012). Christians believe human value and dignity to be indivisible: the aged, the sick, the very young, those with genetic diseases – every human being is possessed of an equal dignity and value, any threat to one of such is a threat to us all (Colson and Cameron, 2004). Human dignity is inviolable. We must respect and protect human life.

**The Uniqueness and Sanctity of Human Life:** The biotech century poses the sharpest form of moral question, what does it mean to be human. In biotechnology the uniqueness of human nature and sanctity of life are at stake. We need to understand that humans are distinct from all other species; at every stage of human life and in every condition of dependency, they are intrinsically valuable and deserving full moral respect. No human has the right to determine who is deemed worthy of protection and who is not (Colson and Cameron, 2004). Jeremiah reflects on the dependence of the entire human race on God’s sustenance: “A man’s life is not his own; it is not man to direct his steps” (Jeremiah 10:23).

In biblical ethics, each human life has a unique dignity because of the image of God and is a unique masterpiece of God’s creation. The suffering, pain and death of human beings, in all its horror and mystery are not God’s original design for us. Human beings were not intended to die; they were made to live forever. Due to disobedience, we are not meant to live forever in our degraded fallen state. Thus, human lifespan is limited, not just as a curse but also out of God’s grace. Human longevity is limited to 120 years and later reduced to 70 or 80 years because of human sinfulness (Gen 6:3; Psalms 90:10).

The inevitable accompaniment of death is fear. The uniqueness and sanctity of human life is transformed into a slavery of fear, mostly the fear of death. The terrible, all-pervading fear of death drives both medical research and our desperate attempts to use technology to prolong life. The new biotechnology cannot hand twist the bleak biblical depiction of the cycle of human life from an earthly perspective. Rather, this should help us to retain a sense of the limitations of biomedical health care. For all our wonderful knowledge and technology, we are not able to redeem our physical bodies from the cycle of death and decay. There can be no biotech fix for the ultimate mysteries of the human condition. No human being can overcome ageing and eventual death by biomedical technology. In God’s providential mercy, that route to the tree of life remains blocked by a flaming sword (Stott, 2006).

**Bonds of Marriage and Parenthood:** The bonds of marriage and parenthood are vital values implicated in biotechnology, affecting the beginning and nurturing of human life. These bonds are essential to our appreciation of our own humanity. The integrity of marriage and parenthood can be eroded when relationships between husband and wife or between parent and child are blurred or redefined in some reproductive procedures. Modern technology introduces outside third parties into the marriage bond for purposes of reproduction. With this, a child can now have as many as five parents: sperm and egg donors, which are genetic parents, the gestational mother, and the couple that intends to raise the child. A child brought up in such an arrangement is denied his or her right to a unified family, and the traditional moral and legal responsibilities inherent in parenthood are diffused and rendered problematic. Even the more complicated side is that of *in-vitro-fertilization* (IVF) technique which is performed by the use sperm and egg from husband and wife that undermines values inherent in the institutions of marriage and family.

In natural sexual procreation, husband and wife physically express their love for each other and are open to engendering a new baby whom they will love and care for together. This openness to new person sets the stage for lifelong parenthood toward their offspring. Their baby’s makeup will be a new and unpredictable combination of traits from both parents, for no one is involved in designing or forcing the production of a particular kind of child. However, some reproductive technologies negate this natural process, thereby making children the result of the meeting of sperm and egg in a *Petri dish*, rather than from sexual union of husband and wife. In fact, human cloning depersonalized procreation into manufacture and a baby produced through this process may have no *mother* or *father* in the ordinary sense but only a template or model (Colson and Cameron, 2004).

Biblical perception of parenthood is against the situation in which we want to control and design our children to fulfil our deepest desires. To bring any child into being for a specific ulterior motive, and to force the child to play a role, however noble, is in some sense manipulative. Children must be respected as mysterious personalities, who are equal to the parents at a fundamental level. We need to let the mystery of human personhood – equal in dignity to their parents’ own – unfold in the lives of our children, the succession of human generations (Stott, 2006). In the biblical sense, parents do not manufacture children, parents beget them. Parents share in the miracle of begetting as beings made in the image of God. Thus, children are human beings who share with parents a common human nature. In God’s design, parents do not determine what their children are; we receive them as a gift, as beings that are equal with parents at a fundamental level. In John Stott’s words, “One of the dangers of reproductive technology is that it subtly reflects and contributes to a change in our relationship to our own children.” In other words, biotech made children become a product of parents’ will, a commodity at human disposal, which abuses the bonds of marriage and parenthood as ordained by God.

**Future Preservation of Truly Human Species:** Biotechnology advancement without biblical bioethics intervention is a threat to preserving a truly human future. Genetic technology may be used to relieve human suffering, treat existing human conditions but it may be used in the future to alter human species. Germ-line technology would be one way genetics could be used to alter future generations of human species. For instance, there are two types of cells in human bodies: somatic cells and germ cells or reproductive cells. The germ cells are sperm or eggs. All the other cells are somatic cells. “Whatever manipulations are achieved in the somatic cell alters only the genome of the person whose cells they were” (Mitchell, 2004). One might want to alter the germ-line to attempt to remove hereditary genetic problems from one’s progeny. By removing or cancelling out the gene in the germ cell, some disorders would be eradicated from a family, a clan or the human race. This may sound like a laudable goal on the surface but the risks of germ line intervention make it unlikely that it will be morally acceptable. This is because most genetic diseases are multi-factorial and in addition, so-called genetic enhancement technology applied to the germ line might alter human species in terrible ways (Colson and Cameron, 2004).

The Bible made it clear that human beings are special creation of God, fashioned in his image and likeness (Gen 1:26-28; 9:1-6). Though fallen and corrupted, humankind remains image bearers of God. In contrast, biotechnology sees human nature as a work-in-progress, a half-baked being that can be remoulded in desirable ways through intelligent use of enhancement technological means to become post-human or trans-human. The healing of Christ is the most significant challenge to the dubious visions of the post-humanists re-engineering agenda. Jesus knew that human fundamental problem is sin, he died for human race, and his resurrection from the dead and the kind of immortality achieved through his resurrection provide the pattern for those who believe in him (Mitchell and Others, 2007).

Biotech bombards us with messages of hope that will not bring the satisfaction, contentment, joy and peace that we seek. “We can find that peace only as we return to the authentic open and loving relationships for which we were created, with God and with one another” (Mitchell and Others, 2007). Only the demonstrative power of love of Jesus Christ is the solution to human weaknesses and fears (Rom. 8:26; 1 Cor. 15:42-44; 2Cor. 12:9, 13:4). Biblical bioethics demands fear and love of God in biotech advancement, a relationship of total dependency on God and transformation by the Holy Spirit from within. Any constructive augmentation of any human being should be undertaken by God and for God’s purposes, not ours (Mitchell and Others, 2017). The Gospel of Jesus Christ is the only channel that can resolve the pain and the emptiness in human hearts, and the only true path for human good.

## **CONCLUSION**

African Christianity should strongly favour the development in biotechnology that will lead to cures for diseases and disabilities that befall the sons and daughters of Africa, and welcome the promise of stem cells from adult donors and other ethical avenues of research. We should champion the prohibition of all human cloning and genetic modification. This is imperative to avoid the birth of a generation of malformed humans and the establishment of vast experimental embryo farms with millions of cloned humans in Africa. No human cloning must be welcomed in Africa. “It is morally

offensive since it involves creating, killing and harvesting one human being in the service of others” (Colson and Cameron, 2004). This should not be practiced in Africa at all. We hereby propose the following principles/pillars for African Christianity to help regulate biotechnology in Africa.

1. *African Christianity begins with the affirmation of God the Creator of everything.*
2. *African Christianity affirms the biblical account as the best guide to understanding the nature, problems and ends of human life*
3. *African Christianity affirms all human beings, regardless of age or level of development, health, disability or status are created in the image of God, each is worthy of respect and protection.*
4. *African Christianity believes human beings are distinct from human tissues not capable of full development.*
5. *African Christianity affirms human beings are created for community and communion with God and with one another.*
6. *African Christianity affirms sin and not physical or mental inadequacy as the fundamental problem of human beings* (Mitchell and Others, 2007).

Also, we like to emphasize the need to develop African biblical worldview to the moral challenges and questions that new biotechnological advancement is raising. We know that African ethics is anthropocentric in nature, and has religious and social influences. Hence, we suggest that African Christianity should integrate the rich social and humanistic contents of African traditional moral values with biblical revelation and discard those values that conflict with biblical moral values. For instance, African traditional ethics is based on the assumption that human beings are created perfect, sinless and possess a mind, which has the ability to make moral decisions. Thus, most of African values are shape by cultural, social and moral values with little or no regard to God’s power (Nkansah-Obrempong, 2013).

We needs to present a biblical concept of human - which closely related to traditional concept of human being - to our people before they embrace Western humanistic worldview. Biblical worldview regards human beings as wonderful and fearfully made, created in God’s image, contaminated by evil, yet affirmed and redeemed by the Christ event – the incarnation, death and resurrection of Jesus of Nazareth. We need a biblical worldview that encompasses wonder, respect, empathy and protection for the weak and vulnerable among us. African Christianity should educate Africans to respect the givenness of our humanity, supporting and encouraging restorative therapies whilst resisting the abusive possibilities of enhancement biotechnology - that is the creation and genetic manipulation of human life or the breeding of human beings.

## REFERENCES

- Berry, A.C. (1995) “Embryo Transfer” in David J. Atkinson and David H. Field, eds. *New Dictionary of Christian Ethics and Pastoral Theology*. Leicester: InterVarsity Press.
- Blackaby, Richard. ed. (2006). *The Blackaby Study Bible*. Nashville: Thomas Nelson, Inc.
- Doerflinger, Richard M. (2004). “Confronting Technology at the Beginning of Life” in Charles W. Colson and Nigel M. de S Cameron, editors. *Human Dignity in the Biotech Century*. Downers Grove: IVP Academic.
- Clark, D.K. and R.V. Rakestraw, eds. (2003). *Readings Christian Ethics: Vol. 2, Issues and Application*. Grand Rapids: Baker Books.
- Colson, Charles W. and Nigel M. de S Cameron, editors. (2004). *Human Dignity in the Biotech Century*. Downers Grove: IVP Academic.
- Geisler, N.L. (1995). *Christian Ethics. Options and Issues*. Grand Rapids: Baker Book House.
- Mitchell, C. Ben and Others. (2007). *Biotechnology and the Human Good*. Washington: Georgetown University Press.
- Smith, Wesley J. (2004). “Lesson from the Cloning Debate: the Need for a Secular Approach” in Charles W. Colson and Nigel M. de S Cameron, editors. *Human Dignity in the Biotech Century*. Downers Grove: IVP Academic.
- Stott, J. (2006). *Issues Facing Christians Today 4<sup>th</sup> Edition*. London: Harper Collins.
- Wyatt, John. (2006). “The New Biotechnology” in John Stott, *Issues Facing Christians Today 4<sup>th</sup> Edition*. London: Harper Collins.