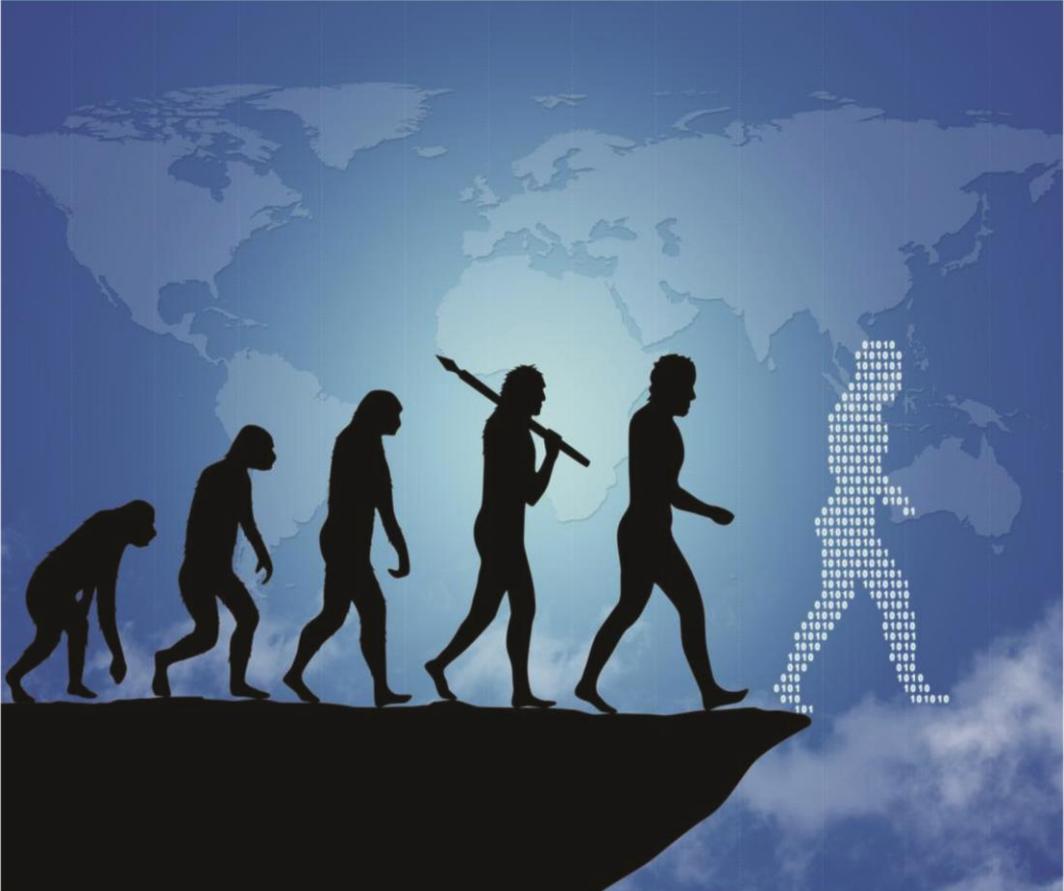


# THE REALITY OF HUMAN EVOLUTION

-Dr. Callixte Yadufashije



# **THE REALITY OF HUMAN EVOLUTION**

By

**Dr. Callixte Yadufashije**

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## **Dedication**

This book is dedicated to my wife Kampirwa Martha, my son and daughter Umunyurwa C. Tony Neisser and Uwanyuze H. Nessia respectively, my mother NyirabagenziThacienne and My brother Rebero Samuel.

## **Acknowledgements**

The world we live in is full of struggles and changes that affect our lives either positively or negatively. Most of times when working, supporters are essentials daily in terms of ideas and other essentials needs for moral motivation in our daily work. I really acknowledge those who contributed to produce this book. My first thanks are addressed to Prof Jean Baptiste Nizeyimana, his philosophical discussion created strong ideas during the period of writing this book. Many thanks to Rebero Samuel, his daily motivation, scientific ideas and friendship support are highly appreciated. My last gratitude thanks are addressed to my beloved wife Martha Kampirwa, her daily support in terms providing the best environment to work in are for great value. Thanks for colleagues and those who provided their time to improve the quality of this book. Best wishes to you all.

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## **CHAPTER 0: INTRODUCTION**

The beginning of life biologically is a cell. Cell cannot be seen without magnification. We always need microscopy to identify types of cells and their parts. It is too mysterious to understand how this small particle plays a huge role in living things. Different cells put together to create a living thing that can produce miracles on this planet. This shows that cells develop themselves to make changes on their life. To pick much knowledge on evolution, and its reality we need to understand this example of how a small cell create a certain living organism. Can you look far? If small cells create a living organism, what will be happen to the product of this living organism from cells? Millions of years we have heard about our ancestors and their works, we can see how things have changed comparing to ours. Recently people used walking to travel a long distance, today there are trains, cars and airplane, there is no sprit needed to understand this, you can see without even thinking more. In few words evolution means changes. Thus changes are everywhere on this

planet. We can measure changes by periods. Something can change to produce the new one. Evolution can make various changes on this planet, in modern world, scientists discovered new materials and others developed theories, this is evolution that will also continue to create new changes in the world, and this is a chain of evolution. Now we have gained that evolution means changes, and then do we see changes on our planet? If there are changes on our planet, we can confirm that evolution is real. And different examples show the reality of evolution intellectually and physically. Understanding of evolution has been a difficult issue especially for Christians and those who believe that God coordinate everything on this planet, but all of these are a part of evolution. Existence of everything is evolution, we met things from our arrival on this planet, we grow and then we die. Details about death will be found in this book. This part of introduction is a pearl of this book many people confuse evolution, which limit their understanding on its reality, by day to days, evolution changes different surrounding even in their life. It is also a part of epistemology understanding; this brought a big misunderstanding to

ontology, too much attention is essential to create new knowledge, understanding of evolution will create evolution, evolution in personal harvest or works. You can create change in yourself through deep analysis of evolution. Everything is coordinated by evolution, evolution is creator of changes, and there is nothing out of it. There are no beliefs needed to explain evolution, evolution is a leader of everything, we think on beliefs through evolution, the reality of evolution is justified through change that are always visible. Thus human beings are located on the planet and livings are others, they do not have any particularity to escape evolution as themselves came from it. Human evolution is justified by ontological evidences of what happened and what are happening. Environmental changes brought changes to livings; it is evidenced that a living can change in phenotypic and genotypic character evidences of ancestors are different with current human being. Within this book, human evolution and its evidences are visible.

## **CHAPTER I: CREATION AND EVOLUTION**

### **1.1. Introduction**

Creation is the act of producing or causing to exist. Believers always think about their creator who is GOD. Million and thousand years passed some of us died and others born. You cannot imagine your father let you die voluntarily. Thinking about creation is the beginning of epistemology in individual's mind. You can ask yourself on where you came from or where you will be after your physical existence. This dilemma is the beginning of metaphysical research. Some definitions can explain what creation is. Creation is the limit of an individual's knowledge and capacity. Human weakness created new philosophy of origin of humanity. Human being is limited in time and space, from here, conclusion due to human limit is that there is someone or something coordinating this movement, it is where we say God. Creation has been seen in the bible and bible is evolution of science and philosophy. The reality of human creation is justified by human weakness and change that happened and that are happening in human

species, there no justified evidences of creation, creation is the concept of evolutionism research philosophy.

## **1.2. Creationism**

Creationism is a doctrine that holding matter, forms of life and the world were created by God out of nothing. It is the real confirmation from bible. Creation is a concept we find in genesis 1 in Christians bible, it confirms that all living and nonliving things were created by God, and scientists, free thinkers and philosophers made various argument on this topic, but still now everyone takes his own understanding on creation. Two ways of explaining creation may be explained here in this context; Christians believe that God is creator of all. In Christianity context, God is creator but when? This doctrine denies wondering on God's origin; bible said that God created a holy human being, and the world was holy and after this, people created sinned, they lost originality, and they all died. The modification of a human being has changed even environment, which mean that God created a human being, but this human being has changed after becoming sinners. Continuing to analyze what Bible said, a human being has got two phenomena, one is creation, and two is permanent and

continuing modification, every scientist can wonder on modifications. According to Christian bible, God created a human being on his image, today people are different. Some are tall and others are short, black and white, there are many races, then among those races, who are in the image of God? There is no need of thinking on creation as mankind came from modification. Creation is something we consider in culture; creation has expired thousand years ago. God created a human being to live forever, today people die every day, which means something important, if we die we came from another side not from God. Christians believe that we will resurrect for eternal life or Death depending on our works and activities, this is another human weakness, and is a belief of survival of soul after death. In this context the analysis of creationism was done but not to confirm its reality as it does not have justification on the other side. What we do depends on our origin genetically, psychologically without forgetting environmental influences. To understand creation, we have to understand both ontology and epistemology, ontology explains the existence, and epistemology comes to knowledge. Ontologically there is no proof

justifying creation, human knowledge is only one way to use to understand but real proof is needed to confirm it. Epistemologically bible confirms that it is a sin to ask about God. Wisdom is wondering. If we limit our ideas, we will die poor. In modern era we need to know more than we know, ourselves we can save our life in the world before we disappear. To understand this context of creation, will create human confidence while alive. Saying that someone is under control of what we are doing is the reduction of someone's life in the world. Creation is not tested scientifically; it is biblical transmission of information which is a part of philosophical thought. This statement wanted to explain how those who believe in creation can understand the concept of evolution. we can continue wondering if creation is real, Christian developed their understanding to the creator who is God, but nothing can happen randomly, if we confirm creation, we will wonder the origin of God, **to stop wondering is falling in darkness of ignorance and leads to poverty of mind.** Generally, if we confirm the reality of creation, we need to understand evolution, as changes are everywhere, a human being today can become a creator of many things

through evolution. Some creationists confirm creation by means of human knowledge which makes difference to other livings but human beings also have different capacities which confirm evolution. Creation and evolution came from the same thought but their reality are different.

## **1.3 Evolutionism**

### **1.3.1 Introduction**

Evolutionism is a world-view, which seeks to explain every aspect of this world in which we live. It encompasses a wide variety of topics, from astronomy to chemistry to biology. At its core, it teaches that there were different stages in the evolution of our universe. Evolution happened million years ago, there is no doubt as we observe different evidences. Charles Darwin in his theory of evolution, he explained that all livings things are related and scientists commented with different arguments and agreements. It depends on someone philosophy on what Darwin said in this theory. The evolution should be confirmed basing on observation of what always observed and learnt from history.

## **1.3.2 Evidences to the reality of human evolution**

### **1.3.2.1 Current existing world**

The current existing world is one evidence to human evolution. Transformations of new phenomena, changes of the physical world, life style of existing human are showing how future will be different with existing world that we have today. Human evolution is based on genetic modification influenced by environmental factors. Our environment is changing quickly as we are in industrial world, artificial foods have become daily meal of human being, this is involuntary changes in nutrition status and will creates physiological changes in human body and physiological changes lead to body weakness that cannot resist to environmental changes. The life is becoming difficult in all countries of the world, disease; disasters and unprotected accidents are increasing, and without doubt, this can lead to problems of human extinction. Scientists always strive to reduce poverty by reducing fertility rate through family planning but also are the way of human extinction; these movements cannot stop but also create other new issues. Nothing is secret to human evolution, and current physical world is a proof to confirm it. You may wonder

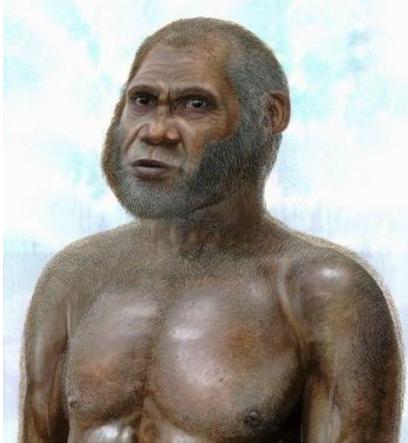
yourself on how physical world confirm human evolution, but remember environmental influences to human evolution used by Charles Darwin to explain his theory of natural selection. Human being strive to survive in his environment, to be familiar with it, some modifications can happen in himself. Comparison of current physical world and last one shows how physical world is changing and also how people are trying to be familiar with it. This can be explained through research, we do research to respond existing problems, and problem are observed in physical world, this is one example of how human try to do everything so that they build resistance to environmental and social changes. Physical world is our daily nest and its changes impact us and nothing we can do to stop it. It shows evolution through observation. Changes of physical world is an evidence to changes of a human being both phenotypic and genotypic changes. These changes can be explained through mathematical derivation. If you derivate a mathematical function it loses some variables which means that it loses its originality.

### **1.3.2.2 Remains of past Livings in geological records (fossils)**

Remains of past living found in geological records give us a clear image of succession of life from common ancestors of species to their extinction, the succession of living things through changes explain and confirm evolution. Most of time people create discussion to human evolution, both creationists and evolutionists, but putting their understanding together has been a difficult issue. It is clear and observed; fossils gave us clear evidences of past human being and how changes happened generation to generations from Homo erectus to Home sapiens we know what happened, and fossils have evidences of this, we do not need much discussion as scientific tests have approved them recently. Studying all physical and physiological characteristics of Homo erectus and that of Home Sapiens, they were different even in body size and capacity; these are our ancestors where we came from, our understanding need to grow philosophically as religion is cultural changes but philosophy is wisdom and without wisdom religion cannot exists. Evolution is not based on beliefs; it is based on existing reality. It is not emotional or

understanding because evidences are explaining what happened. Geological records are essential evidences of human evolution, not only human but also other livings. In 2012 researchers discovered unknown Stone Age people.

Southwest china in 2012, they found a rare fossil showing unknown Stone Age people. See Figure 1



***Figure1: Stone Age people in China (Peter, 2012)***

Once you observe this man you can think many, about his physical appearance. Evolution use science to confirm its realty. We cannot take things and confirm them randomly; we test and observe how livings transformed. The picture above is describing some Stone Age people, your observation can give ideas, some creationists always deny human evolution to justify their doctrine that everything come from creation. Science is agent of changes in the World, whatever we do is based on the reality of science, to confirm this is not a random action; it is based on scientific test. Here this man is full of hairs on the whole body, today you cannot find such people in China, they changed by the time, this is how evolution expresses its reality.

### **1.3.2.3 Evidences from biology**

Two or several species may share the same physical structure, such as body shape and bone anatomy, these features come from their common ancestors, and they are inherited. Some examples can be given as some animals share the same biological structure on their physical or anatomical body, there animals that share with humans the same anatomy, take chimpanzee as example it is not a lie if we confirm that chimpanzee and humans came from the same ancestors, not only chimps but also other animals, for chimpanzee it is clear and visible for every one even by physical observation. Other livings can be different with human due to environmental adaptation but when evaluate their anatomical structure of some parts of the body, you see some similarities. Let come to reproduction way of some animals like cows, a human to give birth, it takes nine months and the canal where a newborn pass is the same like that of human, obstetrical complication seems the same, this cannot happen randomly, they came from common ancestors. Cow is an example taken randomly, you can state different examples for other animals, and Human biologically classified in vertebrate animals,

because he has vertebral column, it clear mankind shares with his brothers somebody parties from their grandparents and no doubt because biologists confirm them and physically appears to everyone. Livings may come from the same ancestors but by their natural selection make them different to their brothers. All livings things come from the same origin and each has an effect to another. Actually, the big issue is not the capacity of each living, what we look at is their body structure, and we can ask ourselves. All vertebrate limbs are homologous, and these justify their origin. It shows that they came from the same body parts of the common ancestors. That is why you find many different living has commonalities. Taking example of chimpanzee and a human, comparing their body structure, you find some of them are the same, they can be different but composed by the same bones, yourself what do you think on this structure? It is the real true to the reality of human evolution. A human being is not unique anatomically; he shares the same anatomical structure with other animals which justify its class origin. They came from the same ancestor but modified by natural selection further information of natural selection you can

read Charles Darwin theory of natural selection. Coming to the way that embryo develops, you can also analyze this evidence as some embryo have characteristics of the embryo of its ancestors. For example, a human embryo possesses gills like that of fishes, this explains an important thing that we cannot reject, and these animals came from the same place as they share some characteristics.

#### **1. 4 Summary**

Creation and evolution are topics that brought misunderstanding between scientists and those who believe in creation. No matter on how someone can understand these two terms. Evolution explains itself; it has evidences that show its reality, in genesis, we accept that God created a human being but for other animals, God said the word only and animal created by the word. It is too mysterious, some animals have features like that of human, how can you say that they were created differently? People have different colors starting from white, black and others, here you can imagine, whom one did God create among mentioned people with their colors? What people need to look at are changes that are happening, finally they will conclude that evolution is

an agent of changes. Without it, nothing can happen but we cannot deny the existing reality whatever we can do physical world explain itself, it does not need interpretation and translation.

## **CHAPTER II: HUMAN BEING AND EVOLUTION**

### **2.1 Introduction**

A human being is engine to other livings. Evolutionists and creationists have developed their understanding to existence of a human being. What is necessary to mention is that livings things came the same way. They have one origin. All living things share the same characteristics biologically; there is no doubt about their relation. The evolution of human being can be understood using different aspects observed from history of a human being. The understanding of human evolution has taken a long time due to beliefs especially in Christian world. Christian's faith and beliefs do accept creation of human being. Not only Christians but also other parts of the world who believe in human creations. Evolution of science to human origin brought different discussions to human evolution and lead to scientific tests to understand human origin. Human like other primates are all livings that evolved differently, evolution comes from ancestors and proof shows that all primates come from the same ancestor. This is

understandable and observed as structure of primate show us that they have a big relationship. Our great understanding on human evolution is important for us to know the future life of living things. Evolutionary science has shown many evidences of human evolution and most of scientists, non-scientists and believers denied due to their own analysis, ontological evidences are a support for them to understand. Our understanding of human evolution is not based on abstractive aspects or beliefs; it is based on scientific proof. Studying evolution in deep and understand its reality can support someone life and inherited to generations. Human evolution is ontologically evidenced by means of the currents situations of a human being. Changes are happening and all will bring changes in human nature. This edited chapter explains the context of human evolution; and also talks about human creation to confirm evolution of a human being. Nothing can happen out of evolution.

Within this chapter we will explain the context of human evolution; we will also talk about human creation to confirm evolution of a human being. Nothing can happen out of evolution.

## **2.2 Do we really confirm that Human has evolved?**

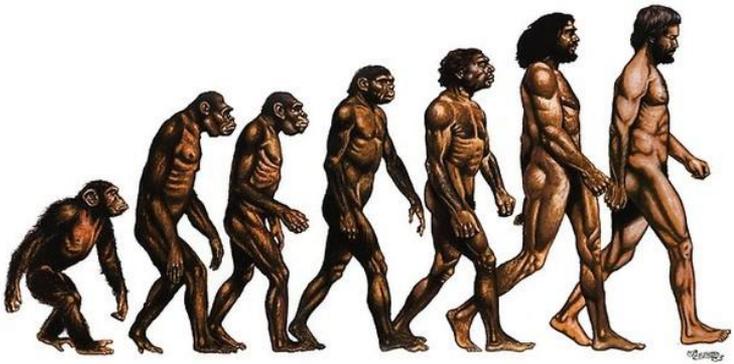
Yes, we do confirm that a Human has evolved. Evolution is a process of change by which people defining origin of human being by identifying human ancestors. Scientific evidence explains well that people have origin from apelike ancestors and literature show that they evolved during six millions of years. The last evolved trait to human is ability to walk on two legs and has happened 4 million years ago according literature and fossils evidences. Human brain also is an another important thing that differentiate him to other brothers of him, he thinks big, the brain evolution, and different trait that separate human to other brothers of him took around 100,000 years according evidences from literature and fossils evidences. A human is not different to other primates; as biological similarities explain everything. The high development of human brain is not a way of denying evolution from primates to human that we are having today. Biological explanations and evidences can help young scientists who are interested in science of evolution. Our science has grown through understanding of evolution, a human being has relation to other animals like rat, and others, and this can be

understood by explaining our vaccine test in medicine. This vaccine test is used while test new vaccine efficacy and reactions, we always test vaccine to rat to know this and is a real evidence to understand the relation of a human being with other animals of the same origin. When we inject a vaccine in rat blood, the reaction that happen to rat are the same as to a human. This is a real proof of human evolution and scientists know this process. It does matter for impact of beliefs to understand evolution but evolution started even before people believe what they believe, example above is important to think far to understand the realty.

**Vaccine test on mouse which will be used later to a human being as an evidence of human evolution.**



This is a way of vaccine test; we mostly use mouse to test vaccine because of blood characteristics. This characteristic can help us to understand the evolution of a human and its relation with other livings. Sharing the same features in the blood shows that they have the same origin and share some ancestors. Philosophers and scientists who are interested are responsible to explain these sciences of evolution and use practical evidences to help young scientists to understand the science of evolution. and it is clear that to understand human life, they used other animals from the same origin.



**Figure2:** steps of human evolution (David, 2018)

### **2.3 Human activities and evolution**

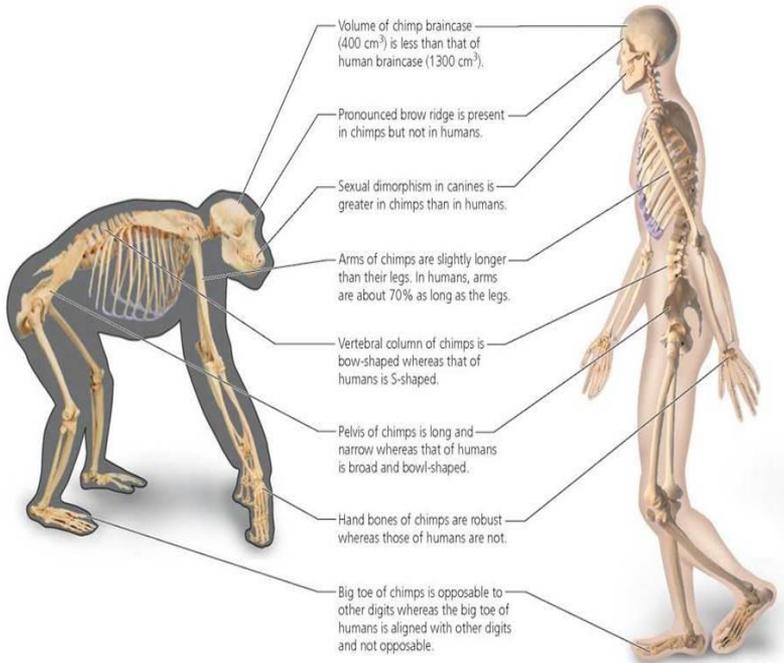
Brain evolution of human made a big difference to other primate and paginates in physical world changes. Human evolved intellectually and stay as top leader of the planet. In modern world human is changing different things and speeding evolution of many livings. Technology in gynecology and reproductive medicine is increasing other reproduction way to human without sexual intercourse of a man and wife, this incomplete non biological man made man will exist and exists. Modernization will not only change other animals but also a human himself. Historically changes happened randomly, like natural disasters, but in modern world many changes will be influenced by human activities, it is new kind of evolution. Understanding of evolution understood scientifically, scientists always strive to bring changes in the world, nuclear bombs have developed through sciences of chemistry, Agriculture is now modernized and we can say that is agricultural evolution through human knowledge, as human continue changing everything on the planet, no doubt that they will even change themselves.

## **2.4 Context of creation for Christians and believers**

Christians and others who believe in human creation denied human evolution, it is clear, a human being is always proud due to their nature. The way they are they cannot accept that they came from animals or in other place, actually even bible is not detailing well about human creation, in genesis bible proved that the earth existed before without image, then we can look far, we can confirm that it got image by evolution, you cannot create something already exist but you can improve things on it. The same version in genesis, God said let us create a man in our image? This speech means something interesting; we can understand that there was a man with a certain image. There are no confusions, this version of bible explains well the reality of evolution, and show the roundness of human being to deny evolution, the force of evolution changed the world we live in, it will continue up to somewhere we do not know. The world is changing rapidly and people may think if God they believe is under of what are happening or supporting them. Primates have categories but are related. Human being is classified in primate, there is no need of explaining many things if a human being

belongs to primates their evolution is the same. If God created a human being in his image, we can think also on the class of primate as there no big difference genetically and physiologically. Science is tool to use to confirm this context as it shows us some similarities and differences. Below we look at picture showing primate similarities.

Once you look at physiological characteristics of chimps and that of a human, they the same. The small difference is that is the size of their body parts and this is not an issue because even human beings are not equal in size. This is a proof and other different proofs will be mentioned within this book.



***Figure3: Anatomical and physiological similarities of Chimps and Human (Shannan, 2017)***



***Figure4: Attentively we can see how these hands are similar so that we confirm the evolution of human being (Shannan, 2017)***

## **2.5 Summary**

Evolution deals with changes in species up to their extinction. Human evolution existed as explained above. The process and changes of in human species explains human evolution, the confirmation already existed. Human being of long ago is not the same like the one of today, they are different, this difference explains evolution in human species, comparison of human being and other livings shows that there are no big differences, evolution change one living to another, whatever we believe, human evolution has all proof and all are explained. Understanding and beliefs are right of every one.

## **CHAPTER III: RELIGION AND EVOLUTION**

### **3.1 Introduction**

Religion is a part of culture, and depends on what society believes. Religion is worldwide, religion is part of Cultural Revolution, and this is explained through what people believe around the world. Observation can be done what Indians believe is different from what Chinese believe. God is believed by many believers but they understand differently about what God is. Having common understanding is different to people around the world which justify evolution. Christians believe in Jesus, but once you evaluate the way they believe in him, it seems different, proof is that there are many Christian religions who believe in God but differently. This chapter will detail religion in the context of evolution.

### **3.2 Understanding of religious to evolution**

Evolution is imagination as most of religious think. Evolution is based on scientific proof. Once evolution comes with idea it has to be tested before confirmation. In evolution we can say that humans have common ancestors with chimpanzee based their similarities and

scientific test. Evolution, specifically common descent, tells us how life came to where it is, but it does not say why. If the question is whether evolution disproves the basic underlying theme of Genesis, that God created the world and the life in it, the answer is no. Evolution cannot say exactly why common descent chose the paths that it did. Most religions, on the other hand, are based on revelations, that usually cannot be objectively verified. They talk about the why, not the how. Also, religious beliefs are not subject to change as easily as scientific beliefs. Finally, a religion normally claims an exact accuracy, something which scientists know they may never achieve. It is humorous in mathematics and physics we prove and demonstrate the truth of response, you cannot deny without a new idea with demonstrations, this shows that what Religious believe are not verifiable and they will never be. Religious deny evolution but is beliefs colonization because science proved the reality of evolution and our lives based in science. It is understandable, evolution is true, and religious deny evolution based on their beliefs but belief cannot disapprove the truths of something. We better know that medicines treat diseases, and also can destroy

our body, but this cannot support any one to deny the capacity of medicines to treat diseases. We cannot reject either evolution or religion, they are all important. Evolution explain well the origin of life use proof of science, religion is also a part of culture. What is necessary is to distinguish things, evolution and religion are different we do no need to confuse people. Based on first chapters of this book, evolution is guide of life; nothing can go through without it. Religion is among elements of Cultural Revolution, nothing new culture can change and people understands also change with culture.

### **3.3 Can religion change anything to evolution?**

No! Religion cannot change evolution. Religion is a part of evolution in culture. Christians always deny evolution saying that evolution is for those who believe in science, but evolution belongs to anyone, because evolution does not depend on people, but people depend on it. Religion is spiritual understanding and is based on mental feelings. Someone can believe that God is ready to give us everything we need, you can think far, if God give us everything, why poverty and sufferings? Why do people die? Evolution only can respond this question but in

religion, the response is not clear. Whatever you believe, you will die, if you believe that God protects people against death, why do people die? Even those who believe in God's protection die like non-believers. This explains well that religion cannot change evolution.

### **3.4 Summary**

Evolution is independent. Evolution will change things and do the same way for those who do not believe on it. If a disaster happens, it reaches all people. Everyone has right of believing, human weakness confirms that God will give them eternal life, we do not know but we need to think on our struggle to save ourselves. To survive in the world, we need good nutrition, hygiene and others. Religion can bring spiritual life and when someone dies everything end with him. This is evolution. Evolution is not a belief; evolution is a science that helps to know the origin of life. We have to know the difference of evolution and religions; they do not need to be compared as evolution is too wide. Generally, evolution brought impacts on the planet and will continue bringing effects for religious and non-religious.

## **CHAPTER IV: EPISTEMOLOGY AND EVOLUTION**

### **4.1 Introduction**

Changes happened and still happening. Human evolution always comes to genetic mutation. Changes of a living genetically will influence many changes of the living in his life style. This chapter is detailing changes of knowledge of human being with evolution. Epistemology is the branch of philosophy focusing on the study of knowledge. It may help us to understand the nature of knowledge and types of knowledge in daily lives. A part from this we can also know the source of knowledge.

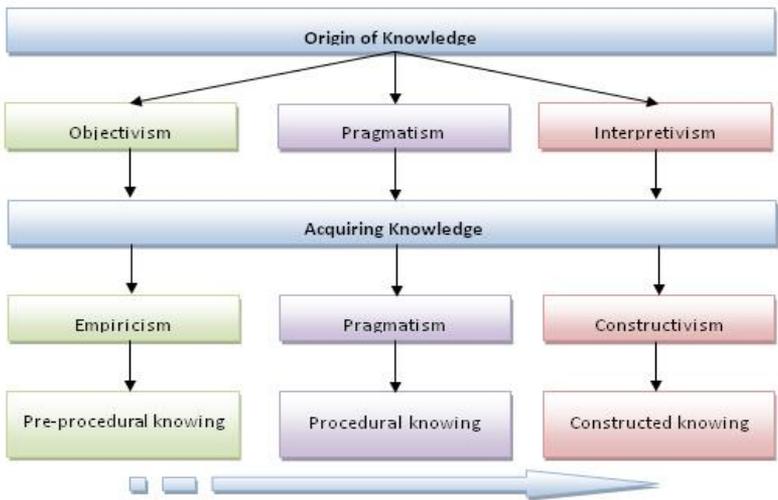


**Evolution of Knowledge**  
**Figure5: Evolution of knowledge (Olga, 2006)**

Before entering in evolution of knowledge we can wonder on why is necessary to know about knowledge. Knowledge is the guide to our life; we get knowledge through different ways, collecting knowledge is considered as knowledge we get through the society we met during our existence. Knowledge in leadership may come from your daily coordination and observation. Education is essential to know more in science; our ancestors did discoveries in domain of science, and transmit them to generations. In human evolution of knowledge is something to consider, knowledge of computers has brought changes and assisted different people to accomplish their task within short period of time. Evolution always begins from human being and transmits to other livings and physical word structure that is why we consider human evolution as a head of changes on the planet. Knowledge confirms human evolutions as things are changing due to intellectual human evolution. Protections from different natural phenomena are done through human knowledge. Collective knowledge comes from different sources and ways. Individual consciousness comes from self-experiences and daily analysis. Analysis of things you

met in your life journey can lead to some package of knowledge, here you can even analyze package of knowledge you get somewhere to create other kind of knowledge. Knowledge is increasing due to changes on the planet, things we create bring changes every day, and we have to fight against changes to survive on the planet. Knowledge is created by people to solve their problems.

#### 4.2 Origin of knowledge



**Figure6:** *Origin of knowledge* (Hofer & Pintrich, 1997)

### **4.3 Detailed explanation of concepts containing source of knowledge**

**Objectivism:** objectivism is based on theory created individually. It is based on personal philosophy. Objectivism is a good origin of knowledge as it helps constructing self-philosophical understanding through analysis of existing data. To confirm the reality of a theory, objectivism allows us to analyze and describe. In evolution of knowledge, it can play an important role in development of new knowledge.

**Pragmatism:** Pragmatism is a philosophical concept that tells people that truth is based on practical approaches than theory. All theories and concepts can be true by proving their applications. Evolution of knowledge has brought application of theory in our daily life. For example, saying that boiling point of water is 100<sup>0</sup>c is not enough, it is essential for a scientist to heat water with a thermometer to see if thermometer will prove this, when water boiling. This theory also helps to understand human evolution, there is practical experiences showing that a human was created, you cannot see it. In pragmatism every truth is based on practical experiments. It is a good source of knowledge,

by practical and experiment we conclude whether a theory is true or not.

**Interpretivism:** Interpretivism is based on measuring reality based on interpretation of society understanding. The truth and reality are socially constructed. Interpretation is essential to confirm reality; in our daily discussion we can harvest knowledge through analysis of ideas of different people.

**Empiricism:** empiricism confirms that knowledge is based on experience and evidences. Empiricisms accept that knowledge can be acquired through experiences. A medical doctor can gain knowledge through experiences in working at the hospital. It based on observation and practical. Empirical familiarity with object can bring to much knowledge about it. For example, if you used typing on the computer for many years, you will be able to type without even looking on keyboard. Doing some for long time creates a knowledge of doing it well. In evolution of knowledge, experience is essential.

**Constructivism:** the theory of constructivism is based on how people learn. It confirms that meaning can be created through interpretative interactions with and

experiences in their social environment. To develop new knowledge exchanging ideas is important and also experiencing environment is necessary. If we do not have chemistry laboratory in our school setting, it will be hard to know some experiments in chemistry. Ideas of how to do experiment can be discussed within student. But laboratory proof will us to conclude about our ideas. Our ideas can be strong through discussion in the group. Discussion can help to improve it and make correction for quality. Evolution of knowledge used this approach where scientists used meeting in conference and seminars to discuss and construct new knowledge about certain situation.

**Procedural knowing:** Procedural knowledge is based on steps to accomplish certain activities. This about organization to complete a work. It very important to know the order of how to do our activities. Like in the science of medicine in surgery, if you are going to do operation in surgery, better to memorize all steps and their succession. If you do not know, you will kill the patient. This may be achieved through experiences, observations and trainings.

**Pre-procedural knowing:** this kind of knowledge is understandable; if you want to operate a patient firstly you need to know needed materials and how to use them. You have to study the patient carefully to make sure that is eligible for operation. In treatment of disease we do both procedural and pre-procedural knowledge, firstly we have to do diagnosis, and after we apply treatment process. What we do for patient explains well pre-procedural knowledge, you cannot treat a patient without diagnosis. All of this create human knowledge and build his capacity. Pre-procedural knowledge is essential for analysis of our activities; human knowledge will continue growing through all sources mentioned in this chapter.

#### **4.4 Summary**

Knowledge is a topic of importance in human evolution. A human being is now an agent of change in the world due to his activities and plans. Knowledge may come from different source as mentioned above and through this knowledge; things are changing quickly, and give new shape of what are happening in current world. We cannot stop acquiring knowledge; they come involuntary due to human needs. Human being is growing in

sciences to save him and resist but then we solve existing problems; it is also the way to create new problems. Our natural immunity has changed due to evolution, none can resist to this environment forever, discovery in medicine has changed treatment ways in human population, the knowledge that we have is guide that of changes on the planet. Recently we used herbal medicines to treat people, demographic ratio brought dangers in surroundings, some vegetation destroyed, where our life is based on modern medicine. Knowledge in Modernizing things on the planet is becoming wide; we can ask ourselves on what will happen; only changes of life will happen.

## **CHAPTER V: ONTOLOGY AND EVOLUTION**

### **5.1 Introduction**

Ontology is a field of metaphysics dealing with reality and existence. Ontologically our minds interested in what exists and that can be seen physically. Everything must be tested to confirm its reality in ontological analysis. Evolution can use ontology to confirm its reality. Evolutionally theory can be supported through the science of ontology. Through this science of ontology spiritual things are excluded as they are not tested. It is essential for us to understand the evolution through ontological process. With this short chapter all aspects of ontology that can explain evolution are detailed.

### **5.2 Aspects of ontology to explain human evolution**

Our daily lives composed of various phenomena explaining human being change generation to generations. Adaptation to environment is becoming difficulty in modern world era. Human population increased in this era, destruction of environment is increasing for human being surviving. The increasing of

human being's life is based on environmental production, we need to eat, drink and sleeping, we need to make sure that human being is satisfied in terms of food and other health conditions, with environmental destruction crops decreased, this decreasing lead us to idea of developing industrial food, this industrial food development also brought consequences in human life. Among these consequences includes non-communicable diseases. Prevalence of non-communicable diseases is increasing and prime factor is nutritional status. In recent years, people used walking long distance and resist for fatigue, but nowadays we cannot do it, this evidence also show that a human being has changed. All of changes that we are facing are based on environmental conditions and environment is still instructing a human being, and can lead to extinction of a human being. Industrial development is destroying environment and cause different changes to us. Nuclear experiences produce radiations that are harmful to environment and its surrounds. Some livings disappeared recently and others are still disappearing. The theories of natural selection explain that once you fail resisting to environmental condition, you disappear.

Changes are still occurring and we can wonder on what these changes will bring, the life is becoming difficulty and human being strives from surviving, they try to develop resistance to environment, and this resistance affects natural immunity of a human being. Examples mentioned explains physical example on evolution. The physical environment is a proof of human evolution such us physical and intellectually. Human brain is changing things in physical world; technology is a proof of evolution in knowledge. Nothing can deny this proof as everyone is aware. Ontological nothing comes from miracles, they all came from changes, they all came from human evolution, this statement helps in using ontology to explain physical world.

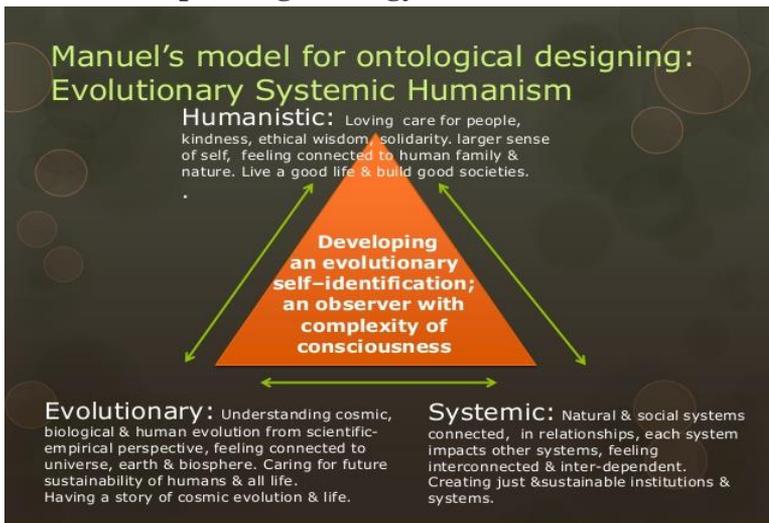
### **5.3 Christianity and physical world ontology**

All changes come from God alone according Christians and other those who believe in God's existence. They believe that at the end of the world there will be different changes in the world including development and technology. These are their feeling; it is difficult to analyze some community understanding as cultural evolution has changed understanding in human community. According to Christians, changes show

them that the world is at the end, the coming back of Jesus, but human evolution is an agent of change, and change will continue happening even after our disappearance, there is no God who recommends changes in the world; only human conditions change this planet we live in. our limit will come later, changes are reducing our resistance on this planet, and there is no solution of these events. Believers and non-believers will disappear the way they came, as everyone has his own understanding and there is no one to judge understanding. Ontology justify our existence through scientific analysis, the physical world explains human evolution through changes brought by human being on this planet. Christians took these like prophetic proof, but this is not tested, if you believe that wars show that Jesus is about coming, you are not right because wars started before Jesus and historically you may get the reality of this statement. Modernization is caused by intellectual evolution of human being. Human being always try to find ways that can help them to resist on the planet, thus they do different researches and results of researches bring changes, whatever we think, we cannot stop human evolution results. Prayers can change

something according to Christians and believers, testing this statement are true by observation. Once we observe what are happen, prayers changes nothing, we pray for people, but they are still suffering and dying. People are suffering from hunger; problems increase in all years; this is the proof that nothing can stop the results of human evolution. There is no matter on how someone can think or believe, what is essential is to resist on changes of our planet even if is not eternal.

#### **5.4 Model explaining ontology of Human evolution**



**Figure7:** Model of ontology for human evolution (Manuel, 2013)

The picture above explains what we have discussed in this chapter from the beginning. According this model human evolution is under control of 3 elements interconnected. Those are evolutionary, humanistic and systemic. According evolutionary explanation, human evolution is based on understanding of cosmos, this is science of cosmology that studies universe. Empirical analysis of human biological and human evolution they are all observed on the model, systemic also is showing the connection of natural and social systems, and Humanistic show all needs and responsibility of a human being. Evolutionary is explaining ontology of human being evolution, once we read empirical perspectives we discover the origin of life and how it continues to change through engagement of human being that are participating in ecological changes in these changes, and also determination of the future of human being can be seen by analyzing cosmos (universe). By then, systemic show something important that we cannot forget, the existing human continue fighting with natural phenomena that and read to some needs to survive, this is the process of humanistic. By the beginning of life human being evolved from other

livings but also continue changing as discussed in previous chapter, this explains ontology of what are existing still now.

### **5.5 Summary**

Every one found him/herself on this planet randomly. We always get changes that we have never thought, they reach us accidentally. Existing events confirms human evolution. all changes that come to the planet we live in, affect directly human population, they cause changes to human population, originality of human population has changed and still changing. The effort of resisting to environmental changes is reducing every year; ontologically accept all existing reality as is our daily live. Nothing can be done to stop changes whoever you are, changes will reach you. There no God to fight against changes, it is based on human evolution and evolution will never stop.

## **CHAPTER VI: SCIENTIFIC ANALYSIS OF EVOLUTION**

### **6.1 Introduction**

In research we always do analysis. What do we analyze? Why do we analyze? In research papers we analyze data, and we analyze them to get findings. Evolution use science to prove its reality. Science is tool to explain different phenomena in the universe, once science fails explain a phenomenon, that phenomenon becomes doubtful. Scientists need to understand this concept, as nothing can happen without science. Different believers deny science but they created in science. Evolution shows us origin of life and how living comes from the same origin. But we can wonder how livings came from the same origin, it is possible as they are called livings, they cannot come from different origin. Thinking on this topic is very interesting to expand our ideas. Analysis can help us to know the hidden reality. If a man I can become anything else, you know, to have this life, it starts as an egg, by then, embryo, fetus and then baby, then growing up. It is also possible for someone to become something else due to conditions.

## **6.2 What do we analyze actually in evolution to confirm its reality?**

In evolution we analyze fossils and biological structure of livings. These are two essential elements to confirm evolution. Observation may come after but based on those fundamental elements.

### **6.2.1 Fossils analysis**

Fossils are the rest of living and nonliving things that existed long ago. Within them we take the rest living and test them in laboratory, not labs, observation also can be done. After testing, we compare depending on what we want to know. In laboratory we can test DNA, number of chromosomes etc. in recent years, this has been done. Fossils have contributed much in evolution reality, and now are still at the top of evolution evidences.

### **6.2.2 Biological evidences analysis**

Anatomical and physiological structures of human determine its relation to other livings. We do not need to discuss much as you know animals that have structures that are like of a human and can be proved genetically. Some genetic characters of some animals approach those of a human being.

### **6.3 Summary**

Evolution is not spiritual understanding, and is not randomly stated, it has proofs and evidences. Scientists and philosophers used to exchange ideas on this topic, to see if evolution is real, the reality of evolution is not based on abstract aspects, and it is based on physical evidences. You can imagine, if I confirm that a human being comes from evolution of chimps, I have to show evidence such as from fossils or biological evidences. All changes we used to face on the planet are based on evolution. Evolution of a human is leading cause of existing reality. Analysis of existing world give us capacity of thinking on the past, comparing present and past philosophical build understanding to evidences of human evolution, and can lead to the image of future human being. Human evolution is on the top to change the planet, as everything is under human recommendations.

## **CHAPTER VII: DEATH AND EVOLUTION**

### **7.1 Introduction**

Death is one among proofs that explain human evolution. Millions of years passed, people died and others also are in the way leading to death. All human being will die there is no doubt. Death leads to extinction of certain species. Extinction is the death of last member of species. Extinction occurs because of environmental conditions that become difficult and livings fail to resist to environment changes. Death is among factors that supports distinction of species. Death is guide to species extinction. Our environment changes every time and species get changes by means of environmental conditions so that they resist to changes. Once they fail to resistance, they die all and extinct. Human being has a big influence to extinction of different species as is changing many things on the planet. Nothing new now to death, as is describes above as a leading cause of distinction of species. Within this article detailed information of death and extinction is described. But remember an important thing, death is factor of life, and extinction is a factor of evolution, if

we want to study evolution of species, we do not study death, we study evolutionary changes of species due to environmental changes.

## **7.2. Extinction and evolution**

Extinction is important element to consider in evolution, extinction is a state in which something no longer exists. Charles Darwin discussed on extinction in his theories of natural selection. Each living has to fight against environment for its existence; extinction is due different factors, such as genetic mutation, ecological changes, etc. human brain is developing for its resistance but also causing changes on the planet, where changes are affecting livings and humans themselves. We say that there is extinction of species when you cannot see its member in the world. In taking a study on fossils records, we discover of evolution situation and extinction of species, in our life, we cannot say that extinction is good, but it helps us to why it existed to various species, then if something to do to protect others, we do and if nothing to do with our capacity, we let things happen. Extinction takes millions of years, no species can extinct in one year, it takes long time period as before extinction, they try to resist.

### **7.3 Can a human extinct?**

This is a question wondered by different scientists, everyone has mentioned his view. Our understanding needs to look far by analysis of ontological evidences. Cosmologists mentioned disasters will be created from the universe and cause extinction of mankind? This can be considered and tested to see its reality. Meanwhile evidences of how life of people is today can confirm the extinction mankind. Diseases, disabilities and other risk factors are increasing day to days, development of new technology also is causing pollution to mankind, natural destruction of biodiversity is out of control and other different problem that are facing the earth. From here our question can be, how long will human resist to all mentioned changes? A human being is like other livings anatomically and physiologically, he will never resist to changes forever, he will extinct like other livings.



**Figure8:** *Natural disasters to human extinction (Luke, 2011)*

#### **7.4 Evidences of human extinction**

A human being is like other livings, if there are livings that disappeared through extinction, a human also can extinct. And nowadays technology is growing quickly where scientists are developing terrified thing that can change many things in human nature. Population ratio increased recently, the new generation is setting all strategies that can be used to reduce overpopulation and this cannot only lead to low demographic ratio, it can even lead to human extinction even if it can take years but it can happen. We stop birth rate but we will never

stop death rate. Disasters are increasing and different people are meeting problems of reproductive health. Diseases are becoming a problem of public health, with industrial world; non communicable diseases are becoming burdens in this era. All of these problems are facing human, they can lead to human extinction. Nothing can stop the results of evolution, the way that things come; it is the same they go. Evolution itself is a proof that can explain all evidences of human extinction.



**Figure9:** Natural disasters to human extinction (Luke, 2011)

### **7.5 Summary**

Death and extinction of livings are not new words to people. They happen are will continue happening. Death is a fact of life and extinction is a fact of evolution.

Extinction is the death of last member of certain species. Death is observed daily but extinction can take millions of years. There are many factors that lead to extinction, reproduction is a key that help a species to exists for many years, if a living loses its capacity of reproducing it can lead to its extinction. If reproduction stops, death continues totally species can extinct. We cannot say that extinction is something good as livings help each other to survive, but we cannot stop it and there is no other power to stop it. Some examples of extinct animals are known in history and others can be seen using fossils. Death is a supporter of living to extinct but we cannot neglect other factors that lead to extinction of species. Technology used by people changing quickly, it can even lead to extinction of human species.



**Figure10:** Mankind activities to human extinction (Staff report, 2014)

## **CHAPTER VIII: REALITY FOR THE END OF THE WORLD**

### **8.1 Introduction**

People always fear about the end of the world. They wonder about reward after death, they fear even punishment after death, there no scientific context confirming this; only Christian bible has explained that there will be rewards and punishment after death at the end of the world. In this chapter there are all details about what happens when someone dies, the world and its end. People need to understand the end of the world in the context of evolution. Here we can ask question like: is the world supposed to end? When and how? All questions about the end of the world will be detailed within this chapter.

### **8.2 Christianity understanding about the end of the world**

Christians believe that the world will end soon. But soon is when? There is no expected time, thousand years past saying that the world will end soon. This belief is based on sprits and faith. Its reality has no justification, according to Christian it is Jesus who will come at the

end of the world to reward those who did well and punish those who did bad. Every human being is emotional and type of emotion is influenced by many factors such as genetic and environmental. Whatever we do depends on these factors there is no need of preachers. No one who can do holy things 100% with world struggle, for these conditions anyone can get Jesus reward in the side of Christians. Saying that a human being can only do holy things is low knowledge of philosophy and sciences. Preaching is believers' culture especially those who believe in God, there is no special thing to humans' life and existence, every one may follow his own beliefs according to his own understanding, or family history religion, no problem on what someone believe if it cannot slow his development. Bible is the holy book for Christians, something can be holy depending on personal understanding, and philosophical knowledge is out of this, if people are not holy, bible also is not holy. Justification is that bible was written by people and those people were not holy, which means that bible is not holy. Bible is book explaining Christian's beliefs history. Bibles is philosophical book for theologians. Christianity is important on the other

side in the society; it may help in different behavior for some people. Remember that the way of behaving sometimes depends on inheritance and environmental factors. Environment is the guide of things, if Jesus will come to end the world we will consider also environmental factors and others, this is when considering Christians understanding about the end of the world. If the world will end by the coming of Jesus, it is impossible for a good scientist to understand, something physical cannot end, do you think the world will disappear, impossible, a human being can die, but a stone cannot, this is a planet like others so if the world can end other planets also will end at the same time, but is impossible in this context, the world can change but it cannot end, in the subchapter below you will see the real evidences to the end of the world and its meaning.

### **8.3 Philosophical and scientific explanation to the end of the world**

When we enter geology we see the rest of living things that existed long ago. By testing their DNA, they have relation with some of livings existing today. They have derivatives. According to mathematician a mathematical function may have n derivations up to zero. When it

reaches zero it is impossible for integration. The end of the world depends on kind of livings. There are livings that disappeared and extinct, for them the world has ended because their species are not at this glob currently. Let give one example, the animals called dinosaurs have disappeared for them the world have already ended. The end of the world means in the significant of evolution, the theory of natural selection can give us understanding here on the end of the world. The world is changing every day and living things may adapt on environmental changes, when fail to adapt on changes, it totally disappears. Here there no much comment as evidences are many in different theories. Scientists and philosophers have discussed a lot on the end of the world and brought misunderstanding depending on beliefs, biblically Jesus will come to end the world, but it is impossible for the world to end. Thus ending of the world means something important here. A human being gets changes every day. We may think on the cause. Let explain an event here, a human being is meeting challenges to day due to environmental changes, which will make them to disappear and extinct. Once a disease occurs immune system can produce

resistance to invading germ or its toxins to cause pathology of invaded organ, when it fails, artificial immunity may be created, when both fail a patient will wait dying. It is the same to disappearance and extinction of a human being, due to environmental changes, a human being will fail to resist, and that can lead to human extinction. The end of the world means human disappearance or extinction, this may be understood with a human being, when human being disappear, it will be the end of the world according them but the world may continue existing with other livings. Environment is changing day to days, and is where we get everything; the change of environment is justifying changes of livings. Nothing we can do as a solution, whatever we do, a human being will disappear, as other livings disappeared. I have experiences observed twenty years ago, in agriculture some crops have disappeared in Rwanda and others in Africa, they failed resisting to environment, there is no need of praying and believing, it will exist. What we need is working hard and is important in our time; we need to help each other to reach on the level we think it can fit in our life. Nothing can support our existence if we are inactive. The end of

world is based on human being extinction but the world will continue existing physically. This means that when people saying the end of the world they have to understand disappearance of a human being. No matter for those who can understand the other side, it is the right of every to understand things as he wants, but he will never stop environmental changes to reach him or her. Evolution is agent of changes and changes are unlimited.

#### **8.4 Summary**

The end of the world is a subject that discussed for long time. Nothing is simple in the world, things change every day through human evolution, the end of the world needs explanation for people to understand, end of the world is not destruction of the planet, it is extinction of living things that are found on the planet. Livings will not extinct at the same time, they will extinct differently. When talking to the end of the world, we may think differently, actually the end of the world clearly is extinction of human species even if other species can continue to survive, but one will continue saying that the world will end. The word end of the world will disappear with human species extinction. We do not

know when and how the procedure will be, but the physical planet cannot end but it can change and it always changes. Nothing can happen without causes, human brain continues creating very terrified things like nuclear weapon that can kill millions of people, if there is something that can kill billions of people we cannot deny the extinction of human species. In the universe there are dangers that can bring disasters on our planet, the human species is an agent of changes and can be an agent of its extinction.

## **GENERAL CONCLUSION**

Human evolution is real and approved through natural world. Changes happened every day. Ontological world is the proof of human evolution, and epistemology helps to understand the origin of life. Ontological world analysis is evidence to human evolution; creationists have tried to disapprove human evolution but evidences cannot allow anyone to disapprove this reality. People can tell you that knowledge comes from God, but people have different and unequal knowledge. People dies and others born nothing can stop these movement, they all explain human evolution. Prayers and other worshipping activities cannot stop evolution. It will continue existing until where we do not know. Our understanding becomes low sometimes through different factors, if you struggle for many years, it can reduce your brain capacity of analysis, evolution in human is due genetic changes and influenced by environmental factors. Recently million years ago, they were a human being, but if we compare with current human being, they seem not the same, which means that something has changed to human being. Evolution happened even in other

living animals not only in human but most of times we used denying human evolution but it existed and mentioned evidenced are true. We do not ask people to believe what they believe but also we have no power to stop human evolution. Abstractive aspects cannot change existing reality to human evolution.

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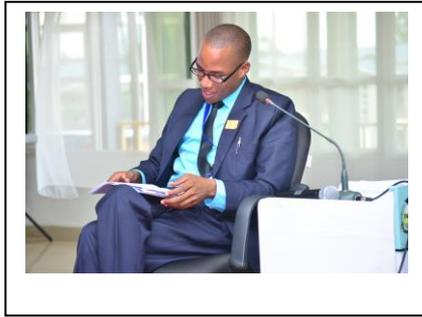
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## SOME OF AUTHOR'S QUOTES



**Do not do things because are  
easy to do, do things because  
are productive to you!**

**-Dr Callixte Yadufashije**

**It's always difficult to dig  
gold underground but it's  
a must to change History**

**-Dr Callixte Yadufashije**

**Wisdom is an  
expensive gold, and is  
wealthy to the owner**

**-Dr Callixte Yadufashije**

**Feel scientific to gain  
knowledge but feel  
philosophical for its  
implementation**

**-Dr Collixte Yadufashije**

**Energy used by working  
will be the same  
energy in harvesting**

**-Dr Collixte Yadufashije**

**Books are silent  
philosophers, you can  
explain their philosophy  
through them and become  
a philosopher**

**-Dr Collixte Yadufashije**

**All respects, promotions  
and grades are nothing,  
if they don't show  
someone's contribution  
to the public**

**-Dr Collixte Yadufashije**

**Struggling for respect no  
longer gives you peace, but  
struggling for peace gives  
you both respect and peace**

**-Dr Collixte Yadufashije**

If you want successful  
life through others, let  
them first be successful  
through you

**-Dr Callixte Yadufashije**

**A good scientist  
lets people be free  
and learn from  
him/her**

**-Dr Callixte Yadufashije**

In Life, we should learn  
from others, but we  
should not copy their lives

**-Dr Callixte Yadufashije**

Education is not a way of  
making life easier, it's a  
way of making life  
possible

**-Dr Callixte Yadufashije**

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Dr. CallixteYadufashije is Rwandan scientist. He did his research degrees in preventive medicine and medical microbiology. He believes in ontological evidences to explain the real world. He taught and teaches medical science courses in various universities across Africa like Hope Africa University, School of medicine in Burundi, Kampala University, Graduate school in fields of public health in Uganda, Jomo Kenyatta University Agriculture and technology school of biomedical sciences Kenya, Burkinafaso Institute of technology, Burkinafaso, and INES-Ruhengeri-Institue of Applied sciences where he currently works as senior Lecturer in department of biomedical sciences. His research of expertise is focusing on areas of maternal microbiome and healthy pregnancy, public maternal and child health and non-communicable diseases. He supervised more than 100 students' projects and thesis in public health, medicine, and medical microbiology.

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