



**CTE**

Centrum för tillämpad etik  
Linköpings Universitet

# **Technologised Parenthood: An Ethical Implication of Human Reproductive Cloning.**

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Master's Thesis in Applied Ethics

Centre for Applied Ethics

Linköping University

Presented May 2005

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<p>Språk Language</p> <p>Svenska/Swedish X Engelska/English</p>	<p>Rapporttyp Report category</p> <p>Licentiatavhandling Examensarbete C-uppsats D-uppsats</p> <p>Övrig rapport _____</p>	<p>ISBN</p> <hr/> <p>ISRN LIU-CTE-AE-EX--05/08--SE</p> <table border="1"> <tr> <td data-bbox="933 598 1169 651">Serietitel och serienummer Title of series, numbering</td> <td data-bbox="1169 598 1411 651">ISSN _____</td> </tr> </table>	Serietitel och serienummer Title of series, numbering	ISSN _____
Serietitel och serienummer Title of series, numbering	ISSN _____			

URL för elektronisk version  
<http://www.ep.liu.se/exjobb/cte/2005/008/>

Titel Title	<p>TECHNOLOGISED PARENTHOOD: AN ETHICAL IMPLICATION OF HUMAN REPRODUCTIVE CLONING</p> <p>TECHNOLOGISED PARENTHOOD: AN ETHICAL IMPLICATION OF HUMAN REPRODUCTIVE CLONING</p>
Författare Author	<p>STANLEY OTITOAJA AMANZE</p>

Sammanfattning  
Abstract

Science and technology has been the bedrock of human growth and dynamism. Man has over the years distinguished his existence from all other beings by his ability to champion and fashion his existence. Among his tools is biotechnology which actually attenuates the fears of aging and death.

Human reproductive cloning stands out as one of the means through which biotechnology plans to achieve this perfect existence for man. Technological advancements in the field of biotechnology are now in the threshold of human procreation. Human reproductive cloning is seen as an assisted method of reproduction which creates a newborn that is genetically identical to another human being.

Human reproductive cloning as a technology and as a means of reproduction is not without its pros and cons. In as much as the technology promises to mention but a few, hope for the infertile couples and single parents, as well as the hope of reproduction without passing on hereditary diseases; it at the same time beeps some flashes of worry. Hence, the inherent threat to the notion of parenthood which does not smack of compromise, coupled with other ethical implications are reasons one may proffer not to have this technology.

Technologised parenthood stands out as an implication of human reproductive cloning and as such it considers issues in human sexuality i.e. the place of human sexuality in reproduction and then the nature of the family which is the playground of human existence. This thesis focuses on this implication of human reproductive cloning while making a critical exposition of the concept of human reproductive cloning.

Nyckelord  
Keyword

Technologised, Parenthood, ethical Implication, Human Reproduction, Cloning.

## **ABSTRACT**

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## **ACKNOWLEDGEMENTS**

I would like to express my gratitude to my supervisor, Prof. Anders Nordgren for his guidance all through the course of this work. I appreciate his constructive criticisms and painstaking approach in the supervision of this work. I am also grateful to Prof. Göran Collste and Adrian Thomasson (PhD) for the incisive way they carried us all through the programme. Their lectures were thoughtful enough to elicit the desire to undertake this work.

I am deeply grateful to my big uncle, Augustine Amanzeh (Rev. Dr.) for all his kindness and love. I cannot thank you enough for your benevolence. Your fatherly cares are immeasurable; we all in the family are grateful and pray God for his continuous blessings. In the same vein I appreciate the love and encouragement showered on me by other members of my family- my mother Celine Amanze and siblings. I thank also the family of Mr. VIN and Ada Nweke for their encouragements. I am grateful to my friend Vivian Uche for all her prayers. I thank Cassy for all his kindness.

Finally, I thank all my friends and colleagues whose discussions in class elicited great ideas that might in one way or the other contributed to the success of this thesis.

Stanley Otitoaja Amanze  
Linköping, May 2005.

**DEDICATED TO**

*The memory of my late father:*

**CHIEF SYLVESTER OGBONNA AMANZE** (1934-1991)

*And to*

**REV. DR. GUS AMANZE** (my beloved uncle and “father”)

“Where can a person be better than in the bosom of their family?”  
-Marmontel Gretry-

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*Parenthood is the principal social institution concerned with reproduction. Numerous folkways (cultural habits) surround and give wisdom to parents as they make reproductive decisions. No argument for or against the appropriate use of genetic technology has paid sufficient attention to parenthood, yet it is exactly that context where some of the most important decisions will be made and where biology and culture are expressed.*

Glenn McGee.

## 1.0 INTRODUCTION

Man as a dynamic being is always making progress towards conquering his environment, the society and more still towards self-overcoming. This self-overcoming is basically felt in the area of technology. Hence, man uses technology to project his dynamic nature. Technology becomes an intrinsic part of man and as such the real nature of man can no longer be explained without making allusions to his technological self. The impact of this technological dynamism is felt in almost every aspect of human existence and ontology.

Some people perceive the effects of this technological advancement to be negative and positive at the same time and as such a lot of discussions have been going on regarding the effects of present day technological advancement and dynamism.

One of the major areas where this dynamism is felt is in the area of biotechnology. We understand biotechnology herein to mean the application of principles of engineering (technology) to the life science, namely, biology. Apart from using technology to enhance the quality of life; man tends to approach a complete creation of man through assisted reproductive technologies. One of such technologies is human reproductive cloning.

This *technological* creation of man threatens our traditional knowledge of procreation

which is an indelible character of parenthood. Hence the meaning of parenthood vis-à-vis the family is being questioned by these new assisted reproductive technologies, specifically human reproductive cloning.

In all these, there is a paradigm shift from what the child should expect in terms of relationship and care, and what science and technology promise to offer. Having this in mind, let us look at the background of our study.

### **1.1 BACKGROUND OF THE STUDY**

Evidently, science and technology has made tremendous progress in the field of biotechnology. The various biotechnological breakthroughs are testimonial to these assertions; for instance, man is now learning new ways to pass life on. Indeed our efforts to understand the mechanics of reproduction has gone forward at a startling pace. Two centuries ago, man learnt how to propagate human life by an unnatural method-artificial insemination. Presently, he can manipulate not only the sperm but also the eggs and produce test tube babies and looming on the corner is the method for making as many copies of a person as we want.<sup>1</sup> The issue of human cloning has been a source of night mare to so many people in the world especially those who are critical of its effects. The birth of dolly, the first clone sheep was received with a lot of mixed feelings. Some felt that it was a gate way towards remaking humanity in an image of good health, productivity and mobility especially in the case of therapeutic cloning (I shall explain therapeutic cloning later in this work) while others see it as intruding upon the foundational profound nature of the inherently unknowable, which represent the bottomless depths of the human arrogance and irresponsibility.<sup>2</sup> The world had an insight into what could be called cloning when Aldous Huxley in 1932 presented his book, *'Brave new world'* in which all procreation was done artificially in laboratories. But in

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<sup>1</sup> Lygre, D.G, 1972, p12.

<sup>2</sup> Mattias J., May 27<sup>th</sup> 2003, p10

1997, the newspaper headline, “*With Cloning of Sheep, the Ethical Ground Shifts*”<sup>3</sup>the world arose to the facticity and not fancy of the cloning technology. Only one week after the Dolly announcement, scientists bring cloning technology closer to humans by cloning rhesus monkeys from embryos. This same march 1997, scientists and ethicists testify at a senate hearing on cloning urging congress not to rush to ban research on the cloning of human beings. And in June 1997, President Clinton signs a five year moratorium on the use of federal funds for human cloning research. His national Bioethics Advisory Commission had concluded that human cloning would be unsafe and unethical. Afterwards, Richard Seed announced his plans to clone a human.<sup>4</sup>

Looking at the above semi-historical excursus, we found out that there have been several plans by scientist to clone human being. What is in doubt now is the facticity of a rumored human cloning; but just as Raymond Bohlin noted,

There are so many roadblocks to the successful cloning of an adult human that I don't expect it any time soon. However, I am afraid our current culture will pursue this possibility as long as there is potential profit and a perceived scientific benefit.<sup>5</sup>

However, according to a report by New York Times<sup>6</sup>, Kolata avers that in what scientists say is a stunning leap forward, a team of South Korean researchers has developed a highly efficient recipe for producing human embryos by cloning and then extracting their stem cells. They used their method to produce 11 human stem cells lines that are genetic matches of patients aged 2 to 56. This group led by led by Dr. Woo Suk Hwang and Dr.

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<sup>3</sup> Kolata, G., February 24, 1997, pA1.

<sup>4</sup> <http://www.reproductivecloning.net/hosting/waite/>.

<sup>5</sup> <http://www.leaderu.com/orgs/probe/docs/humclon.html>

<sup>6</sup> Kolata G., May 19, 2005.

Shin Yong Moon of Seoul National University however indicated that this breakthrough is for therapeutic cloning.

The prospect of human cloning has been the subject of considerable public attention and sharp moral debate both in the United States and around the world. Although a cloned human child is yet to be born, and the animal experiments have had low rates of success, the production of functioning mammalian cloned offspring suggests that the eventual cloning of humans must be considered a serious possibility.<sup>7</sup>

Having seen the above, that is, the possibility of cloning human beings for reproductive purposes, we then go to the next section which is stating the problem and consequently asking the question: what is at stake?

## **1.2 STATEMENT OF THE PROBLEM**

The problem we want to tackle in this work is; giving the fact of the possibility of human reproductive cloning, what is the ethical dilemma and implications of having such a technologised way of reproduction which will imply a technologised parenthood. And what will be the effects on the offspring who will definitely be the key affectants of such a technology as human reproductive cloning.

However, the following questions will help us understand the problem we want to state and solve:

- What is human reproductive cloning and why cloning?
- How does human reproductive cloning affect our traditional knowledge of the family with respect to procreation?
- What is parenthood or society in a world that includes clones? Putting this more succinctly, McGee writes that, in moral terms , the questions to be asked about cloning, were it shown to be safe and effective , are: whether and how does

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<sup>7</sup> The Presidents Council on Bioethics, Washington DC. July 2002.

cloning relate to other kinds of families? What sort of boundaries of parenthood and social responsibility are challenged by cloning?<sup>8</sup>

- What are the grounds of parenthood?
- Is it morally right to subject would be parents and unborn babies to the psychological trauma that may follow such an assisted way of coming to be?
- What is the place of human dignity in the face of human reproductive cloning?
- Legal scholars according to McGee have argued that cloning may violate, for example, a child's "right to an open future". A child born as a genetic copy of another may feel undue pressure to become like or different from its progenitor. Yet a right to an open future is difficult to validate by common law or analogy to ethical analysis about parenthood. What is parenthood, after all, but the teaching of values and knowledge to children in act of stewardship?<sup>9</sup> The above in fact form the crux of our discussion in the essay about technologised parenthood as an ethical dilemma in human reproductive cloning.

### **1.3 THE AIM OF THE WORK**

Looking at the questions mentioned above, one of the aims of this work then will be to discern the key features at the heart of the concept of human reproductive cloning. This will be the empirical descriptive aspect of the work in the sense that I will explain what is meant by human reproductive cloning, its applications and technique.

Then, the work will aim at having exploring and critically exposing the ethical implications of human reproductive cloning namely, on the family (parent and child). To make this very comprehensible, we shall take an initial excursus of what we meant by parenthood and analyze the various grounds of parenthood.

### **1.4 SCOPE AND METHODOLOGY OF THE WORK**

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<sup>8</sup> <http://www.actionbioscience.org/biotech/mcgee>.

<sup>9</sup> <http://www.actionbioscience.org/biotech/mcgee>.

The scope of the work will be limited only to human reproductive cloning as an aspect of assisted reproductive technologies. The dilemma to be discussed will be ethical and will cover issues in relation to parenthood and the child.

The methodology to be applied will be critically expository and at the same time analytical. This is so because; we are going to expose the various ethical implications of technologised parenthood.

Hence, this work is divided into chapters. After this introductory chapter, I will go into chapter two which will be an x-ray of what is involved in cloning. This chapter two will explain the concept of cloning; it will also make a differentiation between the two types of cloning. The techniques of cloning will also be discussed.

Chapter three will ask the question “why cloning?” hence this chapter will expose the various reasons people have in the longing for human reproductive cloning. Chapter four then will expose the perceived fears of people if human cloning will be a technology come true. It also analyses the religious objections to human reproductive cloning using as a focus the catholic teachings and in a summarized form the protestant, Islamic and Jewish teachings. The main objective in this chapter is to analyze the ethical implication of human reproductive cloning if it will be a technological reality.

In chapter five, we will look into the various discussions going on in the sphere of human policy with regard to human reproductive cloning. Major world bodies such as World Health Organization, United Nations Educational, Scientific and Cultural Organization, Council of Europe etc. will be discussed with respect to this.

Chapter six will sum up our view about human reproductive cloning as a technology that is staring man right in the face. Herein we will draw the curtain on our disposition towards human reproductive cloning. And we will bring forward our discussions in various chapters. Hence, we shall try to show that technologised parenthood is an

implication of human reproductive cloning.

Chapter seven will be an evaluation of the work. I will start by an initial analysis of the meaning of parenthood then give an evaluative application of this meaning of parenthood to human reproductive cloning. After this, I will draw a conclusion.

### **1.5.1 THE CONCEPT OF HUMAN REPRODUCTION**

Human reproduction is one of the important concepts in biology. It is a quality and major characteristic of man as a biological being. The Encyclopedia Britannica conceives reproduction in general as,

Making a copy, a likeness and thereby providing for the continued existence of species.<sup>10</sup>

Going by this general definition of reproduction as making copy and likeness, human reproduction then is the ability of human beings to make their own copy or likeness i.e. offspring , for the continued existence of human species.

Human reproduction could be natural or assisted. We ascribe naturality or artificiality to human reproduction according to the process through which it is achieved. Hence we say it is assisted when reproduction is brought about in a laboratory through the assisted reproductive technologies such as, in vitro fertilization, artificial insemination etc. But human reproduction is natural in this sense when it is achieved through the natural means of procreation which involves the copulatory act that results in pregnancy and subsequently the coming to being of the offspring. It is worth mentioning here that for the limited scope of this work we will not go into explanation of the process of human reproduction in general, but suffice it to mention that we shall see human reproduction as

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<sup>10</sup> *Encyclopedia Britannica*, (1907ed.) vol.26, p.65.

any process that brings to be a new offspring. My usage of the words *unnatural* and *nonnatural* is determined by the discussion in focus, both may mean the same thing, but I will adopt *nonnatural* in order to have an unbiased analysis of the topic in view.

However, just as a scholar has noted, reproduction can be said to be in the midst of a set of cultural redefinitions and (literal) reconstructions, primarily as a result of a convergence between two branches of science-genetics and embryology-of scientific “assistance” have by means of which unprecedented forms have been given to the process of reproduction and development.<sup>11</sup> This has led to the redefinition of reproduction socially, economically, politically, and culturally, religiously, even technologically. Added to this is a concurrent phenomenon of expansion and diffusion of reproductive politics which is occurring across this proliferation of sites and locations.<sup>12</sup> This perceived reproductive politics have increasingly become biopolitics in their scope of application and also micropolitics, both in the molecularization of reproductive control and in the Foucauldian sense, denoting a capillary effect of dispersed contestations.<sup>13</sup> In this sense, just as Jennifer Burr writes,

Biology is seen to provide justification for inequalities in both domestic and public spheres. Biological and evolutionary biological theories are similarly employed, both directly and indirectly, to inform and reinforce cultural norms, naturalize maternal qualities and pathologies those behaviors and practices that challenge patriarchal family structures.<sup>14</sup>

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<sup>11</sup> Franklin S., Postmodern Procreation: A Cultural Account of Assisted Reproduction, in [http://www.hsph.harvard.edu/rt21/procreative/FRANKLIN\\_Postmodern.html](http://www.hsph.harvard.edu/rt21/procreative/FRANKLIN_Postmodern.html)

<sup>12</sup> *ibid.*

<sup>13</sup> *ibid.*

<sup>14</sup>

<http://docserver.ingentaconnect.com/deliver/cw/routledge/14616661/v2n2/s2/p105.pdf?fmt=dirpdf&tt=762&cl=54&ini=connect&bini=&wis=connect&ac>

It is against this backdrop that we want to have an in-depth look at human reproductive cloning as a technology which will lead to a cultural redefinition of human reproduction especially as it concerns parenting and parenthood. Let us take a step further by taking a look at what we mean by human reproductive cloning.

## -CHAPTER TWO-

### 2.0 HUMAN CLONING

Cloning is one of the reproductive technologies of our age. It is most often and more appropriately classified under the assisted reproductive technologies. In order to understand our thesis and what we think about human cloning, it is very pertinent to delve into the meaning of cloning. Several people define cloning differently, just as Craig Klugman and Thomas H. Murray noted; that the term “clone” has been used in many arenas, and with different meanings. Thus, a careful definition of terms is essential to any discussion of cloning.<sup>15</sup>

Clone is derived from the Greek *klon*, meaning “twig”. In biology, the noun refers to a cell or organism that is genetically identical to another cell or organism from which it is derived. However, the verb, “clone” refers to the process of creating cloned organisms. There are several definitions of *clone* as applied to animals. One definition is “to produce asexually”; if an organism is divided into two that is not sexual reproduction. For example, one can bisect a mammalian embryo to form identical twins. Although the embryo is the result of a sexual process, making two from one is asexual reproduction, and a form of cloning. Another definition is “to make a genetic copy or set of copies of an organism”.<sup>16</sup>

When applied to humans, however, cloning usually carries one of two meanings. The first is popularly known as twinning. This is a process similar to what happens in utero when identical twins are formed by a fertilized egg splitting into two or more embryos. Twinning occurs in the laboratory when the buds, or cells, of an embryo are removed and allowed to develop, to produce twins of the original embryo.<sup>17</sup> Klugman and Murray note that this is what Cohen and Tomkin explains as “embryo multiplication” or

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<sup>15</sup> Klugman C.M. and Murray T.H., in Humber J.M and Almeder R.F.,1998, p.6

<sup>16</sup> Seidel JR. G.E., in MacKinnon., ed.2000, p.18

<sup>17</sup> Klugman and Murray, *ibid.* p.7

“blastomere separation”. This according to them was the technological leap that was said to have taken place in 1993 when human embryo clones were created. This event however according to Klugman and Murray was not even cloning in the most contentious sense of the term.<sup>18</sup>

Dolly represents the second definition of human cloning: “taking the nucleus of a cell from the body of an adult and transferring it to an unfertilized egg, destroying the genome of the oocyte of the egg, and letting it develop. Cloning in this sense involves taking the diploid nucleus from the differentiated cell of an adult organism, and placing the nucleus into an unfertilized egg from which the haploid native nucleus has been removed. Such a technique is also known as renucleation or nuclear cloning.”<sup>19</sup>

Having this in mind, the term cloning refers to the technique used frequently in biology to reproduce cells and micro-organisms, both vegetable and animals and more recently, to produce the sequences of genetic information contained in biological material. Such as fragments of DNA (deoxyribonucleic acid) which contains a wide range of codified nuclear genetic information.

## PURPOSE

Regarding its purposes, cloning is a technical procedure through which the genetic material of a cell or organism is manipulated in order to obtain an individual or colony of individuals, each one identical to the first one. What distinguishes cloning in this sense from other similar techniques is that in cloning, reproduction takes place without sexual union, or without fertilization or the union of the gametes; it results in a group of individuals biologically identical to the donor who provides the nuclear genetic heritage.<sup>20</sup> In essence, the reproductive technology called cloning makes use of only one

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<sup>18</sup> *ibid.* p.7

<sup>19</sup> *ibid.*

<sup>20</sup> Cardinal Alfonso Lopez Trujillo, Cloning: the disappearance of direct parenthood and denial of the family, in [http://www.vatican.va/roman\\_curia/pontifical\\_councils/family/documents/rc\\_pc\\_fami...](http://www.vatican.va/roman_curia/pontifical_councils/family/documents/rc_pc_fami...)

parent as against the traditional and natural parenthood which consist of two parents even though the parents may not meet in a conjugal relationship.

### HISTORY (*brief*)

Herein, I want to give a little insight to the reader about the historical development of human cloning. This excursus may not be comprehensive and may not follow conventional *epochalization*. I will for the sake of this work choose those moments that I feel are *ad rem* to this presentation. Human knowledge about cloning and the technology that is involved dates as far back as 1880 when August Weissmann states that genetic information of a cell diminishes with each cell division. A little after that, Walter Sutton in 1902 proves that chromosomes hold genetic information. This same year, Hans Spemann, a German embryologist and a professor of zoology at the University of Freiburg divides a Salamander embryo in two and shows early embryo cells retain all the genetic information necessary to create a new organism and in 1928, he conducted the first known nuclear transfer experiment. Afterwards, he proposes an experiment to transfer one cell's nucleus into an egg without a nucleus, the basic method that would eventually be used in cloning. This was in 1938. This proposal ignited and excited so many other scientists to get into experiments that have to do with genetic information. In 1944, Oswald Avery, discovers that genetic information is carried by the nucleic acids of cells.<sup>21</sup>

What actually became cloning took place in the 1950s, Thomas King and Robert Briggs of the Institute for Cancer Research in Philadelphia cloned tadpoles. This was a very big breakthrough into the world of cloning. Although it was a leopard frog that was cloned, they allowed it to live only to the stage of a tadpole.<sup>22</sup>

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<sup>21</sup> The above history is taken from the internet source-<http://www.reproductivecloning.net/hosting/waite/>

<sup>22</sup> Briggs, R., and King, T., 1952, pp.455-463.

In 1953, James Watson and Francis Crick made the discovery that revolutionized biotechnology and that is the discovery of DNA, with its double-helical structure. Precisely in April 25 of 1953, they published their scientific paper in which they described the intricacies of the deoxyribo nucleic acid.<sup>23</sup> Five years after this discovery, another scientist, Steward F.C. of Cornell University grows carrots plants from root cells.

Then in 1968, John Gurdon of Oxford University cloned sexually mature frogs from differentiated cells precisely from the intestinal cells of adult frogs. A year after that, J.B.S. Haldane, a British scientist made the coinage of the word “clone”. He used the word “clone” to describe Gurdon’s experiment in which he (Gurdon) used frogs.<sup>24</sup> Subsequently, in 1966, a complete genetic code was established. The discovery of the genetic code was an important step towards understanding the fundamentals of life. Learning how DNA coded for protein was the first step towards the manipulation of protein.<sup>25</sup> Four years after this, Stanley Cohen and Paul Berg create the first recombinant DNA. This was the first successful gene splicing. They did this using the earlier discovery made by Paul Berg. He had earlier before then, in 1972 created the first recombinant DNA molecules.

The birth of Louise Brown in July 25, 1978, the first baby resulting from in vitro fertilization techniques triggered off a lot of expectations in the biotechnological world. Louis Brown was born in Britain to a 30 year old woman Leslie. This gestation was possible due to the efforts of a gynecologist from Oldham, Lancashire in Great Britain, Patrick Steptoe and Robert Edwards, a physiologist from Cambridge University.<sup>26</sup> In this same 1978, the release of David Rorvik’s book, In *His Image: the Cloning of Man*, sparks a worldwide debate on cloning ethics.<sup>27</sup>

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<sup>23</sup> Watson J.D., Crick F.H.C, April 25,1953,pp. 737-738

<sup>24</sup> Haldane, J.B.S., in Wolstenholme, G., (ed.) 1963.

<sup>25</sup> <http://library.thinkquest.org/24355/data/details>. March 13, 2005.

<sup>26</sup> Read more in Gwynne, P., August 7, 1978, pp.66-72.

<sup>27</sup> <http://www.reproductivecloning.net/hosting/waite/>. March 13, 2005.

Then in 1980, the U.S. Supreme Court rules that human made organisms (a non-natural micro-organism) are patentable. Within this 1980s, a lot transpired in the biotechnology world. In 1983, Kary B. Mullis developed the polymerase chain reaction (PCR) which allows rapid synthesis of designated fragments of DNA.

In October of 1990, the National Institutes of Health officially began the Human Genome Project. This project was a massive international collaborative effort to locate the 50,000 to 100,000 genes and sequence the estimated 3 billion nucleotides making up the entire human genome.<sup>28</sup> The information gathered from this project was another stepping stone to the cloning project. Researchers at the genome consortium have confirmed the existence of 19,599 protein-coding genes in the human genome and identified another 2,188 DNA segments that are predicted to be protein-coding genes.

Then, on July 5, 1996, Dolly, the first organism ever to be cloned from adult cells, was born. This was as a result of the combined efforts of Ian Wilmut and Keith Campbell, researchers at the Roslin Institute in Scotland who created Dolly using a technique popularly known as somatic nuclear cell transfer.

The birth of dolly triggered off a lot of debates and discussions on human cloning and at the same time it was an eye opener of the possibility of human cloning. Although there are rumours of human cloning, it has not been verified of a facticity, of a cloned human.

However, Dr. Panayiotis Zavos of the Andrology Institute in Lexington KY and Dr. Severino Antinori, a fertility doctor in Rome announced in early 2001 that they want to proceed with the cloning of humans. Professor Antoniori announced in early 2001 that he intends to start cloning human embryos before the end of 2001.<sup>29</sup>

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<sup>28</sup> <http://home.hawaii.rr.com/johns/history.htm>

<sup>29</sup> [http://www.religioustolerance.org/clo\\_intra.htm](http://www.religioustolerance.org/clo_intra.htm)

## 2.1 PRECEDENTS OF HUMAN CLONING

Looking critically at several technological advancements, one finds out that every new technology has a background technology which served as an introduction to such a new technology. Certain biotechnological activities preceded the sudden quest and crave for human cloning. And alongside these activities is a concomitant change in world view and the way people understand man and life. Just as Klugman and Murray notes,

Along the scientific development of cloning over the  
Last 60 years, one can trace an equally intriguing history  
Ethical and social commentary about those same techniques  
These ideas and concepts challenge notions of the self, of the  
body. And of what it means to be human.<sup>30</sup>

Just as the world responds to biotechnological breakthroughs, the ideas about man and his nature was deeply bruised. Man became more or less seen from the point of view of machine, an increasingly mechanized views of humans as machines subsisted. The modern view of the body is as a machine, and that the body is composed of parts, and like machines, these parts are replaceable and interchangeable. Klugman and Murray gave an illustration of this human body mechanization with the muffler of a car. If the muffler on a car does not work, one simply needs to replace it with another that has similar specifications. The same view applies to the body. If a kidney fails, then it can be replaced with another that has similar blood types and other matching factors. In some cases, as with pacemakers, insulin pumps, dialysis, and mechanical hearts, the replacement does not even need to be organic. Human beings can now be equipped with artificial organs made from glass, steel, and plastic that are considered to be interchangeable with organic organs.<sup>31</sup>

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<sup>30</sup> Klugman and Murray, *ibid.*,p.7

<sup>31</sup> *ibid.*, p.5

Human body in this sense is no longer born but man made. Just as Andrew Kimbrell avows that,

Today, the traditional image of the human body has been shattered. Over the last centuries, and increasing in recent years. Our understanding and view of the body has undergone a free-fall as advances in science and technology appear to confuse and obscure any fixed definition of human life. Gradually, the body as sacred has evolved into the body as secular. The body is no longer seen as analogous to the divine, but rather as similar to the engines of industry. The image of God has given to more modern deities. The body has become machine.<sup>32</sup>

A little away from this, people begin to think that since it has been possible to change the parts hence, it will equally be possible to “build” a completely new man from an already existing man since the raw materials for a complete new man are hard to find.

All these culminated in a mechanistic approach to the nature and being of man. This doctrine of mechanism was significantly refined when the western civilization entered the industrial age. Just as more complex and sophisticated machines were developed, the machine image of the body also evolved. By the twentieth century, mechanism’s proponents had set out to remake the body in the likeness of the modern motor with its greatest attribute which is efficiency. These attempts according to Kimbrell were to have extraordinary consequences for human work and the human body shop. They were also to lead directly to perhaps the most pernicious practice of the twentieth century which is eugenics.<sup>33</sup> And in a more extended sense, it serves as the background of these cravings for human cloning.

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<sup>32</sup> Kimbrell, K., 1998, p.232.

<sup>33</sup> *ibid.*, p.243

In coping with the mechanization of the human body, biological engineers sought a procedure that would mechanically reproduce exact duplicates of genetic material. As a result of this, natural procreation such as sexual reproduction which defines man became clearly as not enough for getting into being new life forms. These genetic engineers saw creation through intercourse or other natural methods as awkward: too slow, undependable and unpredictable. For over four decades, genetic engineers have been attempting to meet the challenge of artificiality and efficiently reproducing life. As at the moment, they are in the process of perfecting a new reproduction process, which would substitute for the natural method. They call this revolutionary *biofacturing* process cloning.<sup>34</sup>

### 2.1.1 TECHNOLOGICAL ADVANCEMENT IN ANIMAL REPRODUCTIVE SCIENCE

Advancements in animal biological science have always preceded such advancement in human biological science. It should be noted that, over the last three decades, advances in animal reproduction have more often than not presaged application of the same techniques in human reproduction. Kimbrell notices that in 1952, the first calf was produced with frozen semen. Less than a decade later, frozen sperm had become a staple in human artificial insemination. In 1960s, scientists start to create calves through embryo transfers into cows “surrogate mothers”. In 1980s, embryo transfer, including embryo transfer into surrogate mothers, became a routine practice in infertility clinics in the United States and around the world. And in 1973, the first calve was produced from a frozen embryo. According to current reports, 150,000 frozen bovine embryo transfers are attempted each year in the United States, resulting in approximately 100,000 calves. The use of frozen embryos has become an “attractive adjunct” to IVF in humans; world wide, hundreds of children have been born through that means.<sup>35</sup>

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<sup>34</sup> *ibid.* p.214; Kimbrell uses the word biofacturing to express the artificial manufacturing of human parts. Biofacturing brings to bear biology and the craft of making new biological parts.

<sup>35</sup> *Ibid.*, p.223

If cloning technology follows this trend, then it is very obvious that in the nearest time, we shall see a cloned man.

The reality of the cloning technology cannot be over emphasized. Just as one observer noted,

the ability to successfully clone large mammals hints at the possibility in years to come that similar technique could be devised for humans.<sup>36</sup>

Having this background, let us look more precisely at certain biotechnological breakthroughs that we consider as a serious prelude to human reproductive cloning.

### **2.1.2 EMBRYO RESEARCH.**

This is also an area in which biotechnology has made so much impact. And there has been a wide range of discussions going on in this area. According to Dianne N. Irvin, one of the most significant breakthroughs came in November 1998, when two separate researchers successfully isolated stem cells from human embryos and aborted fetuses. The impassioned hopes are that stem cells can be used to great advantage. The cautious fears are that innocent and vulnerable human beings are destroyed, and needlessly so, in the process.<sup>37</sup>

We are not going to discuss embryo research in its extensive form but we are making allusions to it as one of the technological breakthroughs that are preceding human reproductive cloning.

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<sup>36</sup> Schneider K., February 17, 1988,p.A1

<sup>37</sup>Irvin D.N., Stem Cells Research: Some Pros and Cons,  
<http://www.physiciansforlife.ca/stemcellproandcon>

Human embryos are defined as human organisms derived from one or more gametes or diploid cells. Pluripotent stem cells are specialized subpopulation of cells capable of developing into most (ectoderm, Mesoderm), but not all, human tissues may be derived from human embryos.<sup>38</sup>

Embryonic stem cells are primordial cells harvested from either the inner mass of a blastocyst (a stage in the development of a fetus that occurs approximately four days after fertilization) or from the gonadal tissues of aborted fetuses. There are numerous potential uses of stem cells, including tissue transplantation, in which a failing organ could be rejuvenated by an injection of stem cells; pharmaceutical testing; embryology; and gene therapy.

The three major goals usually cited for pursuing this research are: the gaining of important scientific knowledge about embryonic development and its applications to related fields; curing debilitating disease, e.g., Parkinson's disease, etc.; and screening drugs pharmaceutical companies, instead of having to rely on animal's models.<sup>39</sup> These goals are what people take to be the good side of embryo research.

There is however a lot of voices against research that has to do with human embryo. Such oppositions and rejections are based on the excessive manufacture of the embryo which results in the destruction of unwanted embryos and as such many ethicists question the morality of such biological attitude.

Embryonic research has a futuristic dimension in the sense that it promises the hope of therapies that would extend life, perhaps to the point at which humans may become immortal. Many scientists now believe that death is not inevitable and that the process

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<sup>38</sup> <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;108/3/813>

<sup>39</sup> Irvin D. N., *ibid.*

whereby cells seem to be programmed to age and die is a contingent accident of human development which can in principle and perhaps in fact be reversed and part of that reversal may flow from the regenerative powers of stem cells.<sup>40</sup>

It is my opinion here that, life extending procedures like embryonic stem cell research inform and occasion further researches which lead to the human cloning technology.

## 2.2. THE TECHNIQUE OF CLONING

Cloning is an asexual and agamic type of reproduction, and as such it is achieved without the actual input of the sex cells or gametes. There is no fertilization, rather what is obtainable is the fusion of the nucleus which is taken from the somatic cell of the individual that is to be cloned, or from the somatic cell itself, with an oocyte from which the nucleus has been removed, that is, an oocyte lacking the maternal genome. Since the nucleus of the somatic cell contains the whole genetic inheritance, the individual obtained possesses –except for possible alterations, the genetic identity of the nucleus donor. Cloning then, is a technical procedure through which the genetic material of a cell or organism is manipulated in order to obtain an individual or a colony of individuals that is identical to each other.<sup>41</sup>

This (cloning) could be realized through two major means: “embryo splitting”, which involves the separation of an early human embryo into two or more parts; each of which has the potential to develop into a blastocyst (which if implanted can develop into an offspring). The other major means is by somatic nuclear transfer. The somatic cell nuclear transfer refers to the transfer of the nucleus from the somatic to an egg cell. A somatic cell in this case is any cell of the body other than a germ (reproductive) cell. An example of a somatic cell would be a blood cell or skin cell. This process involves the

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<sup>40</sup> Harris J., 2004. p.117.

<sup>41</sup> [http://www.vatican.va/roman\\_curia/pontifical\\_councils/family/documents/rc\\_pc\\_fami....2005-02-10](http://www.vatican.va/roman_curia/pontifical_councils/family/documents/rc_pc_fami....2005-02-10).

removal of the nucleus of a somatic cell and inserting it into an unfertilized egg that has its nucleus removed. The egg with its donated nucleus then divides until it becomes an embryo. Then the embryo is placed inside a surrogate mother, and develops inside the surrogate.

Under this somatic cell nuclear transfer technique is “The Roslin Technique” and “Honolulu Technique”<sup>42</sup> The Roslin technique was developed by researchers at the Roslin Institute, the institute that created Dolly. In this technique, somatic cells (with nuclei intact) are allowed to grow and divide and are then deprived of nutrients to induce the cells into a suspended or dormant stage. An egg cell that its nucleus has been removed is placed close to a somatic cell. Chemicals or electricity triggers the resulting entity to begin to develop into an embryo. This embryo is then implanted into a surrogate.

The other technique called “The Honolulu Technique” was developed by an international research team in Hawaii led by Dr. Teruhiko Wakayama. This method was used in cloning mice. It involves the removal of the nucleus from the somatic cell and injecting it into an egg that has had its egg removed. The egg is bathed in a chemical solution and cultured. The developing embryo is then implanted into the surrogate and allowed to develop. This process differs from the one explained above (i.e. the dolly technique) in the sense that there is no fusion of cells involved. In the Dolly technique, adult sheep cells were fused together before being implanted in the sheep which originally donated the egg.

In all these techniques, the resulting offspring will be genetically identical to the donor and not the surrogate unless the surrogate is also the donor.

### **2.3 TYPES OF CLONING**

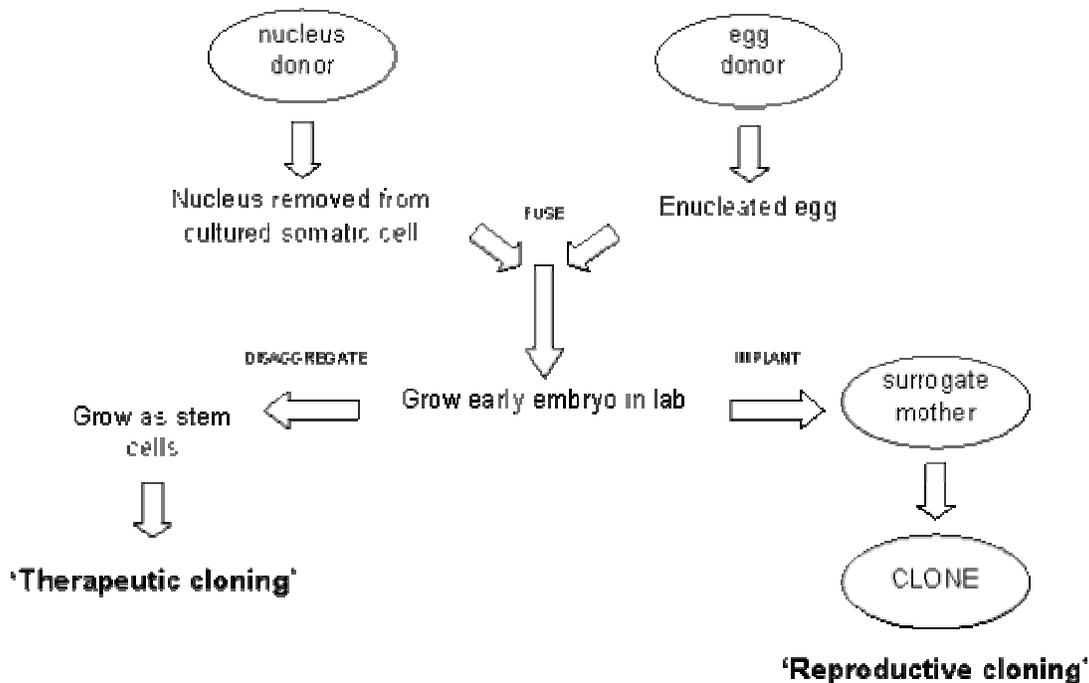
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<sup>42</sup> <http://biology.about.com/library/weekly/aa010903a.htm>. 2005-03-17.

Taking into consideration the techniques of cloning, two major types of cloning have special prominence. This include, therapeutic cloning and reproductive cloning. The major difference between the two is seen in the purpose for which the cloning is intended; hence, the complete development of an embryo through implantation in the uterus is the goal of “reproductive cloning”, whereas “therapeutic” cloning requires the use of the embryo in its pre-implantation stage in research for therapeutic ends.

In this section, we shall try to elucidate and explain these two types of cloning. It is however, important to mention here that our major interest in this whole work is on reproductive cloning.

***An illustration of the different types of cloning:***



*fig 1*

<sup>43</sup> This illustration is taken from an internet source: Alexander D.R., Human Cloning- distorting the image of God, in Cambridge papers, vol.10, no.2, June 2001; [http://www.jubilee-centre.org/online\\_documents/Cloninghumans.htm](http://www.jubilee-centre.org/online_documents/Cloninghumans.htm)

### **2.3.1 THERAPEUTIC CLONING**

Therapeutic cloning is the production of human embryos for the purpose of genetic therapy. This has often been described as a major biotechnological breakthrough which will benefit man in his study of human development and as a remedy for diseases which are far beyond the scope of conventional medicine. In therapeutic cloning, the stem cells are extracted from the egg. This extraction process destroys the embryo. This technique seems more promising than organ transplant since the new embryo will have the same identical DNA, with the sick person who is the beneficiary of the cloning. The tissue or organ will have the sick person's original DNA and the patient will not have to take immune suppressant drugs as is required after transplants. Gurdon notes that the major advantage of therapeutic cloning is that there would not be the danger of organ rejection since therapeutic cloning produce embryonic stem cells that are genetically identical to a patient. These stem cells could then be differentiated into precursor replacement cells to treat one of a variety of degenerative diseases from which the patient might suffer.<sup>44</sup>

However, many people question the acceptability of therapeutic cloning since it involves the destruction of the unused or unwanted embryos. Such voices raise questions about the moral status of human embryo.

### **2.3.2 REPRODUCTIVE CLONING.**

Reproductive cloning is the technique used to generate an animal that has the same genetic qualities, i.e. the same nuclear DNA as another already existing animal. In this sense each produced clone is a copy of another currently or previously existing animal. Reproductive cloning uses the "somatic cell nuclear transfer" (SCNT) technique. Just as

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<sup>44</sup> Gurdon, J.B., Colman, A., 1999, pp.743-746.

we mentioned in chapter one, in this technique, scientists transfer genetic material from the nucleus of a donor adult cell to an egg whose nucleus, and thus its genetic material, has been removed. Looking at the above figure i.e. *fig1*, The reconstructed egg containing the DNA from a donor cell must be treated with chemicals or electric current (fused) in order to stimulate cell division. Once the cloned embryo reaches a suitable stage, it is transferred to the uterus of a female host (a surrogate) where it continues to develop until birth. This reproductive cloning technology as we, mentioned is the technique used in the “production” of Dolly. Presently some mammalian species have been used in research concerning cloning, and they include, cattle, goats, pigs, sheep and mice etc.

It is worthy of note here that researches regarding reproductive cloning have not been yielding exciting results. According to “Cloning Fact Sheet”, Reproductive cloning is expensive and highly inefficient. This report states that more than 90 per cent of cloning attempts fail to produce viable offspring. More than 100 nuclear transfer procedures could be required to produce one viable clone. Moreover, cloned animals tend to have more compromised immune function and higher rates of infection, tumor growth and other disorders.<sup>45</sup>

In a more related observation, The National Academies Committee on Science, Engineering, and Public Policy notes that typically, very few cloning attempts are successful. Many clones die in the uterus, even at late stages or soon after birth, and those that survive frequently exhibit severe birth defects. In addition, female animals carrying cloned fetuses may face serious risks, including death from cloning related complications. Consequently, human cloning is likely to have similar negative outcomes. Because many eggs are needed for human reproductive cloning attempts, human experimentation could subject more women to adverse health effects, either from high

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<sup>45</sup> [http://www.ornl.gov/sci/techresources/Human\\_Genome/elsi/cloning.shtml](http://www.ornl.gov/sci/techresources/Human_Genome/elsi/cloning.shtml).

levels of hormones used to stimulate egg production or because more women overall would be sought to donate eggs, which involves surgery with its own inherent risks.<sup>46</sup>

It is against this backdrop that we want to look into the ethical implications of human reproductive cloning. But before then, we shall take a look at the reasons why some people want human cloning, while some do not.

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<sup>46</sup> National Academic committee on Science, Engineering, and, Public Policy, National Academies Board on Life Sciences, Scientific and Medical Aspects of Human Reproductive Cloning, National Academic Press, Washington, D.C., 2002, p.40

## -CHAPTER THREE-

### 3.0 WHY CLONING?

In this section, we want to find out what reasons people have in their bid and support for human cloning. Just as we said above, the birth of Dolly the world-famous sheep triggered the most extraordinary re-awakening of interest in, and concern about cloning and indeed about scientific and technological innovation and its regulation and control. She really has fuelled a debate in a number of fora: genetic and scientific, political and moral, journalistic and literary. She has also given birth to a number of myths, not least among which is the myth that she represents danger to humanity, the human gene pool, genetic diversity, the ecosystem, the world as we know it, and to the survival of the human species. Cloning is a technology and indeed a subject that has gripped the public imagination.<sup>47</sup>

Just like every new technology, people certainly long to have the technology as a way of naturally being a part of the flowing event. Some also see it a savior who has come to save mankind from the shackles of infertility and therefore a better way or more or less an aggiornamento in the field of assisted reproductive technologies.

Several people give several reasons in support of human cloning. Their reasons, sometimes far from being real stems from a mere fantasy of having such a revolution in the way human procreation is carried out. And on a more serious note, several scientists are of the opinion that the technology called cloning would save mankind and bring man to that level of self fulfillment which the world looks up to. Just as Jayati Ghosh writes,

Certainly, there are significant medical benefits that may result from cloning research. Cloning of particular tissue is now believed to be a possible cure for diseases like

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<sup>47</sup> Harris J., 2004, p.1

Parkinson's. And there is a wide range of other positive medical results. But even apart from this, there are those who see it as a natural extension of assisted Reproductive technology, which has become increasingly sophisticated and advanced in a number of countries. From this point of view, cloning is not very different from, or even technologically more demanding than, the creation of designer babies in which certain genes have been deliberately suppressed or modified.<sup>48</sup>

In essence, discussions about human reproductive cloning have taken two different dimensions. On each side of the issue, there are two distinct kinds of moral arguments brought forward. On the one hand, some opponents claim that human cloning would violate fundamental human rights. While moral and even human rights need not to be understood as absolute, they do place moral restrictions on permissible actions that an appeal to a mere balance of benefits over harms cannot justify overriding; for example, the rights of human subjects in research must be respected even if the result is that some potential beneficial research is more difficult or cannot be done. On the other hand, both opponents and proponents also cite the likely harms and benefits, both to the individual and the society at large.

In this first instance let us consider the benefits vis-à-vis the arguments in support of human cloning. We shall divide the benefits into two major groups: benefits to the individual and benefits to the society. This is to enable us understand what we mean by benefits of human cloning because, human reproductive cloning seems not to be the unique answer to any outstanding human problem and these "benefit" appear to be

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<sup>48</sup> Ghosh J., "The Fantasy and Reality of Human Cloning" in *Frontline*, vol. 18, issue 04, Feb.17-Mar.02, 2001. <http://www.frontlineonnet.com/fl18041160.htm>.

limited at the most. Hence I shall alongside the benefits expose certain criticism of the benefits.

### 3.1 BENEFITS TO THE SOCIETY ARGUMENT.

*Human cloning allows man to fashion his own essential nature and turn chance into choice. For cloning's advocates, this is an opportunity to remake mankind in an age of health, prosperity, and nobility; it is the ultimate expression of man's unlimited potential.*

*Daniel Reilly*

Certain people believe that cloning technology will be very beneficial to the society at large. There are a number of important benefits that may result from the cloning of humans that is done with the aim of producing persons. We shall consider few of those benefits which human cloning promises to bring.

**3.1.1 Human cloning would enable the duplication of those individuals the society considers to be great; who made significant contributions to the society.** In this instance, when one is able to clone for instance, Nelson Mandela, it means that what we shall have is an offspring that has the same genetic inheritance as Mandela, an individual who shall make the same significant contributions to politics as Mandela did.

However, mention should be made herein that much of the appeal to this reason rests mostly on an erroneous and confused assumption of genetic determinism, that is, that one's genes fully determine what one will become, do, and accomplish.<sup>49</sup> It should be noted however that what makes Mandela the extraordinary person he is the confluence of his genetic endowment and the environment in which he finds himself. In this sense, cloning will produce a person with the same genetic endowments but will not recreate the

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<sup>49</sup>Brock D.W., in Nussbaum M and Sunstein C, (eds.),1998, p.149

old environment the person found himself. Because of the complex nature of human existence in its growth and existence, we cannot ascertain to what extent nature or nurture shapes the individual. Cloning however, might produce individuals with exceptional qualities; we do not know how close these clones would be to their original parent. Even so, the hope for the exceptional, even if less and different, accomplishment from cloning such extraordinary individuals might be a reasonable ground for doing so.<sup>50</sup>

**3.1.2 Human cloning would bring advances in scientific knowledge.** Some argue that human reproductive cloning technology will bring advances in the field of scientific knowledge especially as it relates to human development. Just as psychology has the theoretical task of constructing a satisfactory theory that will explain the acquisition of traits of character, i.e. information as to what extent these traits are inherited, the science of human cloning will give practical answers to such scientific theories.

Scientific knowledge gathered through this means, that is through researches in human cloning will help the society to manage human beings well through a grounded understanding of their genetic composition and the means of their procreation. This argument lacks certainty because there is always considerable uncertainty about the nature and importance of the new scientific and medical knowledge to which a dramatic new technology like human cloning will lead; the road to new knowledge is never mapped in advance and takes many unexpected turns.<sup>51</sup> Human reproductive cloning notwithstanding is believed to be a gateway towards a proper and in-dept understanding of the human reproductive system; and in a wider scope what it means to be human.

### 3.2 BENEFITS TO THE INDIVIDUAL

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<sup>50</sup> *ibid.*,p.150

<sup>51</sup> *ibid.*,p.150

Human reproductive cloning has certain promises to the individual persons in the society. In this section, let us take a look at those principal reasons why people would want to have human cloning. It should be noted that there are several arguments in support of human cloning but for the sake of this paper, we shall restrict ourselves to the ones that are most commonly referred to.

### **3.2.1 The human cloning technology will be a solution to the problem of infertility.**

This is actually the key argument been offered by the proponents of human reproductive cloning. Human cloning according to them would help couples who have infertility problem to have their own child. Hence it is perceived to be a new means to relieve such couples of such a distress. Just as Brock pointed out,

Human cloning would allow women who have no ova or men who have no sperm to produce an offspring that is biologically related to them.<sup>52</sup>

This actually means that human reproductive cloning will be a relief to those couples who cannot have a child by any other means due to the fact that one or both of the sex cells are lacking. Brock goes further to say that;

Embryos might also be clone, by either nuclear transfer or embryo splitting, in order to increase the number of embryos for implantation and improve the chances of successful conception.<sup>53</sup>

These benefits of human cloning to relieve infertility are greater the more persons there are who cannot overcome their infertility by any other means acceptable to them. This benefit of human cloning has been applauded by many not minding the fact that there are

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<sup>52</sup> *ibid.*,p.146

<sup>53</sup> *ibid.*,p.146

so many other forms of assisted reproductive technologies. But many people look up to human reproductive cloning as a technology that will supersede other forms of assisted human reproductive technologies because it is more sophisticated and more recent.

However, even though human reproductive cloning gives a high hope of achieving an infertile free world, it should be noted that there are other safer means of doing this without taking the inherent high risk involved in human reproductive cloning. Moreover, considering the cost of such a technology as human reproductive cloning, one wonders at the availability of such a technology to the masses who are supposed to be the end users of the technology and as such the technological availability is in doubt.

### **3.2.2 Human reproductive cloning would enable a person obtain needed organs or tissues for transplantation.**

Dan Brock points out that human cloning would solve the problems of finding a transplant donor whose organs or tissue is an acceptable match and would eliminate, or drastically reduce the risk of transplant rejection by the host<sup>54</sup>.

This benefit is more related to therapeutic cloning because just as some liberal positions hold; it will in time allow scientists to create organs that are a perfect match for those in need of transplant. The cloned organ would be based on the recipient's genetic material and would not require the use of debilitating immunosuppressive therapies.<sup>55</sup>

But with particular reference to human reproductive cloning, cloning for such a purpose would mean treating the clone as a means for the benefit of the other. An individual should be loved for his or her own sake and as an end in itself. Writing along Kantian thoughts, *The Philosophy Page* postulates that, man in the system of nature (homo phenomenon, animal rationale ) is being of little significance and along with the other

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<sup>54</sup> *ibid.*,p.147

<sup>55</sup> <http://www.religioustolerance.org/cloning.htm>

animals, considered as a product of the earth, has an ordinary value. But man as a person, i.e., as subject of a morally-practical reason, is exalted above all price. Going further this philosophy page said that, for such a one (homo noumenon) he is not to be valued merely as a means to an end of other people, or even to his own ends, but is to be prized as an end in himself. This is to say, he possesses a dignity (an absolute inner worth) whereby he exacts the respect of all other rational beings in the world, can measure himself against each member of his species, and can esteem himself on a footing of equality with them.<sup>56</sup>

**3.2.3 Human cloning will be an effective means of reproduction that will take care of the risk of transmitting a serious hereditary disease to an offspring without doing so.** Human cloning in this case will help couples in which one party risks transmitting a serious hereditary disease to an offspring to reproduce without doing so. Proponents of this benefit believe that cloning will definitely result to happier and healthier individuals, because most couples would like to raise children that will not have the same hereditary disease as they do. A journal quoting Ian Wilmut writes,

That cloning techniques could be combined with genetic engineering to cure hereditary disease. For example, couples who did not want to pass on a genetic disease could first produce an embryo through in vitro fertilization. The embryo would then be screened for the genetic abnormality. Stem cells from the embryo would be taken, and a genetic engineering technique developed last year by Thomas Zwake and James Thomson (*Nature Biotechnology* 2003; 21:319-21) would be used to correct the genetic abnormality. The corrected stem cell nucleus would then be placed in an egg to form a new embryo that would be implanted into the mother's womb. The resulting

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<sup>56</sup> <http://www.praxeology.net/kant8.htm>.

foetus would essentially be an identical twin of the original embryo but with the abnormal gene corrected in every one of its cells. It would still be a clone—but of a new individual produced by both its parents and not a clone of just one parent.

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However, it should be noted that there are so many other procedures which do not involve cloning that can help couples reproduce without transferring a hereditary disease to their offspring. For instance, current methods of reducing hereditary diseases such as using third-party genes are much safer than human cloning. Third-party gene therapy methods include surrogacy, sperm and egg donation, and in vivo gene transfer. All of these methods are all fully developed and already being used.<sup>58</sup> Hence human reproductive cloning should not be seen as one and only means of achieving a world free of genetic transmitted diseases.

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<sup>57</sup> <http://bmj.bmjournals.com/cgi/content/full/328/7438/484-a>

<sup>58</sup> Nikolich D. internet source- <http://www.colorado.edu/archives/sp2001/double.html>

## **-CHAPTER FOUR-**

### **4.0 GENERAL ARGUMENTS AGAINST HUMAN CLONING.**

In this section, we will look into the general reasons why people are opposed to the cloning technology. Some might think of these arguments as a matter of principle, for instance, principles regarding human dignity, identity and individuality; some as a matter of considering the present dispensation i.e. the imperfect nature of the technology; and some as a matter of what I call “forever we shall hold” attitude; and this group does not see anything good in such a technology as human reproductive cloning, even mere mention of it elicits objections. Most of the immediate condemnations of any possible human reproductive cloning stem from the issue of human right. Such rights include the right to individual identity; the right to have an unblemished dignity and the right to direct ones future, which is what some commentators have called the right to an open future. Although we are not going to discuss in details what principle should guide human reproduction or what constitutes an individual’s right but suffice it to mention that most of the objections to human reproductive cloning revolves around the concepts of human right, which of necessity include the priceless value of human life.

### **4.1 HUMAN REPRODUCTIVE CLONING AS MERE REPUGNANCE**

There has been a lot of criticism against human cloning; many people find the idea of cloning simply viscerally repugnant. According to Leon Kass;

This repugnance, though not an argument is the emotional expression of deep wisdom, beyond reason’s power fully to articulate it.<sup>59</sup>

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<sup>59</sup> Kass L., June 2, 1997,p.20

This repugnance Leon suggests is experienced at incest, bestiality, or cannibalism, even though we may not be able to give completely rational explanations of what is morally wrong with these practices. Yet we would be less than fully human if we were not repulsed by them.<sup>60</sup> In fact for so many people, the fact that cloning would result in a child without sexual reproduction is an argument against it. Hence it is not natural and human life for such people cannot be started or manufactured in the laboratory. There is more to human life than scientific research and experimentations. Going further, Leon Kass believes that,

We are repelled by the prospect of cloning human beings not because of the strangeness or novelty of the undertaking, but because we intuit and feel, immediately and without argument, the violation of things that we rightfully hold dear. Repugnance, here as elsewhere, revolts against the excesses of human willfulness, warning us not to transgress what is unspeakably profound. Indeed, in this age in which everything is held to be permissible so long as it is freely done, in which our given human nature no longer commands respect, in which our bodies are regarded as mere instruments of our autonomous rational wills, repugnance may be the only voice left that speaks up to defend the central core of our humanity. Shallow are the souls that have forgotten how to shudder.<sup>61</sup>

However, some scholars like Prof James Wilson has expressed objection to Kass's repugnance theory noting that he (Kass) gave an overriding significance to coitus as the

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<sup>60</sup> *ibid.* p.20

<sup>61</sup> Kass L., and Wilson J., 1998, p.5

source of children not taking into consideration other forms of assisted reproduction which do not involve coitus.<sup>62</sup>

This wisdom of repugnance does not satisfactorily give an answer to the moral reason why people have maintained an aversive stand on the issue of cloning. Shifting a little bit from this common man's view of repugnance is a more scholarly moral resistance to the technology of human reproductive cloning. Let us have a more precise look into the general arguments against human reproductive cloning.

#### **4.2 THE THREAT TO INDIVIDUAL IDENTITY.**

Some people object to the idea of cloning because they think it will lessen the worth of individuals and diminish the respect for human life because it will lead to persons being viewed as replaceable. The body, the soul, and their combination make an individual unique. Hence human cloning threatens to change the body and a person's individuality-to obliterate it .With multiple copies of each person wandering around, that uniqueness is diminished more, and becomes banal.

This idea possibly came from the fact that the first clone-dolly was a sheep, a species not noted for individuality. Or just as Bonnie Steinbock said that the idea that human cloning threatens individuality stems from a perception, encouraged by joking comments on the media, that cloning will create a literary double.<sup>63</sup> However there has been an objection to the argument that human reproductive cloning threatens man's individual identity. Cloning of course does not create a duplicate of the adult but an infant, and it would be a mistake, however, to conclude that a person created by human cloning is of less worth or value than one created by sexual reproduction. Brock argues in this regard that at least outside of some religious context, it is the nature of a being, not how it is created, that is

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<sup>62</sup> Ibid.

<sup>63</sup> Steinbock B., 2000, p.71

the source of its value and makes it worthy of respect.<sup>64</sup> Human dignity is inherent in man and is not easily eroded as envisaged by opponents of human reproductive cloning.

### **4.3 THE THREAT TO HUMAN DIGNITY**

A different version of this worry or rather objection to human reproductive cloning is that human reproductive cloning would diminish the worth or value of human person because we would come to see person as able to be manufactured or hand made. And this will be a dangerous classification of human beings in terms of those that are original and those that are hand made. This demystification of the creation of human life would reduce our appreciation and awe of human life and of its natural creation.<sup>65</sup>

Most of the reasons for this argument stem from the believe that God created man in his own image and likeness and as such man shares the same dignity maybe not as God but as a son of God who shares the life of God. Therefore any biotechnological act that tends to make a new man will mean playing God. This falls also under the religious objection of human reproductive cloning. We shall discuss this more when we shall examine the religious objections of human reproductive cloning. But suffice it to mention here that the perceived threat to human dignity has been pointed out as an implication of human reproductive cloning.

However the acceptance of this position is not without flaws. Just as we mentioned above, that what gives man his dignity is his nature and not how he is created. But it is my opinion here that the creation of man is part of his nature and as such any consideration about the dignity of man should also involve the way in which man comes into existence.

### **4.4 THE RIGHT TO AN OPEN FUTURE ARGUMENT**

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<sup>64</sup> Brock D.W., *ibid.*,p.159

<sup>65</sup> Brock D.W., *ibid.*, p.159

Critics of human cloning believe that human reproductive cloning will definitely violate the child's right to an "open future"<sup>66</sup>. That implies, a cloned individual would be in some way pre-determined, hence narrowing the child's choices when he or she grows up. Hans Jonas puts this as the child's "right to ignorance". He argues that each of us develops a personality and becomes a self by making choices. However, a cloned human being would know the choices that were made by the person whose genome he or she shared. In this way, a clone would differ from an identical twin, as identical twins go through life at the same time. By contrast, a clone would be a genetic replica of someone who has already lived his life, so the clone would know a great deal about himself and his future. He would know what he would like as an adult, the diseases to which he would be prone to, the talents he would have and so forth. This according to Jonas would make the child unable to create and become his own self.<sup>67</sup>

A later twin created by cloning, Jonas argues, knows, or at least believes she knows, too much about herself. For there is already in the world another, an earlier person, her twin, who from the same genetic starting point has made the life choices that are still in the later twin's future. It will seem that her life has already been lived and played out by another, that her fate is already determined ; she will lose the sense of human possibility in freely and spontaneously creating her own future and authentic self.

However, proponents of cloning react to this argument by saying that we are not completely our genes or that our genes do not completely shape what we are, because man is as we have mentioned above, interplay of gene and the environment. Hence they regard the right to an open future argument as a crude genetic determinism which lacks credence. But credence could be given however to the open future argument on the basis

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<sup>66</sup> Feinberg J., 1992, 76-97.

<sup>67</sup> Jonas H., 1974,p 484-96.

of psychology because, we should not rule out the possibility of the clone having an influence from the knowledge he has of his “first life”<sup>68</sup>.

#### **4.5 POSSIBLE OBJECTIFICATION AND COMMERCIALIZATION OF THE CLONES.**

The science of cloning may lead to possible objectification of the individual. Dan Brock writes that both opponents and proponents of human cloning agree that cloned embryos should not be bought or sold.<sup>69</sup> But this agreement so to say does not remove the possibility of having some medical practitioners who will not commercialize the cloning technology, and as such we do not rule out the possibility of malpractice. In a science fiction one can imagine commercial interests offering genetically certified and guaranteed embryos for sale perhaps offering a catalogue of different embryos cloned from individuals with a variety of talents, capacities and other desirable qualities. This would be a fundamental violation of the equal moral respect and dignity owed to all persons, treating them instead as objects to be differentially valued, bought, and sold in the market place. It should be noted that although at the early stage they may be embryos, but it is the same embryo that will grow into an individual person. Brock puts it succinctly this way,

Even if embryos are not yet persons at the time they would be purchase or sold, they would be being valued, bought or sold for the persons they will become.<sup>70</sup>

Another side of this objection to cloning is what Michael Tooley calls the “Brave New World Objections”.<sup>71</sup> He comments that this type of objection though not frequently

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<sup>68</sup> “First life” in this sense refers to the life of the parent clone from which the clone is created from. It is assumed that this life of the parent clone can psychologically influence the offspring clone because she has a serious knowledge of the life the parent clone.

<sup>69</sup> Brock D.W., *ibid.*, p161

<sup>70</sup> *ibid.*, p.160

<sup>71</sup> Tooley M., *ibid.*, p93

encountered in scholarly discussions involves scenarios in which human beings are cloned in large numbers to serve as slaves, or as enthusiastic soldiers in a dictator's army. One can in this instance imagine what dictator leaders like Hitler would do with the cloning technology in the 1940s.

Again there may be a deliberate intent to clone human beings with low intelligence to do a particular repetitive, boring, and low-paying job. Their low intelligence would make them unsuitable for any other work, perhaps they would not even mind jobs that every one would avoid. This will be exploitative because the technology is being used in the wrong way. What causes anxiety in this regard is the possibility that such a wrongful use of the cloning technology is unavoidable.

However it could be argued that any other technology might be used in the wrong way and abuse does not displace use. Moreover, since the technology will bring about "normal" human beings, it becomes impossible to commercialize it since other forms of assisted reproductive technologies have not been commercialized to the negative.

#### **4.6 PSYCHOLOGICAL STRESS.**

Opponents of human reproductive cloning believe that human reproductive cloning will definitely bring upon the clone psychological problems. This objection is related to that of the threat to individuality of the person and violation of rights objections, because the idea is that, even if cloning does not violate a person's right to be unique individual, or to have a unique genetic makeup, or to have an open and unconstrained future, nevertheless, people who are clones may feel that their uniqueness is compromised, or that their future is constrained and this may cause substantial psychological harm and suffering.<sup>72</sup>

This so because in such a case as a clone having a good knowledge of her first twins achievement may be torn between her inability to meet up with such a high level

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<sup>72</sup> *ibid.* p.93.

achievement of the first twin. Brock believes that there is no doubt knowing the path in life taken by one's earlier twin might often have several bad psychological effects.<sup>73</sup> The later twin might feel, even if mistakenly, that her fate has already been substantially laid out, and so have difficulty freely and spontaneously taking responsibility for and making her own fate and life.

Another side of this argument would be that there will be a heavy psychological burden for the clone to really know of her origin, i.e. made from the laboratory. The feeling of being extraordinary in the negative might clamp the individual down and become a heavy psychological burden for the individual.

Reacting to this argument, proponents of human reproductive cloning claim that the issue of psychological effect is redundant because the opposite will be the case in the sense that children of human reproductive cloning will have a basic pride that they are of the new world. Moreover knowledge of the parent twin's earlier achievement sets the new clone on edge over the parent clone in that there will be a natural tendency to work hard.

#### **4.7 HIGH LEVEL RISK INVOLVED.**

There is a perceived high level of risk involved in the cloning technology. This high level risk has given rise to an objection to the cloning of human beings. Proponents of this argument make allusions to the technology that brought about Dolly-the first clone. It should be noted that out of 277 attempts, dolly came about. Human cloning is far more complicated, with greater risks and potentials for error. Hence the failure rate to this end when compared to human life is quite an unacceptable price.

Brock identifies such risk that is associated to the clone; he affirms that one risk to the clone is the failure to implant, grow, and or develop successfully, but this would involve the embryos death or destruction long before most people or the law considers it to be a

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<sup>73</sup> Brock D.W., *ibid.*,p.155

person with moral or legal protections of its life.<sup>74</sup>

Further more Harold Varmos raised the concerns that a cell many years old from which a person is cloned could have accumulated genetic mutations during its years in another adult that could give the resulting clone a predisposition to cancer or other diseases of aging.<sup>75</sup>

Looking at the above dispositions, it becomes preeminent for many to object to the human cloning technology following from the perceived high risk of monstrosity which might crop up from the experiments and their subsequent destruction. This of course will be a threat too to the sacredness of human life. As such, the perceived dangers placed side by side with the good promises of the technology, one feels safer with not having the technology than with having the technology. Human life and nature is so precious to be gambled with and any experiment that has to do with loss of human life should be avoided because every life is as precious as the other and none should be sacrificed at the alter of scientific experiments and technological exuberance.

However, the proponents of human reproductive cloning see this argument as been hasty. In as much as every new technology undergoes a period of trial and error, it does not remove the fact of its achieving perfection some day. It could be noted that presently with the scientific breakthrough in South Korea, human reproductive cloning is nearing a stage of low risk.

#### **4.8 RELIGIOUS OBJECTIONS TO HUMAN CLONING.**

*As technology advances...cloning to produce a child may become reasonably safe ... If so, will that mean there are no lasting objections to cloning? ... If there are lasting objections to cloning, they will be religious.*<sup>76</sup>

Ronald Cole-Turn

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<sup>74</sup> Brock D.W., *ibid.*, p.157

<sup>75</sup> Weiss, R., March 7, 1997

<sup>76</sup> Cole-Turner, R., 1997, p.xii-xii.

Most of the religious objections to human cloning stems from traditions and scriptures which are unique to each religion. Several religions hold several views about human reproductive cloning. Most of these views are informed by their belief in the existence of a supreme God who has the power to create; and some in their belief of the sacredness of human life and as such any alteration will be tantamount to infringement on the dignity and individuality of the human person. Most religious thinkers who recommend public policies on cloning humans propose either a ban or restrictive regulations.

Let us briefly look into the catholic, Protestants, Jewish, and Islamic attitudes towards human reproductive cloning.

The Catholics believe that every man is called to duty in helping maintain what God has created in the creation history and not tampering with it in any form. Man is created in the image of God and as such is created with an inherent dignity. The Vatican's 1987 *Instruction on Respect for Human Life (Donum Vitae)* argued for a legal prohibition of human cloning as well as other forms of assisted reproductive technologies. Human cloning must be judged negative with regard to the dignity of the person cloned, who enters the world by virtue of being the "copy" (even if only a biological copy) of another being: this practice paves the way to the clone's radical suffering, for his psychic identity is jeopardized by the real or even by the merely virtual presence of his "other".<sup>77</sup> They believe that human cloning will infringe on the sanctity of life and if clones are seen as less equal, they might be sacrificed for the benefit of others in cases of organ transplant. The Church argues that just ends do not justify immoral means. The possibility that cloning may ease the suffering of sterile individuals or those with life threatening diseases does not justify using inherently immoral technology.<sup>78</sup>

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<sup>77</sup> LIBRERIA EDITRICE VATICANA, Reflections on Cloning, in [http://www.vatican.va/roman\\_curia/pontifical\\_academies/acdlife/documents/rc\\_pa\\_acdlife\\_doc\\_30091997\\_clon\\_en.html](http://www.vatican.va/roman_curia/pontifical_academies/acdlife/documents/rc_pa_acdlife_doc_30091997_clon_en.html).

<sup>78</sup> National Bioethics Advisory Committee, 54, 55.

Many protestant writes hold similar objections to human cloning to that of the Catholic Church; for instance, on March 6, 1997, the Christian Life Commission of the Southern Baptist Convention issued a resolution entitled “Against Human Cloning”. This resolution supported President Clinton’s decision to prohibit federal funding for human cloning research. Furthermore, they requested “that the congress of the United States make human cloning unlawful.” They also called on “all nations of the world to make efforts to prevent the cloning of any human being.”

However, some of them differ from the conservative group and uphold a more liberal view about human reproductive cloning. This group does express qualified support for the cloning research and at the same time expresses deep moral reservations, at least at this time, about the transfer of human embryo obtained by nuclear transfer techniques to a womb for the purpose of gestation and birth.<sup>79</sup>

Islamic and Jewish scholars alike disagree over the degree to which the cloning technology should be applied. Hence most of them see human cloning as a disruption to human kinship to which both religions uphold; while others like Rabbi Elliot Dorff argues that human cloning should be regulated and not banned.<sup>80</sup> Dorff believes that the dangers of cloning require that it should be supervised and restricted; and that cloning should be used only for medical research and therapy. He suggested however that the full and equal status of clones with other fetuses or human beings must be recognized, with equivalent protections guarded; and careful policies must be devised to determine how cloning mistakes will be identified and handled.<sup>81</sup> Let us predict that what must have informed Dorff’s position is the biblical injunction in the book of genesis where God gave man the instructions to “increase and multiply and subdue the earth”. (Genesis 1vs. 28)

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<sup>79</sup> Ibid.

<sup>80</sup> Dorff, R.E.N., March 14, 1997.

<sup>81</sup> *ibid.*

Conclusively then, we find out that there are several objections to human reproductive cloning and these objections are supported by different arguments. Let us however, proceed by taking a look at human cloning in the face of public policy.

## **-CHAPTER FIVE-**

*“My decision to clone myself should not be the government’s business, or Cardinal O’Connor’s, any more than a woman’s decision to have an abortion is. Cloning is hugely significant. It’s part of the reproductive rights of every human being.”*<sup>82</sup>

Wicker F.

### **5.1 HUMAN REPRODUCTIVE CLONING AND PUBLIC POLICY**

In this section, we want to juxtapose the technological advancement in the area of human reproductive cloning vis-à-vis certain public policies. Looking at the discussions in human cloning, one finds out that most of the discussions focus on the rightness or wrongness of the cloning technology according to some moral theories. Such moral debates enable persons to take their choices should such a technology is made available to them.

There is however, another aspect of this cloning debate which involves whether the technique of cloning should be permitted or forbidden; its rightness or wrongness notwithstanding. Hence, we talk about human reproductive cloning and public policies. Public policies in this regard have to do with the various legal backings or banning of human reproductive cloning.

But because of the complex nature of the technique of human cloning coupled with the fact that it is still not realized, making policies concerning human cloning is difficult. Just as Andrea I. Bonnicksen writes;

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<sup>82</sup> Wicker F., May 25, 1997, p.18

Policy efforts in cloning has been crisis driven with periods of calm punctured with bouts of activity, which make an ill fit wit incremental technological growth.<sup>83</sup>

In essence one finds it is not very easy to make policies regarding certain advancement in technology. There is a history of miserable experiences when trying to create rules in which the government defined which acts are permitted and prohibited based on the motivations of the actors.<sup>84</sup> Charo gave an example of how difficult it can be to make such ethical policies with the case of abortion; many people who support legal abortion are appalled at the notion that it could be used by someone who simply wants to select for the sex of the child. They find this inherently sexist, or at least unacceptably gratuitous as a justification for abortion. And as such, the often want to prohibit abortion for this singular reason while preserving all other reasons for allowing abortion. Such situations also suffice for the debates in human reproductive cloning.

In recent times, several groups have concluded that reproductive cloning of human beings creates ethical and scientific risks that society should not tolerate. In 1997, the National Bioethics Advisory Commission recommended that it was morally unacceptable to create a child using somatic cell nuclear transfer cloning and suggested that a moratorium be imposed until the safety of this technique could be assessed. The commission also cautioned against preempting the use of cloning technology for purposes unrelated to producing a live born child.<sup>85</sup>

In a similar development, in 2001 the national Academy of Sciences issued a report stating that the United States should ban human reproductive cloning aimed at creating a child because experience with reproductive cloning in animals suggests that the process

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<sup>83</sup> Bonnicksen A.L., 2000, p.117.

<sup>84</sup> Charo R.A., "Cloning and the Ethics of Public Policy", *ibid.* p.109.

<sup>85</sup> <http://www.dnapolicy.org/genetics/cloning.jhtml>.

would be dangerous for the woman, the fetus, and the newborn, and would likely fail.<sup>86</sup> The report however, recommends a review of the ban after every five years and should be reconsidered if,

Only if a new scientific review indicates that the procedures are likely to be safe and effective, and if a<sup>87</sup> broad national dialogue on societal, religious and ethical issues suggests that reconsideration are warranted.

Going a little bit further, in 2002, The President's Council on Bioethics sent in a report in which they concluded that human reproductive cloning is both safe and morally unacceptable and should not be attempted. They made allusions to the various harms human reproductive cloning, may bring to humanity. The above little survey is, however with particular reference to the US.

So many other councils and commissions round the globe have submitted reports with regard to making policies in human reproductive cloning. Herein then, let us have a look at some international bodies and their documentations with regard to our present discussions.

## **5.2 UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)**

Recent developments in the field of cloning technology led the UNESCO, to make a declaration on human reproductive cloning. This document, nine drafts of which were written by a special bioethics committee of UNESCO over a period of four years, is designed to balance scientific advancement with human dignity and rights. Called

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<sup>86</sup> Ibid.

<sup>87</sup> *ibid.*

UNESCO's most significant document, it was prepared in time for the 1998 celebration of the fiftieth anniversary of the United Nations Declarations on Human Rights.

This declaration, which is although not legally binding, serves a *vade mecum* for ethical and public decisions in human reproductive cloning. According to this 1997 declaration,

Practices which are contrary to human dignity such as reproductive cloning of human beings shall not be permitted. States and competent international organizations are invited to cooperate in identifying such practices and in determining, national or internationally, appropriate measures to be taken to ensure that the principles set out in this declaration are respected.<sup>88</sup>

The declaration goes further to say that in order to respect individual's dignity; we have to respect their uniqueness and diversity.<sup>89</sup>

This document does not however define cloning or defend the conclusion that cloning is contrary to human dignity. Hence the declaration is seen only as aspirational and is not legally binding on the 186 member nations that signed it.

In a web source, in a news dated 30-12-2002, following the announcement of the first cloning of a human being, the Director-General of UNESCO, Mr. Koichiro Matsuura, categorically condemns any research or practice directed towards reproductive human cloning, and urges the international community to act without delay.<sup>90</sup> . He made

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<sup>88</sup> UNESCO, Universal Declaration on the Human Genome and Human Rights, 1997, Article 11.

<sup>89</sup> Ibid, Article 2.

<sup>90</sup> <http://portal.unesco.org/en/ev.php>.

allusions to the UNESCO Universal Declaration on the Human Genome and Human rights

Hence in the light of Matsuura, there can be no progress for humanity in a world where science and technology develop independently of all ethical imperatives.<sup>91</sup>

In another instance, UNESCO's document identifies the ethical issues regarding human reproductive cloning thus:

- technical and medical safety
- undermining the concept of reproduction and family
- ambiguous relations of a cloned child with the progenitor
- confusing personal identity and harming the psychological development of a clone
- concerns about eugenics
- contrary to human dignity
- Promoting trends towards designer babies and human enhancement.<sup>92</sup>

Looking at this declaration, it becomes very obvious that the major intent is the protection of the individual in his rights and individuality. The proponents of human reproductive cloning will always argue that the technology should be viewed with a more open mind in the sense that the advantages inherent in the technology should be well utilized instead of running into hasty declarations which may not actually see the benefits of the technology.

### **5.3 WORLD HEALTH ORGANIZATION- WHO**

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<sup>91</sup> Ibid.

<sup>92</sup> Human Cloning, Ethical Issues: UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, in <http://unesdoc.unesco.org/images/0013/00135928e.pdf>.

In the light of this discussion, the member states of the World Health Organization consider that developments in human reproductive cloning have unprecedented ethical implications and raise serious concerns for the safety of individuals and subsequent generations of human beings. Hence the organization has therefore resolved that the use of cloning,

For the replication of human individual is ethically unacceptable and contrary to human dignity and integrity.<sup>93</sup>

Hence the organization

...urges member states to foster continued and informed debate on these issues and to take appropriate steps including legal and juridical measures to prohibit cloning for the purpose of replicating human individuals.<sup>94</sup>

It should be noted that, the World Health Organization sees in cloning the possible instrumentalisation of the human person. Hence, it writes that,

The main objection to the use of human cloning for reproductive purposes is that it would be contrary to human dignity as it would violate the uniqueness and indeterminateness of the human being... as a decisive step towards the artificial production of human being,

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<sup>93</sup> WHA50.37

<sup>94</sup> WHA51.10

it would increase the risks of reducing people to objects.<sup>95</sup>

Going a little bit further, the World Health Organization identifies social and psychological consequences of the reproductive cloning technique because, it is seen as having the potential to disrupt intergenerational relations and family structures, with major psychological, social and legal consequences for the individual and communities concerned. Therefore, it is thought that the technique of reproductive cloning is likely to be used to reinforce rather than to combat society's prejudices, and to increase discrimination, for example, along the line of gender, ethnic group, caste and financial statuses.<sup>96</sup>

#### **5.4 COUNCIL OF EUROPE.**

Within the Council of Europe, is a group of forty states that opened a Convention on Human Rights and Biomedicine in 1997 for the signatures of its member. This was the first legally binding document on such an issue as the human reproductive cloning. Hence, following the news of Dolly's birth and Richard Seed's announcement, the council drafted a second protocol, the Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings, and opened it in early 1998 for the signatures of the member states that had signed the original Bioethics Convention.<sup>97</sup> This document states that,

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<sup>95</sup> World Health Organization, Implementation of Resolutions and Decisions, Report by the Director-General, April 8, 1998,p.2

<sup>96</sup> *ibid.*

<sup>97</sup> Additional Protocol to the Convention for the protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings, European Treaties, ETS No.164 (1997)

Any intervention seeking to create a human being, genetically identical to another being, whether living or dead is prohibited.<sup>98</sup>

It goes further to define the terms of the prohibition thus,

For the purpose of this article, the term human being genetically identical to another human being means a human being sharing with another the same nuclear genetic set.<sup>99</sup>

Through this document, most commentators believe that The Council of Europe tries in a great extent to reconcile the advances in biomedical sciences with respect for the personal dignity and for the individual as such. This document unlike the other document has a legal undersigning and that makes it different from other documents and pronouncement on human reproductive cloning.

## **5.5 AROUND THE GLOBE.**

Considering individual nations, many governments are silent on cloning. Others have embryo research laws that would indirectly limit cloning. We shall take a look at few countries considering the limited scope of this work.

In a CNN report titled International Opposition to Cloning, the reporter gives us an insight of what is happening around the globe with regard to human cloning debate and policy<sup>100</sup>.

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<sup>98</sup> *ibid.*

<sup>99</sup> *ibid.*

<sup>100</sup> CNN World, August 29, 2001, <http://edition.cnn.com/2001/WORLD/europe/08/07/clone.legislation/>

In the UK, the Royal Society believes that a world wide moratorium on reproductive cloning is necessary to deter scientist from indulging in such a act as cloning for reproductive reasons hence, the writer quotes the house of Lords report, “a human cloning ban would have a public support, is justified on scientific grounds and would assist in improving the public’s confidence in science”.

However, the 1990 Human Fertilization and Embryology Act permitted research on donated embryos only for strictly limited purposes, including studies on infertility and the detection of birth defects. Following from this, in January 31, 2001, Britain became the first country to effectively legalize the cloning human embryos Monday after the House of Lords approved a controversial change to government regulations aimed at allowing research stem cells. Like all other embryos used in research, the clones created under the new regulations would have to be destroyed after 14 days, and the creation of babies by cloning would remain outlawed. But in another development, the British High Court ruled in November 2001, that the previous regulation regarding fertilized embryos did not apply to cloned human embryos because they were not created by fertilization, implicitly stating that both reproductive and therapeutic human cloning were technically legal in the UK. This caused a lot of up roar and as such the British Parliament passed a law on December 4, 2001 explicitly banning reproductive cloning.<sup>101</sup>

In Italy, the country of Antinori, the law forbids “all forms of experimentation or intervention whose objective, even indirectly, is the cloning of humans or animals.”<sup>102</sup>

In Sweden, *The Swedish Research Council* in a paper presented to the government on December 4, 2001 called on the government to allow the cloning of human embryos to produce stem cells for medical research, arguing that the moral risks of this work would be smaller than the possible medical gains.<sup>103</sup> The council exalted the gains of therapeutic cloning.

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<sup>101</sup> *ibid.*

<sup>102</sup> *ibid.*

<sup>103</sup> *ibid.*

Coming to Africa, there have been several calls for the need to adopt instruments which codify the ethical, legal, social and cultural dimensions of the medical and life sciences as well as the technologies associated with them. In a statement contributing to the Africa-Europe Troika meeting of 2004, African Union admonishes that States have a special responsibility, not only with respect to bioethical reflection, but also in the drafting of any legislation that may stem therefrom. In matter of Bioethics, it is important that African Union and its Member States frame laws and regulations aimed at protecting human dignity and human rights and freedoms.<sup>104</sup>

Generally then, despite concerns about human cloning, there is no single national approach to cloning; and on the contrary, there are significant differences among nations created by differing values placed on the role of medical research in society, degree of trust in the scientific enterprise, prevailing ideas about the moral status of the embryo, values placed on the importance of assisted conception in society, and historical circumstances. Although, the UNESCO and Council of Europe documents aim at achieving a transnational harmonization, one can expect variations among nations as they define what is and what is not contrary to human dignity.<sup>105</sup>

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<sup>104</sup> [http://www.africa-union.org/News\\_Events/Calendar\\_](http://www.africa-union.org/News_Events/Calendar_)

<sup>105</sup> Bonnicksen A.L., *ibid.*, p.122

## **-CHAPTER SIX-**

### **6.0 TECHNOLOGISED PARENTHOOD: AN ETHICAL IMPLICATION OF HUMAN REPRODUCTIVE CLONING.**

In this section, we want to look into the issue of parenthood as it relates to human reproductive cloning. This we shall note forms the topic of our entire discussion in this thesis. One of the implications of human reproductive cloning is with particular reference to parenting and parenthood. What informs our disposition to this is the fact that every offspring must of social, biological necessity and sequentially be the offspring of somebody. Scientists we must mention have not been able to create man out of nothing; hence every offspring is traced to a parent being.

Biotechnological revolution invaded every aspect of human nature and in particular human procreation and in a direct and also extended form human parenthood. Hence because of the biological revolution man is faced with a technological parenthood and parenting. Authentic parenting is on the wings and technological parenting is stirring man in the face.

In human reproductive cloning, the idea of procreation which is a natural action that results in having a new life form is replaced with “making” in the laboratory without recourse to family or any conventional parent. Man may in his self overcoming be welcoming to this new form of human creation but

Regardless of the knowledge about consequences which many of the these proposals would require – a wisdom demonstrably impossible for men to have now about the remote future- many of these

proposals would irreversibly remove a basic form of humanity: the basis in our creation for the covenant of marriage and parenthood.<sup>106</sup>

It becomes imperative to say that one of the implications of human reproductive cloning is the perceived distortion of the traditional conceptions of fatherhood and motherhood culminating in a distortion of the entirety of parenthood. Hence we say that human reproductive cloning will lead to a technologised parenthood because it definitely will transform family life and bring to bear new forms of social relationship.

Technologised parenthood is the shift from the natural to the unnatural. The responsibility of procreation shifts from the conjugal love to the technological laboratory. The sobriquet “technologised parenthood” is a coinage of Donald Demarco. Demarco in his book, *“In my Mother’s Womb, The Catholic Church’s Defense of Natural Life”*, defines the appellation technologised parenthood as,

That particular use of reproductive technology which attenuates the meaning of motherhood and fatherhood ... it is directed towards reducing complex functions to their component parts rather than towards respecting the nature of the whole. It is more mechanized than organic; more impersonal than personal ...reality however reveals a process in which technology seeks to gain control of parenthood.<sup>107</sup>

In essence, we see technologised parenthood as one of the ethical implications of human reproductive cloning. Our discussion of this implication of human cloning as a separate

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<sup>106</sup> Ramsey P., 1970, p.130.

<sup>107</sup> Demarco D.,1980, p.208

problem and not as a general problem is because of the place it holds in our topic in this thesis. Let us then look at the intricacies of this implication as it effects human sexuality and the family in general having at the back of our minds the fact that the family is the root of the society.

## **6.1 HUMAN REPRODUCTIVE CLONING AND HUMAN SEXUALITY**

*This idea of technologised parenthood revolves around human sexuality.* Technologised parenthood in this sense is parenthood without sex or at least the conjugal relation that precede human procreation. Human reproductive cloning as a means to achieving technologised parenthood stands against human sexuality. Humanity is incomplete without its sexuality. And Demarco writing further states that;

Fullness of both motherhood and fatherhood demands the unification of procreation and bodified conjugal love. As this unity is compromised or violated, the moral and spiritual meaning of motherhood and fatherhood are proportionally jeopardized.<sup>108</sup>

Human reproductive cloning violates human sexuality. Many scholars uphold these position especially religious thinkers. Catholic theologians hold that human reproductive cloning separates the unitive and the procreative aspects of human sexuality, and that this in itself is an affront not only to the natural law, but also to the dignity of the conjugal union.<sup>109</sup> Further more, Heller points out that some other theologians like Oliver O'Donovan argues that human reproductive cloning makes children rather than begets

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<sup>108</sup> *ibid.* p.187.

<sup>109</sup> Heller J.C.,1998,p.170

them, and that such making diminishes humanity to the extent that is not natural, or part of what God intends for human sexuality.<sup>110</sup>

Ramsey in discussing the importance of human sexuality maintains that, the nature of parenthood may be summed up by saying that conjugal intercourse is a life-giving act of love making or a love-making act of life giving. Married couples from their one flesh unity together comes the one flesh of the flesh; not of course because of any materiality genetics can prove or disprove, but because of the communication of love<sup>111</sup>. Hence parenthood is understood both as a deep personal act and as a relation.

However, parenthood is more than giving life i.e. making new life forms from the point of view of being the biological parents. Just as we mentioned above in chapter one, we found out that one can be a parent through adoption and as such one can also be a parent of a cloned child without actually begetting the child through coitus.

Let us look a little further into human reproductive cloning and its implications to the family.

## **6.2 THE FAMILY IN THE FACE OF HUMAN REPRODUCTIVE CLONING**

Human reproductive cloning makes possible or rather permits children to come to the family through nonnatural means. This raises the possibility that such children might encounter special problems in forming their identities or in forming relationships with other members of the family who were born through natural means. Lisa Cahill argues that cloning implies that a child be born from a single parent and she views this as a “revolution in history” of such proportion that it should be viewed with “immense caution”. Cahill believes that cloning will result in an “unprecedented rupture in those biological dimensions of embodied humanity which have been most important for social

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<sup>110</sup> *ibid.*

<sup>111</sup> Ramsey P., 1970, p.130.

cooperation”, since cloned children would not be able to claim “the dual-lineage origin that characterizes every other human being”,<sup>112</sup>

The family is the microcosm of the macrocosm which is the society. The being of man cannot be complete without his sociality. Hence this existential truism can only be lived out well in the family which is the bed rock of the society. Human reproductive cloning tends to shatter this whole dynamism because in human reproductive cloning, one fails to ascertain the exact relationship that exists between the clone and other “natural” members of the family.

In human societies, we notice that every social system is arranged in a pattern of relationships which make up the system. To this effect, Talcott Parsons argues that each of us is an actor playing a role within a system of relationships. Therefore “a social system consists in a plurality of individual actors interacting with each other in a situation which has at least a physical or environmental aspect, actors who are motivated in terms of a tendency to the optimization of gratification and whose relation to their situations, including each other, is defined and mediated in terms of a system of culturally structured and shared symbols.”<sup>113</sup>

Human reproductive cloning as such focuses more on the technology rather than taking into consideration this inherent culturally structured symbol of human relations. The Family Research Council, in giving out reasons to ban cloning points out that “reproductive cloning would confuse relationships. A cloned child would have only one parent, who would be its genetic twin. Then would the clone be the person’s child or sibling? This would pose great problems of inheritance.”<sup>114</sup> All these would culminate in a transformation and disruption of a system that will be hard to reformulate.

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<sup>112</sup> The above is quoted in The National Bioethics Advisory Commission, 1997, p.53.

<sup>113</sup> <http://www.mdx.ac.uk/www/study/sshglo.htm>.

<sup>114</sup> <http://www.orthodoxytoday.org/articles/FRCCLoning.shtml>. 20<sup>th</sup> April 2005.

Apart from the above mentioned foreseen implications, the psychological disaster such a technology as human reproductive cloning will generate is enormous. In an online library presentation, James Q. Wilson believes along side with Leon Kass that we are profoundly threatened by asexual reproduction that produces single parent offspring; such offspring will experience confusion over their identity, suffer from being produced as artifacts and become the victims of despotism.<sup>115</sup>

However, proponents of human reproductive cloning do not see any problem with the issue of human parenthood as been torn apart by human reproductive cloning. Such liberals holding tight to reproductive autonomy claim that human reproductive cloning will enable homosexual couples and single parents to have children of their own; and they believe that life is what you make out of it no matter the social integration that people profess.

More still, they believe that human cloning will improve the technological dynamism the world seeks as against a dormant world that is upheld by conservatives.

Taking cognizance of all these, human reproductive cloning, stands at a cross road considering the ethical implications of the technology. Looking back then at what we have discussed, it becomes pertinent to put up an evaluation and a conclusion.

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<sup>115</sup> Questia online library. <http://questia.com/PM.qst?>

## **-CHAPTER SEVEN-**

### **7.0 EVALUATION AND TENTATIVE CONCLUSION**

In chapters three and four and also in chapter six, we tried to outline the various implications of human reproductive cloning vis-à-vis the various arguments in support and against human reproductive cloning. However, in this section, we want to evaluate the concept of human reproductive cloning vis-à-vis the concept of parenthood. We shall start by having an initial excursus on the meaning of parenthood and then we shall place it along side what we have already discussed about human reproductive cloning.

### **7.1 PARENTHOOD**

The free online dictionary defines a parent as one who begets, gives birth to, or nurtures and raises a child; a father or mother, an organism that produces or generates offspring.<sup>116</sup> While the same dictionary sees parenthood as the state of being a parent.<sup>117</sup> This may not be the entirety of what we mean by parent and parenthood. This is so because the various assisted reproductive technologies and in a special way human reproductive cloning have compelled us to think more clearly about what it means to be a parent.

Murray and Kaebnick of The Hastings Center New York outline three possible meaning of parenthood that is, parenthood as biology; parenthood as intention; and parenthood as childrearing. Biology here includes both genes and gestation. The child born to a woman who is also its genetic mother is her biological child in both senses. The second meaning which has to do with intentionality entails when a woman and a man intend to have a child. Parenthood as intentionality is usually and commonly linked to biology, but it is not because the use of other people's ova, sperm or womb can attenuate or sever the biological tie. Then the third which is the concept of parenthood as rearing children

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<sup>116</sup> <http://dictionary.reference.com/search?q=parent>

<sup>117</sup> *ibid*

emphasizes the provision of physical, emotional, financial needs of the child. Rearing parents may be attached to the child by biology; but the ancient practice of adoption shows that people can be parents in the complete absence of biological ties.<sup>118</sup>

In explaining further the meaning of parenthood, Murray and Kaebnick maintains that the relationship between parent and child is best understood in terms of mutuality, rather than in terms of property or stewardship. Mutuality here is a property of an actual relationship, not merely a biological tie.<sup>119</sup> This then means that parenthood is not just an act of begetting as it is seen in other lower animals and plants but an act of love and care which may also and sometimes necessarily involve begetting.

However, it is worthy of mention here that there are other accounts of parenthood. For instance the Stanford encyclopedia of philosophy outlines four major accounts of parenthood: genetic accounts, gestational accounts, intentional account and causal accounts.<sup>120</sup> Most of these accounts are interrelated and complimentary. We shall not discuss these accounts in details considering the scope of this work but suffice it to mention here that all these accounts try to define parenthood amidst technological and cultural dispositions.

According to the Stanford encyclopedia of philosophy, genetic account has to do with the direct genetic derivation of the offspring. In this sense one can talk of familial relations such as cousins, sibling etc. which is founded on a genetic tie.<sup>121</sup> Gestational parenthood as the name implies puts the parent to be the gestational mother of the child; thus in a

Reproductive context in which a child's  
gestational mother differs from its genetic mother-

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<sup>118</sup>Murray T.H., Kaebnick G.E., Genetic ties and Genetic Mixups in JME Online:  
<http://jme.bmjournals.com/cgi/content/full/29/2/68>

<sup>119</sup> ibid.

<sup>120</sup> <http://plato.stanford.edu/entries/parenthood/>

<sup>121</sup> ibid.

as happens in egg donation or gestational surrogacy- it is the gestational mother who has the primary claim to parental rights and responsibilities.<sup>122</sup>

Intentional account of parenthood in the encyclopedia's view is torn between pluralistic version i.e. parenthood as the orchestration of procreation with intent to rear; and monistic version which holds that being a parent involves nothing more than having the right sort of intentions.<sup>123</sup> The causal approach to parenthood holds that causing a child to exist is enough to make ones claim to parenthood licit.<sup>124</sup> All these different accounts of parenthood can be further analyzed to find their defects and merits. But for the purposes of this work, I will give credence to the account of parenthood given earlier by Murray and Kaebnick i.e. parenthood as mutuality. My choice of this account is more or less because of its moral background. And as such I will evaluate human reproductive cloning having in mind their approach to parenthood which puts parenthood above normal begetting but also of necessity involves love and care.

## **7.2 APPLICATION**

Evaluatively then, human reproductive cloning when placed along side the notion of parenthood as biology which is the culmination of gene and gestation, one finds out that human reproductive cloning could not be reckoned with. This is so because at the level of gene the clone will be the child of the embryo donor who may not be the surrogate mother but at the level of gestation the clone will be the child of whoever that gestated it. If this is so, then in a case whereby the provenant clone gestates her own clone, then she will be its mother, even though genetically she will be its sister; but if someone else gestates it, then that person is its mother and that clone is not morally speaking related in

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<sup>122</sup> *ibid.*

<sup>123</sup> *ibid.*

<sup>124</sup> *ibid.*

any way to the source or her parents.<sup>125</sup> This definitely confuses human relationship as it applies to kin relationship and more precisely parenthood.

Parenthood as intention when juxtaposed with human reproductive cloning depends largely on the type of intention that is asserted. For instance, if the source agrees to be cloned but is not interested in the outcome as in the case of embryo donation, then intentionalism would regard neither the source nor her parents as parents of the clone; only the laboratory where the child was created will be its parents.<sup>126</sup> This poses a serious problem because going by the definition of parenthood which of necessity involves mutuality, human reproductive cloning stands against the right of a child to have a parent who should love and care for it other than being left at the mercy of scientists whose intention is research based. Although the intention might also be to have a child as in the case of infertile couple; but we should not overlook the other possibility mentioned above.

In the instance of parenthood as “rearing”, human reproductive cloning becomes problematic because the nature of the relationship distorts the intention. One wonders at the psychological disposition of the “rearing parent” who is rearing her twin and at the same time her offspring. Moreover the morality of such parenthood stands to be questioned considering the fact that it goes against already existing traditional notions of human relations and “folk system”.

Then human reproductive cloning disrupts the meaning and normal lineage of parent-child relationship. It does this through a confused postulation of a relationship that does not fit into the already existing social design of human families; for instance the scientist-clone relationship wherein the scientist may qualify as a parent considering in a very remote sense the causalist account of parenthood. One wonders at the morality of such an obscure notion of parenthood.

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<sup>125</sup> *ibid.*

<sup>126</sup> *Ibid.*

In as much as there are several accounts of parenthood which definitely yield confounding interpretations to the parent clone relationship, it becomes obvious to say here that the notion of parenthood as mutuality which presupposes love and affinity stands supreme and as such human reproductive cloning falls below this line since it in a great extent presupposes a technologised parenthood devoid of the congruent elements of human relationship with respect to human parenthood..

This evaluation may not be exhaustive therefore further analysis considering the development of the technology in question i.e. human reproductive cloning will not be out of place.

### **7.3 CONCLUSION**

Conclusively, human reproductive cloning is one of the technological advancement of our time that is stirring man in the face. Among its promises is the hope of advancing technological knowledge and achieving a breakthrough in solving fertility problems. Hence infertile couples can have their own genetically related children. More still the world can now design their own babies according to their test and likeness without having to worry about the uncertainties that surround human procreation.

However when placed along side its perceived disadvantages; ranging from pure repugnance to the unguaranteeable nature of the technique; coupled with the crucifixion of human dignity and identity, it becomes obvious that the future of man in the face of such a technology is at stake. One finds out that the technology is not the best for man as at the moment. Great in the list is the threat to human parenthood and parenting.

Human life is sacred and therefore researches involving human life should be critically analyzed to check for its effects and implications for the sacredness of human life.

Human reproductive cloning is a technology that directly involves life. Its implications are also felt in the playground of life which is the family. Human life normally starts with a conjugal relation which results in fertilization and the subsequent natural processes that follow. It becomes obvious that human reproductive cloning will alter human families in the way in which they relate with each other. A technologised parenthood will take the place of actual and normal parenthood and the act of parenting which is basically a characteristic of man as a mammal will be thrown to the wings and terribly jeopardized. Human sexuality which actually defines and gives meaning to procreation is relegated to an insignificant dimension and the powers of human sexuality redefined.

When placed along side the notions of parenthood, human reproductive cloning connotes an erodement of the normal and natural notion of human parenthood. The outcome of this erosion is a technologised parenthood wherein technology takes precedence in determining what defines the parent-child relation.

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