Research on Humanities and Social Sciences
ISSN 2222-1719 (Paper) ISSN 2222-2863 (Online)
Vol.4, No.2, 2014

The Relationship between Religion and Science in Mission: Reflections from an African Christian Perspective

Dickson Nkonge Kagema, PhD [1]
Chuka University,Department of Arts and Humanities
P.O Box 109 -60400,CHUKA,KENYA.
Email- dicknkonge@gmail.com

Abstract
The subject of religion and science has become a new area of mission and study in Africa. Are they foes or allies? Can science be used as a tool for mission in Africa? This paper looks at the meaning of these two entities, examines the origin of modern science and shows its close connection to religion, gives the relationship between religion and science in the African context, investigates why religion continues to survive in today's scientifically developing Africa, shows how science affects mission in Africa and concludes that religion and science are distinct but inseparable entities which are both required in Africa. Rather than refuting any of them as irrelevant, Africa needs both of them for its survival and so they should be allowed to co-exist.
Key Words: Religion and Science, African Context, Survival of Religion, Science and Mission

I. Introduction

The subject of religion and science is becoming a new area of mission and study in Africa today. To many people religion and science are antagonists which can not share in mission or evangelization. When I was appointed to teach religion at Chuka University in 2010, one of my colleagues at St. Paul's University in Kenya wondered how I would survive in an institution which concentrates on teaching sciences.[2] He felt that religion and science are conflicting disciplines with differing ideologies hence practically impossible to exist in one area. Since then I have kept on reflecting on this matter and this has led to this paper. Are religion and science allies or foes? Are they siblings or distant cousins? To what extent are they partners in mission? These are some of the questions I intend to address in this paper. The most interesting thing is that in spite of the debate which this subject has aroused globally, it has not been given much attention in Africa where both religion and science seem to have tremendous influence. In 1960s J.S. Mbiti in his assessment of African religiosity had alluded that 'Africans are notoriously religious', with religion occupying all spheres of life (1969:1), but today the same assertion cannot be out rightly made due to the influence of science. It is important to scrutinize the place of science in the religious African society. This underscores the significance of this paper today. The paper mainly utilizes the secondary sources of information to come up with what I think should be the relationship between religion and science in mission in an African context.

2. Definition of Religion and Science

For us to comprehend the relationship that exists between religion and science it is preferable that we commence by looking at their meaning.

2.1 Religion

Although religion is a widely studied discipline and has been given numerous definitions since nineteenth century (Beeman 2001) when people saw the need of the comprehensive study of this phenomenon which greatly influences humanity, so far no substantial definition seems to have been given. Nkonge (2010:1) feels that although religion is as old as human race those studying it find it difficult to define it and as such most of them end up saying what it does or its effects rather than what it is in essence. Milton Yinger sees a real problem in the definition of religion. This is because a devout adherent of a particular faith is likely to believe that a definition ought to describe the true quality of religion. He/she is not happy with the concept that a definition is heuristic device useful for one purpose but of no value for another (Yinger 1970:3). Religion is therefore an intricate reality. It is complex because of its inscrutability in spite of its enormous influence upon humanity and a reality because it actually exists and as Mugambi (1996: 5) elucidates, human beings perceive it through their five senses of touch, sight, smell, taste and hearing. A reality is something which actually exits and so although we have problems in defining religion, it actually exists. It is a fact, an occurrence and a tangible phenomenon.
With this in mind, I would like to define religion from its etymology. The word religion is derived from the Latin

[1] Dr. Dickson Nkonge teaches Religion at Chuka University in Kenya. He is a Research Associate in Practical Theology and Missiology at Stellenbosch University, South Africa
[2] St. Paul's University mainly teaches theology and religion while Chuka University was initially started to teach science courses but also offers courses in education, business, arts and humanities.

word, *religio*, whose root meaning has not been easy to establish. In the Indo-European language, the root *leg* or *lig* means 'to be concerned', which seems to derive from the Greek word *alegein* which means 'to pay heed to'. This again seems connected to the Latin word, *diligens* from which the English word 'diligent' comes (Kasiera 1990: 3). This then implies that religion has three main aspects namely 'to be concerned', 'to pay heed to' and 'diligence'. It was in view of this linguistic background that Paul Tillich defined religion as the 'Ultimate Concern' (Kasiera, 1990). Religion in this case is the direction or movement towards the ultimate or the unconditional (Brown 1965). The unconditional in this regard may be God, gods, spirits or other supernatural powers. Borrowing from the same linguistic locale, I define religion as 'diligently paying heed to powers beyond human reach'. It is the 'diligent concern and focus on the ultimate reality'. As humans struggle with the three existential questions of the ultimate origin, ultimate purpose and ultimate destiny, they have always found themselves ending up in a complex manifestation called religion. So, as Mugambi (1996:6) puts it religion becomes a means through which human beings express their joys and sorrows, hopes and fears, failures and achievements, frustrations and expectations. Religion deals with matters of faith and revelation. Its truth cannot be empirically verified, although there are attempts today by some scientific extremists to unsuccessfully verify some of the claims of religion.

2.2 Science

The Oxford Advanced Learner's Dictionary defines science as an organized knowledge, especially obtained by observation and testing of facts about the physical world, natural laws and society. It is the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment. The scientific method entails the meticulous process of gathering and analyzing data (www.vocaburary.com/dictionary). Scientific knowledge is empirically verified, that is, tested though experiment and observation. In short science is a broad term that refers to any type of knowledge-base that can have some type of predictable outcome. It includes nature, experiments, outer space, and many other things. Science covers a lot of research and is an on going mission to discover new things and to understand them (answers.ask.com/reference/dictionaries).

3. The Birth of Modern Science

Religions came into being as people grappled with the existential questions of life but for us to comprehend the place of science in today's religious societies especially in Africa we need to look at the emergence of modern science. Is there any correlation between the birth of modern science and the existing religions? Religions emerged from the humans' endeavor to answer the three existential questions: Where did we come from? What are we doing here? Where are we ending to? Therefore, since they commenced to exist, humans have striven to explain the many mysteries of the universe and to justify their existence in it. Throughout this journey of self-understanding, numerous standpoints on human existence have evolved and merged into an intricate phenomenon called religion (Nkonge 2010:2).

However as the human race has grown and advanced, people have come to realize that some ideas cannot be explained by religion alone. While religion has proved useful in addressing queries from the metaphysical world (Molloy 2013:10), it is important to note that today some of the claims of religion have been found to be less and less plausible (Nkonge: 2010:3). Advances in science and technology have brought a new understanding of the universe sometimes challenging the foundations of the religious ideology. This is of course not new as it started from the time of Renaissance (1300-1500) when scientific information about the world steadily expanded in the fields of astronomy, geology, zoology, chemistry, biology and physics seriously contrasting assertions in the same field derived from the Bible, rather than from direct observation and experiment (Nkonge 2010:7). Renaissance was a period of major breakthrough in learning. It marked the beginning of modern world when knowledge, education, literature, art and science began to grow at ever increasing speed (Anderson 1984). The period saw the rise of universities and schoolmen with the former being excellent centers of searching new knowledge and the later being involved in serious reflection and study as opposed to the old conservative and autocratic clerical order.

The years from 1500 to 1700 saw not one but two profound upheavals in the Western thought. That is Religious Reformation and Scientific Revolution (Moore 1977:48). In religion, Christian protestant reformers such as Martin Luther, John Calvin and Ulrich Zwingli were replacing a human-centered view of the world with a God-centered one (:48). The rise of urban civilization and the collapse of the traditional religion in Europe (see Cox 1965) were two hallmarks that had placed human beings in a very desperate situation. Secularization which Van Peursen had described as deliverance of man (sic) from his religious and metaphysical control of his reason (1963: 13-17) had become the accepted norm of life. Humanists such as Dietrich Bonhoeffer came with slogans like 'man's coming of age' where they called for the humans' loosing of the world from religious and quasi religious understanding of itself, the dispelling of all closed world- views and the breaking of all supernatural myths (1959; Cox 1965:2). Human beings commenced to live and act with little regard to religion. Life in

Europe became meaningless with the emphasis of the possible death of God and that with him all meaning had vanished from the earth (see Kitwood 1970: 72). In all this, the Church which Nkonge (2012:1) informs that is usually the most trusted institution in the societies where Christianity is dominant remained silent and in support of the status quo. According to McNair (1977:8), church leaders (clergy) of the time were corrupt, immoral, business centered, negligent and ignorant hypocrites who employed all unscrupulous ways to get money from the people. For instance Martin Luther was dismayed by Pope Leo X's pretence of extracting money from the faithful by the sale of the indulgences (Anderson 1984:119). Rather than tending their flock the popes were busy creating Christendom by taking the place of the Roman Emperor as the political heads of Europe. This led them use their spiritual offices for political gains (Thomson 1976:1). There was the cry for Reformation from all corners of Europe (Chandwick 1964:11-2). The Reformers were not convinced that such a Church would lead people to God as it claimed (Anderson 1984:120).

In science, scientists such as Nicolas Copernicus, Galileo Galilei, Isaac Newton, Johann Kepler and Tycho Brahe were replacing a universe centered on the earth with one centered on the sun (Moore 1977:48). For instance, Copernicus revolutionalized the medieval geocentric world-view which had placed the earth as the center of the cosmos with his suggestion that the universe was centered on the sun and not the earth, a view referred to as heliocentrism (Thurston 1994)). Although Aristarchus of Samos had proposed that the earth revolves around the sun as early as third century B.C.E, this view only became more profound and supported in the sixteenth century when Copernicus revived and elaborated it (Dreyer 1953). Thus the scientific revolution radically altered the conditions of thoughts and material in which human race lives (Encyclopedia Britannica 2010).

The point which I want to emphasize here is that Religious Reformation and Scientific Revolution went hand in hand. There is a close connection Protestant Reformation and the rise of modern science. Moore (1977:48) supports this view by denoting that "There is distinct and plausible evidence that Protestantism gave rise to modern science". A careful observation of what happened during the Reformation reveals an evidence of Protestant contribution to scientific revolution, a clear indication that religion gave decisive encouragement to science. Some specific examples include:

a) Some of the teachings of the reformers significantly encouraged the development of science. For example, the Lutherans taught that Christ was really present in nature as well as in the Eucharist. Martin Luther was of the view that Christ was not in isolation of the universe which he had helped create (Chadwick 1976). This encouraged the Lutherans to get involved in scientific discoveries as a way of understanding the universe given to them by God. The Calvinists took lead in advancing the course of science (Moore 1977: 49). John Calvin urged the believers to do good works to confirm that they are among the 'elect' (Anderson 1984:131). Good works included understanding nature and this was possibly the motive for scientific activity among the Protestants. In view of this the Protestants emphasized that 'Nature should be studied systematically, rationally and experimentary for the glory of God and the good of mankind' (Moore 1977: 49). The Protestants in general supported free inquiry and freedom of the individual. Their doctrine of the 'Priesthood of all believers' significantly nurtured the growth the scientific spirit. For instance Luther used this doctrine (Every Christian is a priest) to knock the three 'walls' namely 'The supreme power of the Church over the power of princes' , 'the sole authority of the pope and other clergy to interpret scriptures' and 'the sole authority of the pope to call the Church's General council' (Anderson 1984: 122). These 'walls' had circumscribed other believers hindering them from participating in the Church's life as well as realizing their full potential. Thus when the reformers told the Christians that "You are a royal priesthood. . ." this was a clarion call for all believers to participate in scientific discoveries and other innovations. Yinger (1970:64) clarifies this even more by denoting that,

> The Reformation certainly did not directly sponsor a situation of religious tolerance and openness, but the momentum of the protest against medieval patterns of authority and the conflicts among the Protestant churches helped break the cake of custom and facilitated thought. Protestantism helped to break the intellectual monopoly of the clergy, it encouraged the masses to read and established colleges and universities in greater abundance.

b) Some of the scientists were strict followers of their religion and the reformers supported the scientists as well. For instance, a Lutheran prince, Duke Albrecht subsidized the publication of Copernicus, Tycho Brahe and Johann Kepler, the great astronomers were both devout followers of Luther, Michael Maestlin, a Lutheran pastor edited Kepler's work in 1596, Philip Van Lansberghe, a reformed minister and renowned astronomer, became the keenest supporter of Copernicus in Netherlands while his fellow countryman Isaac Beechman a scientist and strict Calvinist was an early defender of atomistic philosophy. In England the Puritan movement produced such men as Henry Briggs, Henry Gellibrand and John Wilkings who devoted themselves to scientific discovery and learning (Moore 1977: 49-50).

It is therefore clear from the above arguments that Protestantism (religion) encouraged the birth of modern science. In other words religion is the mother of modern science. This becomes the basis of our understanding of

the relationship between religion and science in the contemporary African society. In Africa the family plays a significant role where parents and the children are supposed to live in harmony at all times (Mbiti 1969:104). In this case since science is the child of religion then it means they are not in conflict at all. They are members of the same family hence mutual understanding, love, respect, bliss and interdependence exist between them.

3. Relationship between Religion and Science in the African Context

In the Western world religion and science are perceived to be in severe conflict with some Western scholars such as Henry Thomas Huxley declaring that "It is practically impossible to be a soldier for science and the loyal son of the Church' (Brooke 2006) to show the divergence that exists between the two entities. In the Western mind science is today viewed as far more important than religion (Nkonge 2010:6) since science is perceived to have provided humans with undreamed comforts and luxuries while religions have no such material benefits to offer (Palekar 2012). This may however not be the case with Africa where religion substantially occupies the African life and mind. Mbiti (1969: 1-5) informs us that Africans are notoriously religious and they experience this religiosity in a deeply religious universe.

With the effect of globalization, it would be unwise to think that this religiosity will not be affected but I think it will still be impossible to erase it from the hearts and minds of the Africans. Take for example Kenya, where the Western expatriates commenced to arrive as early as 1840s.[1] Although their influence has been here for a long time the religiosity of Kenyans still remains intact with Christians forming about 82.5%, Muslims 11.1%, Traditionalists 1.6%, and other religions 1.7% of the total population (see Kenya's Population Census 2010). This implies the number of those irreligious is negligible. There may be the question concerning the level of the Africans' commitment to their religions, but it is important to realize that whether they are very committed or not Africans value their religions. The African people do not know how to exist without religion. This view is supported the study conducted by Pew Forum on Religion and Public Life in 2010. In the survey of 19 African countries and 25000 interviews, the forum found that about 90% of the respondents affirmed that religion is 'very important' to them, making Africa the most religious zone in the world. The survey found that Africans overwhelmly practice either Christianity or Islam and that Africans are very likely to believe that the Bible or Koran is literally true (Potts 2010). Interestingly, the survey established that many of those Africans who indicated that they are deeply committed to the practice of either Christianity or Islam also incorporate elements of African Traditional Religions (ATR) into their daily lives (Potts 2010). This shows that Africans are followers of ATR before they are followers of other religions. In any case ATR forms the foundation of African religiosity and should be credited for the Africa's religious environment today.

Today science just as religion is becoming a force to reckon in the African culture. With the current wave of globalization the effect of modern science in Africa cannot be understated (see Kasongo 2010: 314). But how has science affected religious beliefs in Africa? Religion and science are distinct entities propagating differing ideologies but it would be imprudent to regard them as in conflict. Yinger (1970: 57) refers to religion and science as dual roads to truth. This is further clarified by Thomas Aquinas who argued that 'There could be no contradiction between religion and science if man knew enough because both stem from God' (Yinger 1970: 58). The 'assumed' tension between religion and science is therefore caused by human beings' failure to perceive of the deity who is the origin of everything. Africans do not have this problem. The conception of a God who is the source of everything is not alien in Africa. Mbiti (1969:29) elucidates that,

> In Africa, God is the origin and sustenance of all things. He is older than the Zamani period. He is outside and beyond His creation . . . He is personally involved in His creation so that it is not outside of Him or His reach.

This means that to an African God is the cause of all things including science. Therefore religion and science are not foes, because religion focuses on God who is the source of everything science not excluded. This is clarified further by William G. Oxtoby and Alan Segal (2007:19) who elucidate that all African religions focus on a Supreme Being who is seen as the source of all things. I support those who since eighteenth century have come to conclusion that religion and science are harmonious arguing that 'It is not that religion is good science but science is good religion' (Yinger 1970: 57). Religion is not good science because many of its claims cannot be empirically verified but science is good religion because there is nothing wrong by believing what science teaches. Religion deals with faith and revelation and we need to understand that God reveals himself to humanity through science as much as he does so through other means. So even with our African religiosity it is important for us to realize that as Nkonge (2011: 8) puts it 'science is not only a method but a way of life'. This implies that both religion and science are indispensable components of human life.

Interestingly both religion and science first developed in Africa. As I have already said religion arose as human

[1] The Portuguese had come earlier but by the time they left Kenya in 1729, they left minute memorable traces. For the Portuguese work and failure in Kenya see Nkonge, D (2011).

beings struggled to address the existential questions of life. Archeologists have told us that the first human beings came from Africa (see Stinger 2003). In fact all scientific communities attest to the fact that the first people lived in East Africa (Menton 1991). This being the case we have a reason to believe that the first religion originated from Africa. This makes ATR the oldest religion in the world. This view is supported by Oxtoby, et. al who explain that excavations of the burial sites in Africa dating back as far as 100 000 years have revealed that bodies were placed in the ground with faces turned towards the setting sun and were painted with ochre. Personal items such as tools and weapons were also placed in the grave (2007:15). This suggests a kind of religious practice among the first human beings. They believed in life after death.

Concerning science, there is plausible evidence that the earliest civilization (architecture and engineering) begun in Africa. Hinson (1973) informs that as early as 4000 BCE, the Egyptians were building their pyramids. Jos Clark attributes most of the scientific methods we use today to the ancient Greece but feels that the Greeks got their ideas from the Africans. He argues that the Greek's science and technology would not have been possible were it not for another civilization, one that was millennia before even Greece was founded, that is, the Egyptian civilization (2010). Africa is thus the origin of science and technology. From the above arguments it is clear that both religion and science originated from Africa and so it would be illogical to view them as two conflicting forces as they have a common source.

4. The Survival of Religion in Africa in the Midst of Science

J.S. Mbiti informs that Africa is today caught up in a world revolution which is so dynamic that it has almost got out of human control. A new and rapid rhythm is beating from the drums of science and technology, modern communication and mass media, and schools and universities seriously disrupting the African person's image of him/herself and that of the universe (1969:211). Science and technology are therefore not alien entities in the African soil. Sydella Blatch explains this further by denoting that Africa has made great achievements in science and technology (2013). Despite Africa suffering through horrific system of slavery (Blatch 2013), colonialism and neo-colonialism Africans have made countless contributions in science, but unfortunately this contribution has not been acknowledged due to racism. Lovejoy (2013) express her anger to this treatment of the African scientists by arguing that the failure to recognize Africans' contribution to science and technology demonstrates that conceptions of scientific knowledge have been racialized as if knowledge and discoveries bear some correlation with the skin colour.

Numerous scientific and technological inventions have been made and continue to be made in Africa. For instance modern high school level concepts in mathematics were first developed in Africa, as well as the first method of counting (Batch 2013). Skills of Engineering and Architecture also first developed in Africa with the Egyptian pyramids (Lovejoy 2013). The earth's first ever known comet strike about 28 million years ago was discovered by South African scientists (Powell 2013). In 2012, they also discovered AIDS vaccine in which some HIV/AIDS infected people produce antibodies that are able to kill a wide range of the HIV strains (South Africa. info 2012). In 1996, they had discovered that a plant known as *Hoodia gordonii* which grows in arid areas with high saline soil such as Kalahari Desert could be used to reduce caloric intake (Sawahel 2010). Although still debatable, it is believed that the 'M-Pesa' technology which is a mobile phone based money transfer and micro financing service for Safaricom and Vodacom developed in Kenya (Communication Commission of Kenya 2012). The sexual virility drug Viagra which is used to address the problem of Male Erectile Dysfunction, a situation of persistent inability in men to achieve and maintain erection sufficient for sexual satisfaction was discovered by an African called Professor George Magoha, who is the current Vice Chancellor of the University of Nairobi (Onyango 2007). Professor Thomas Odhiambo of Kenya was the world's pioneer in establishing indigenous scientific capacity. He focused on developing sustainable solutions to the pressing need for food production in the world and improved health in rural areas (The Hunger Project 1987). Wangari Maathai was among the first people in the world to show interest in environment science, a field which she made a significant contribution globally (Robison 2007). Other Africans who have made a remarkable contribution in science and technology include Bethel Ogot, Ali Mazrui, Cheik Anta Diop, Kwasi Wiredu, Stanle Tambia, Joseph Maina Mungai, George Kinoti and many others. From the few examples shown above it is therefore fair to say that there are many scientific and technological discoveries taking place in Africa. Lovejoy (2013) contends that the contributions of African peoples through innovation in science and technology have helped shape the modern world.

My main concern in this section is 'Why is it that in spite of the world revolution which has hit Africa and the rapid development in scientific and technological invention Africa South of Sahara still remains overwhelmly a religious continent?' In the late 1960s a theologian Reinhold Niebuhr raised a similar concern by asking "Why has religious faith persisted for . . . centuries after the triumphs of modern science?" (1968: x). The answer he gave to his own question was,

> Basic trust is born from the security given to a child by his parents. But life is full of ills and hazards of

> natural and historical evils, so that this childlike trust will soon be dissipated if maturity cannot devise a method of transmuting the basic trust of the childhood, based on the obvious security to faith which transcends all in coherences, incongruities and ills of life (Niebuhr 1968: x).

Religious faith, he affirmed is such a transmutation (Niebuhr 1968). So according to Niebuhr, religion is continually renewed out of the incongruous situation of a human being. He/she is a child of nature who yet transcends nature, a creature who experiences disorder and incoherence, but who thinks about it and struggles with it (Yinger 1970:1). I agree with Niebuhr and I feel that his views may as well explain why Africans have remained religious in spite of the external influences and scientific innovations. Zablon Nthamburi, a Kenyan theologian and church leader observes that Africa has probably suffered from oppression and exploitation more than any other continent. From the days of slave trade where human cargos were traded for commodities, African people have been oppressed in many other ways. Colonialism was the climax of this exploitation. During colonialism, Africans were made to understand that they were not fully human, sometimes being classified with dogs, there was forced labour, their best arable land was alienated for use by the white settlers and many of them were killed. When they fought for independence and gained it, they were shocked to realize that human nature is such that it loves to exploit and oppress. African leaders who took over leadership from the white governments continued to behave like the colonial masters exploiting and oppressing their fellow Africans (1991:5). Today Africa languishes in poverty, diseases, ethnic tensions, coups, corruption, hunger, injustices and many other vices. Desmond Tutu laments that 'the picture is bleak . . . and it is as if the entire continent was groaning under the curse of Ham' (Ngara 2004:5).

With this kind of situation it would be imprudent to imagine that the African religiosity will ever die out. We need to allude to the fact that with the development of science religion has faced a lot of challenges as some of its truths have been proved to be false by science. The practical applications of the laws of science have provided human beings with undreamed comforts and luxuries, while religions have no such visible and material benefits to offer (Paleker 2012). But at the same time we need to realize that a human being is a psychosomatic unit (Has a body and spirit). Science may provide him/her with physical comforts but it is only religion which can give him/her courage to struggle against heavy odds. It is religion alone which can bring the healing balm to his/her wondered spirit (Nkonge 2012:8). This explains why religions survive and will continue to survive in human societies including Africa amid numerous scientific discoveries.

To explain why religions have survived in Africa, I still would like to use the ten analogies used by J.N.K. Mugambi to describe religion (1996). Although many scholars have attempted to describe religion I have come to appreciate the description of religion by Mugambi (1996:5-6) who uses analogies to explain the role of religion in human individuals and communities as way of showing that religion is an indispensable phenomenon in any human society including Africa. He describes religion as the:

i) 'Fabric' with which human beings as individuals and communities weave the web of their social existence.

ii) 'Compass' with which human beings as individuals and communities steer the ship of their social existence.

iii) 'Radar' through which human beings as individuals and communities monitor the starting points and the destinations of their search for personal and social identity.

iv) 'Stethoscope' with which human beings as individuals and community diagnose the pathological condition of their social environment.

v) 'Slide rule' with which human beings as individuals and communities identify their relationships with the rest of entities in the cultural and natural environment.

vi) 'Thermometer' with which human beings as individuals and communities measure the heat generated by social and psychological tensions.

vii) 'Barometer' with which human beings as individuals and communities measure pressure generated by social and psychological tensions.

viii) 'Means' by which human beings define their sense of belonging within the cultural and natural environment.

ix) Set of belief, and practices through which human beings as individuals and communities affirm the ultimate origin, ultimate purpose and ultimate destiny of all aspects of reality.

x) Human beings' action of expressing of their joy and sorrows, hopes and fears, failures and achievements, frustrations and expectations.

According to these analogies religion unifies people, shows them direction, helps them in search of their identity, acts as a therapy, helps them identify their relationship with the environment, helps in detecting and reducing human social and psychological tensions, helps in answering existential questions of life and acts as a means of expressing people's joys and sorrows, hopes and fears, failures and success, frustrations and expectations. This implies that religion plays a significant role in the lives of human beings and it is difficult to comprehend of a society without religion. I therefore think that even with advancement of science, religion will continue to

occupy a vital place in the lives of Africans. In this regard, religion will continue to survive in Africa as it has always done. As Yinger (1970:61) notes, there has been a long series of sharp conflicts between science and specific religious beliefs and practices which have sometimes resulted to religions modifying their teachings and beliefs to fit to what science advocates, but we should note that despite these drastic and continuous changes, religion remains a vital part of human societies.

5. Science as an Enabler of Mission in Africa

Although mission is a controversial term since it indefinable (Nkonge 2008:262), I want to adapt the general understanding of the word 'mission' in relation to religion. David Bosch elucidates that the term 'mission' presupposes a sender, a person or persons sent by the sender, those to whom one is sent and an assignment (1998:1). Nkonge (2004) explains this further by arguing that the person(s) sent usually to a foreign country has a task of teaching and spreading religion. In this case mission entails spreading a religion.

So how has science enhanced the spreading of religion? Science is mainly a product of non-religious forces, and a religious approach to it is ambivalent but it would be a mistake to consider science and religion antithetical (Yinger 1970:64). In many ways science has supported the work of religion thereby facilitating mission. Religion and science are dual roads to truth hence work in support of each other (Nkonge 2010:9)

In Africa men and women of learning are also men and women of religion. Most of the learning institutions including schools, colleges and universities are started and sponsored by religions. These institutions become centers of reflections and new discoveries and those involved in these activities are in most cases strict followers of their religions. When those trained in these institutions go back to their villages or even go to work in other places they go their carrying their religious ideologies spreading them either directly or directly. For instance here in Kenya Christian missionaries of the nineteenth century evangelized by opening schools in various places. Africans who went in these schools received not only education but also Christianity. When they went back to their villages they became agents of spreading Christianity to others. In this case places meant for learning, reflection and discoveries became centers of preparing mission agents.

Religions that are concerned with holistic salvation have received unwavering support from science. According to the African theologians salvation is deliverance from sin. Sin is viewed as whatever destroys the image of God in humans such as disease, hunger, war, corruption, poverty, unemployment, injustice e.t.c. (Onyango 1998). Religions that are concerned with saving people deliver them from these vices on top of minding of their spiritual welfare. In Christianity, Jesus of Nazareth is regarded as the saviour of the world (Mtt.1:21) because he addressed both physical and spiritual needs of the people. He fed the hungry (Mtt. 14:13-21), healed the sick (Mtt. 8-9), taught the people (Mtt.5:13- 7:28; Mk. 4) and preached to them (Mtt.5:1-12; Lk. 4:42-44). So religions that are concerned with the quality of human life on earth get encouragement and support from science as they struggle to meet that concern. This may explain why science has developed most rapidly in religious societies. For instance, Norbert Samuelson informs that science has progressed rapidly in the Jewish communities because of the Jews' emphasis that 'The knowledge of sciences is the knowledge of God' (2006:48). As part of their belief system the Jews are taught that to have the knowledge of God and to be in unity with him they must learn science (Samuelson 2006). In Christian societies science has advanced the course of Christianity to the extent that some Christian leaders such as Thomas Aquinas had to argue that there is no contradiction between the two since they both come from God (Polkinghorne 2006). In the seventeenth century Christians taught that God had written two books, that is the 'Book of Nature' and the 'Book of Scripture'. Both books should be read and if this is done in the right manner, they should not contradict each other since they have the same author (Nkonge 2011:7). Thus scientists such as John Ray, Isaac Newton, Johann Kepler and Nicholus Copernicus were strict followers of their faith.

6. Conclusion

Religion and Science may be diverse entities with divergent outlook where science advocates a rational perception of things while religion believes in a world where faith and revelation prevail, but it would be wrong to regard them as enemies. They may have conflicting ideologies but Africa needs both of them. Due to evils propelled against Africa including slavery, colonialism, apartheid and bad governance the African continent has lagged behind scientifically and technologically. We therefore seriously need science and technology as we reconstruct this continent. On the other hand religion is part of the African identity. It gives Africans hope and courage as they struggle with the hopeless situation in which they have unfortunately found themselves. Rather than relegate either religion or science as unimportant in Africa today, both must be allowed to co-exist as indispensable components of our culture. Science is an indispensable tool for mission.

References

Anderson, K. (1984). *Church History and Theology* Bk. 4. Nairobi: PBTE

Answers.ask.com/reference/dictionaries. Accessed on 23/11/2013
Beeman, W.O. (2001). 'Fighting the Good Fight, Fundamentalism and Religious Revival' in J. MacClancy (ed) *Anthropology for the Real World*. Chicago: University of Chicago Press.
Blatch, S (2013). 'Great Achievements in Science and Technology in Ancient Africa'. https://www.asbmb.org. Accessed on 21/12/2013.
Bonhoeffer, D. (1959). *Ethics*. New York: Macmillan
Bosch, D. (1998*). Transforming Mission. Paradigm Shifts in Theology of Mission*. New York: Mary Knoll.
Brook, H.J. (2006). 'Contributions from the History of Science and Religion' in P. Clayton & Z. Simpson (ed). *The Oxford Handbook of Science and Religion*. Oxford: OUP.
Brown, M. (1965). *Ultimate Concern- Tillich in Dialogue*. California: Harper & Row
Chandwick, O. (1976). *The Reformation*. Middle Sex: Penguine
Clark, J. (2010). 'Did the ancient Greeks get their ideas from the Africans'. History.howstuffworks.com. Accessed on 16/1/2014.
Communication Commission for Kenya (20120
Cox, H. (1965). *The Secular City*. New York: Macmillan.
Dreyer, J.L.E. (1953). *A History of Astronomy from Thales to Kepler*. New York: Dover Publications
Encyclopedia Britannica, (2010).www.britannica.com.
http://www.vocaburary.com/dictionary/science.
Hinson, D. (1973). *History of Israel*. London: SPCK
Kasiera, E.M. (1990). 'The Comparative Study of Religion' in J.N.K. Mugambi (ed). *A Comparative Study of Religion*. Nairobi: UON Press.
Kasongo, A. (2010). Impact of Globalization on Traditional African Religion and Cultural Conflict'. *Journal of Alternative Perspectives in the Social Sciences*, Vol.2. No. 1, 309-322.
Kenya's Population Census Results (2010).
Kitwood, J.M. (1970). *Ethics*. New York: Macmillan
Lovejoy, P.E. (2013). 'African Contributions to Science, Technology and Development'. www.uneso.org/new/fileadm/MULTIMEDIA/HQ/CLT/Pdf/p. Accessed on 21/12/2013.
Mbiti, J.S. (1969). *African Religions and Philosophy*. London. Heinemann.
McNair, P. (1977). 'Seeds of Renewal' in T. Dowley *The Lion Handbook of Christianity*. Oxford: Lion Publishing .
Minton, D.N. (1991). 'The Scientific Evolution of the Origin of Man' www.bestbiblescience.org/apermage.htm. Accessed 16/1/2014
Molloy, M. (2013). *Experiencing the World's Religions*, 6th Ed. New York: McGraw
Moore, J.R. (1977). 'The Rise of Modern Science' in T. Dowley (ed). *A Lion Handbook of the History of Christianity*. Oxford: Lion Publishing, 48-50.
Mugambi, J.N.K. (1996). *Religion and Social Construction of Reality*. Nairobi: UoN.
Ngara, E. (2004). *Christian leadership*. Nairobi: Paulines.
Niebuhr, R. (1968). *The Religious Situation*. London: Donald Cutler.
Nkonge, D. (2004). 'A Study of the Anglican Church in Meru'. Unpl. MA Thesis. Nairobi: University of Nairobi.
Nkonge, D. (2008). 'Leadership Training for Mission in the Anglican Church of Kenya'. Unpl. PhD Thesis. Pretoria: UNISA
Nkonge, D. (2010). 'Interface between Religion and Medicine'. Unpl. Manuscript.
Nkonge, D. (2011). 'Some Perspectives to the Study of Religion in Africa' . Unpl. Manuscript.
Nkonge, D. (2011). ' Equipping Church Leaders for Mission in the Anglican Church of Kenya'. *Journal of Anglican Studies*. Vol.9, No.2.
Nkonge, D. (2012). 'Developing Church Leaders in Africa for Reliable Leadership'. *Dutch Reformed Theological Journal*, Vol. 53, Nos. 3 & 4, 229-240.
Nthamburi, Z. (1991). *The African Church at the Crossroads*. Nairobi: Uzima.
Onyango, D. (2007). 'African Examples' www.abeingo.com. Accessed 16/1/2014.
Onyango, E (1998). 'Lecture Notes', St. Andrews Theological College, Kabare.
Oxtoby, W.G & Segal, A. (2007). *A Concise Introduction to World Religions*. Oxford: OUP
Palekar, A (2012). 'Science and Religion'. www.sciedu.ca/wje. Accessed on 25/11/2013.
Paursen, V. (1963). 'Man and Reality: The History of Human Thought' in *The Student Wold, LVI.*
Polkinghorne, J. (2006). 'Christianity and Science' in P. Clayton & Z. Simpson (ed). *The Oxford Handbook of Religion and Science*. Oxford: OUP.
Potts, R. (2010). 'Africans Take Lead on Religion' themediaproject.org. Accessed on 21/12/2013.
Powell, A. (2013). 'Comet Strike'. www.voanews.com. Accessed 21/12/2013.

Robinson, S. (2007). 'Heroes of the environment'. Content.time.com. Accessed on 16/1/2014
Samuelson, N. (2006). Judaism and Science' in P. Clayton & Z. Simpson (ed). *The Oxford Handbook of Religion and Science*. Oxford: OUP.
Sawahel, W. (2010). 'Africa: New Inventions and Discoveries
Stinger, C. (2003). 'Human Evolution' in *Nature*, 423 (6941), 692-3.
Observatory'.www.universityworldnews.com. Accessed on 22/12/2013.
South African. Info, 2012
The Hunger Project (1987). Empowering Women and Men to end their own Hunger'. www.ehp.org. Accessed on 16/1/2014.
The Oxford Advanced Learners Dictionary (1989). Oxford: OUP
Thomson, A. (1976). *New Movements*. London: SPCK
Thurston, H. (1994*). Early Astronomy*. New York: Springer-Verlag
Yinger, J.M. (1970). *The Scientific Study of Religion*. London: Macmillan