

Chapter I

Human Cloning and the Ethical Frameworks

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Chapter I

Human Cloning and the Ethical Frameworks

1.1. Introduction

The present chapter makes an attempt to provide a brief introduction to the concept of cloning from scientific and historical point of view. It primarily concerns with the origin and historical development of the concept of human cloning and a scientific analysis of its different kinds based on the bio medical study. It also deals with the problem of human cloning from the ethical point of view. It also tries to study the most recent and controversial ethical and moral issue of human cloning and its development so far in different field of modern biology. It tries to register the ethical understanding of the concept of human cloning.

The chapter also to attempts to highlight the corresponding ethical frameworks which situate cloning as a moral challenge. In this connection, an attempt is made to study systematically deferent ethical frameworks, which has an important influence on the concept human cloning. Finally, the chapter ends with the enquiry whether these ethical frameworks able to justify the acceptability of human cloning. Finally, it also studies the role of ethical justifications in terms of human cloning dispute with special reference to autonomy justification.

1.2. Cloning: A Brief Overview

Cloning is to be defined as the process of creating an exact copy of something. In genetic science, the term ‘cloning’ refers to the process of making an identical copy of the DNA¹ of an organism. It is the process of replicating the genes present within a DNA molecule in order to make exact copies of an organism. The word ‘clone’ has many connotations and is used to describe various different biological entities. It may

be used either as a noun or a verb. As a noun, it is used in different two ways. It is applied first to the individual offspring that are produced by asexual reproduction. It is also applied to all the asexually produced offspring collectively, and to their identical parent. As a verb, 'clone' is used both intransitively and transitively. Plants that reproduce asexually are said to clone; a scientist who induces asexual reproduction in some creature is said to clone it.²

It has become very difficult to point out the true definition of cloning. The word 'clone', derived from the Greek word 'klon', refers to asexual reproduction, which is also known as vegetative reproduction. Cloned molecules, cell, plants, and animals are genetically identical copies produced from the sexual process without any intervention. 'Cloning' is the copying of biological material to produce identical genetic copies from a single entity, such as genes, cells, or organisms. Scientists use the word 'cloning' in many different ways. The first documented use of the term 'cloning' was in the context of asexual plant reproduction.³

Again, the term 'cloning' also refers to the production of genetically identical organisms via somatic cell nuclear transfer (SCNT).⁴ In this process, scientists remove genetic material from the nucleus of a donor adult cell to an egg whose nucleus, and thus its genetic material, has been removed. The reconstructed egg containing the DNA from a donor cell must be treated with chemicals or electric current in order to stimulate cell division. Once the cloned embryo reaches a suitable stage, it is transferred to the uterus of a female host where it continues to develop until birth. In other words, nuclear transfer is a technique where an animal may be produced from a nucleus. That nucleus which is originating from a single cell that is transferred to an enucleated egg. An enucleated egg is such from which the genetic material had been removed. The cells providing the nucleus can be from embryos, fetuses or adults.

Again “Somatic cell nuclear transfer” refers to a process in which the nucleus of a somatic cell of an existing organism is transferred into an oocyte from which the nucleus has been removed.⁵ The National Bioethics Advisory Commission (NBAC) defines cloning in its simplest sense as “The making of identical copies of molecules, cells, tissues, and even entire animals.”⁶

Searching through the *American Heritage Dictionary*⁷, it is found that the idea of a clone can be interpreted in four different ways-

1. A clone is a group of genetically identical cells descended from a single common ancestor, such as a bacterial colony, whose members arose from a single original cell as a result of binary fission.
2. Clone is an organism that descends asexually from a single ancestor, such as a plant produced by layering or a polyp by budding.
3. Clone is the replica of a DNA sequence, such as a gene, produced by genetic engineering.
4. Clone is one that copies or closely resembles another as in appearance or function.

1.3. History of Cloning

The word ‘Cloning’ is not a new addition to the Dictionary. It is as old as primeval in history. Cloning is a term originally applied to a botanical technique of asexual reproduction.⁸ The initial use of the term cloning is in the early 20th century, in the field of botany which designates plant grafts. Plants that reproduce asexually are said to clone; a scientist who induces asexual reproduction in some creature is said to clone it. Elm trees clone themselves to form entire copies.⁹ Here after the term ‘Clone’ eventually came to be used for micro-organisms as well. All the dictionaries

commonly defined clones as an organisms derived from other organisms with the same genetic make-up.

The initial era of cloning started in 1952 with the work of the great biologists Robert Briggs and Thomas King in Philadelphia.¹⁰ The use of 'nuclear transplantation' as a means towards cloning animals was first developed by two great scientist. These scientists used frog eggs for their experiment because the eggs of frog are very large and readily accessible to manipulation. Again, the Cloning becomes a popular culture in the 1980s. In 1983, David Solter and James McGrath established a protocol for transferring nuclei from one mouse embryo to another.¹¹ This was critically important for two reasons: - (1) It demonstrated the general feasibility of using nuclear transfer technology in mammals and (2) It introduced a modification of the technique used in frogs that greatly increased the rate of embryo survival. Again, in the year 1997, 23nd February, another remarkable development took place which shocked the foundations of biology and philosophy.¹² This time, a clone named Dolly was introduced, who had been cloned directly from a single cell taken from the breast tissue of an adult donor. Clone Dolly was engineered by Dr. Ian Wilmut, a great veterinary researcher and his colleagues at the Roslin Institute. Dr. Wilmut and his colleagues announced that they had cloned a viable lamb by transplanting the nucleus of a somatic cell from a six years old sheep to an enucleated egg.¹³ Dolly was born after a normal gestation period of about five months. Genetic tests proved Dolly as a clone and from that day she became an international icon. Dolly was the first mammal to be cloned from an adult cell. Subsequently, Scientists from Hawaii reported on July 23, 1997 that they had developed number of adult mouse clones and even cloned some of those clones again.

Again, prior to Dolly another series of experiments were conducted in the year 1995. This experiment produced two different sheep named Megan and Morag. In 1995, Dr. Ian Wilmut and Dr. Keith Campbell successfully cloned these two mountain sheep, from embryonic sheep cells. In march 1996 almost exactly one year before the world got news of Dolly; the Roslin team announced a stunning breakthrough: the birth of Megan and Morag, two sheep cloned from mature embryo cells.¹⁴ One year later, in 1996, Wilmut and Campbell successfully cloned Dolly, the first mammal to be born from an adult somatic cell, specifically an udder cell, a sheep's mammary gland.¹⁵ The actual method of nuclear transfer was the same through which Megan, Morag and Dolly were produced. But, the only difference in this experiment was the nature of the cells that scientists used as donors. It is declared by the scientists that in the first series of experiments, they used embryo cells. But, in the case of dolly scientists used embryo, fetal and adult cells.

1.4. Human Cloning

According to the scientific analysis, 'Cloning' is the copying of biological material to produce identical genetic copies from a single entity, such as genes, cells, or organisms. However, scientists used the word 'cloning' in many different ways at different time. The term "human cloning" is routinely used by the scientists to describe a kind of accepted and approved research. This description can be summarized as (1) 'clones' of human genes placed into various cell types to study their function; (2) human genes 'cloned' into bacteria to produce proteins for therapeutic purposes and (3) 'cloning' of human cells for the study of cancer or genetic diseases. These types of analyses of cloning are integral instruments in biotechnology. It has been used to produce important medicines, diagnostics, and vaccines to treat heart attacks, cancer, kidney disease, diabetes, hepatitis, multiple

sclerosis, cystic fibrosis, and other diseases of human beings. Many scientists hope that, with proper research and application, embryonic stem cells can be used to treat a wide variety of afflictions, e.g., tissue toxicity resulting from cancer therapy (National Cancer Institute, 1999) Alzheimer's disease,¹⁶ Parkinson's disease,¹⁷ diabetes,¹⁸ heart disease and limb paralysis.

The possibility of 'human cloning' has been followed from another very important idea of the popular imagination. It has started in the popular entertainment world since long period of time. For example, in the year 1979, a thriller novel, "*The Boys from Brazil*," subsequently made into a Hollywood film and depicted a Nazi war criminal, which raises a colony of young Hitler 'clones'.¹⁹ At that time some people thought that this new technology may evoke visions of Aldous Huxley's novel "*Brave new World*", where cloning people into different groups is a part of comprehensive programme of social engineering that deprives individuals of their freedom.²⁰ Huxley's novel states that human cloning is a major sequence which not only drives the story alone but also encouraged the readers to think critically about what identity means. It was sometimes more popular in pure science fiction than actual scientific experiments. In this sense, the story of Dolly gave added impetus to this discussion and expressed a serious concern about issue of human cloning.

In the context of Dolly, the first mammal clone produced from an adult cell, the reaction of the scientist community was as a whole friendly and positive, but the reaction of the public at large was more or less negative. This finding raised the possibility of cloning human cells to grow tissues and organs for transplantation. It also raised the possibility of cloning complete human organisms.²¹ The growing interest surrounding the prospect of cloning human beings at that time has been tempered with carefulness. The basic idea was that human beings also could be cloned

as well. Mass people were terrified by this unique prospect. However, the idea of ‘human cloning’ was called morally despicable, repugnant, totally inappropriate, ethically wrong, socially misguided and biologically mistaken etc. On the recommendations of National Bioethics Advisory Commission, President Clinton drafted the Cloning Prohibition Act of 1997, which outlawed somatic cell nuclear transfer for the purpose of creating a human being. Significantly, the Act did not call an outright ban on all cloning research, but included a five year ‘sunset clause’ that allowed important and promising work to clone DNA, cells, tissues and nonhuman animals.²²

The idea was that the technique of cloning should not be used only to produce animals for the production of medically useful drugs, but also to produce ‘twins’ i.e., some kind of sheep with especially fine wool, or some kind of cow with specially high-milk or beef, and in this way the practice should catch on in a big way. If this is the scenario then loss of genetic diversity might be a more serious issue. If this is so and cloning ever become a really popular way of having human babies in near future, then the question of the practice on human genetic diversity would also have to be reconsidered seriously.

1.5. Different Types of Cloning

The scientists classified cloning into three different types. These three types of cloning are namely, (1) Embryo cloning, (2) Reproductive cloning or Adult DNA cloning and (3) Therapeutic cloning or Bio-medical cloning. In this connection we are giving an outline of these three popular types of cloning.

1.5.1. Embryo Cloning: The first kind of cloning is called as embryo cloning. Embryo cloning is a medical technique which produces monozygotic (identical) twins

or triplets. This technique simply tries to duplicate the process that nature uses to produce twins or triplets. This procedure is important in livestock breeding. In the case of an embryo cloning procedure, one or more cells are removed from a fertilized embryo which encourage developing one or more duplicate embryos. However, this particular procedure has been experimented for many years on various species of animals. But, only a very limited number of experimentation has been completed in case of human beings.

1.5.2. Reproductive Cloning or Adult DNA Cloning: The second kind of cloning is called as reproductive cloning. Reproductive cloning is the foundation of most controversial debates regarding the genetic revolution in the field of Bio-engineering. The use of human cloning has been improperly called “reproductive cloning” since its ultimate goal is to reproduce an adult human being. It is reproductive cloning that result in a copy of a specific human being. When a human embryo is implanted in the uterus of the woman to which the generating egg belongs or of a surrogate mother, the delivery of a newborn baby is expected following pregnancy, as has been demonstrated as mammalian cloning. The reproductive cloning is concerned with making cloned humans. This technique also is used to produce a duplicate copy of an existing animal. The scientist has used this technique to produce a clone of a sheep and other mammals. In this cloning procedure the DNA from an ovum is removed and it is replaced with the DNA from a cell, which is again removed from another adult animal. The fertilized ovum is now called a pre-embryo. This pre-embryo is again implanted in another womb which allowed developing into a new animal.

1.5.3. Therapeutic Cloning or Bio-medical Cloning: The third kind of cloning is called as therapeutic cloning or bio-medical cloning. It is another kind of cloning

technique which is used again for the purpose of medical treatment. In modern biology, it is treated as one of the most divisive techniques which involve cloning adult cells for use in medicine as well as an active area of bio-medical research. Therapeutic cloning is the transfer of nuclear material isolated from a somatic cell into an enucleated oocyte in the goal of deriving embryonic cell lines with the same genome as the nuclear donor.

However, among these three techniques of cloning, therapeutic cloning is related to reproductive cloning. Though, therapeutic cloning technique is closely related to reproductive cloning, in which a copy of an organism is produced, but both the procedures of cloning have two different goals. However, therapeutic cloning is entirely different and does not involve the creation of an exactly perfect copied human being. In therapeutic cloning, no sperm fertilization is involved nor is there implantation into the uterus to create a child. The main target of therapeutic cloning procedure is to produce a healthy copy of a sick person's tissue or an organ for transplant. It promises a future in which damaged and diseased tissues will be replaced without worrying about immune rejection. This procedure of cloning would be accepted as most reliable and superior in case of organ transplantation from the other human being.

Again, therapeutic cloning has two different forms. They are namely, the therapy for inherited mitochondrial diseases and the stem cell therapies. The mitochondrial disease is transmitted down the maternal line because mitochondrial DNA is transmitted through egg cells, there being no mitochondria in sperm cells. Such diseases can sometimes be treated. The most effective treatment would be to prevent inheritance of the defective mitochondrial DNA. On the other hand, stem cell

therapies are less obviously related to reproductive cloning. The stem cell therapies do not aim at the creation of a child who is to be born. But it aims at using reproductive techniques directly or indirectly to produce stem cells for therapeutic purposes.

1.6. Human Cloning: The Ethical and Moral Challenges

The debate of human being has reached a climax point in present day among all stages of people. The debate involves the scientists, legislators, religious leaders, philosophers and different international organizations of the society. Most of the scientific, governmental and religious organizations of that time opposed reproductive cloning. Even, a serious ethical concern has been developed by the future possibility of clones. Unfortunately of these diverse groups of people none of them thought harmoniously and worked together for a common goal. Over all, there was a general agreement comes out from this issue that human ‘reproductive cloning’ for the purpose of producing a human genetically identical baby of human being is totally unethical. Leon R. Kass stated in his Book that “the programmed reproduction of man will, in fact, dehumanize him”.²³ He also believes that we should declare human cloning unethical in itself and dangerous in its likely consequences. This procedure is not free from high risk as the failure rate of this process is too high. The failure rate of this process is more than ninety percent and this high rate morbidity of animal cloning strongly rejects its applicability in the case of human beings. Here after, animals which have is cloned also have to suffer high rate of deformity and disability. Therefore, the ethical understanding of cloning, especially with regard to human beings which openly challenges its easy limitations.

Now, from the theoretical point of view the problems of cloning techniques are resolved so far, but there are so many questions remain unsolved even today. These fundamental questions are namely, on what ground should the reproduction of human babies by cloning procedure to be allowed or prohibited? Whether the procedure of cloning only be applied especially for those sterile couples or for those homosexual couples and who would become a biological offspring? Now, how would a child feel or experience his or her life after birth as an asexual reproduction? Is the human clone a 'unique individual' or as a genetic 'prisoner'? Is a cloned child simply a twin of its genetic donor? Should the parents choose the inherited characteristics of a cloned baby? The scientists and the bioethicists preoccupy their mind including these important issues. The scientists also defend that the reproductive cloning technique is potential to endanger human identity. Of course, many of them argue that cloning violates ethical principles; therefore it has to be prohibited. As for example, John Harris has stressed, to deny humans the possible benefits of cloning and to deny them the freedom to choose how to reproduce is a violation of fundamental human rights and ethical principles, such as respect for human dignity, equality, and autonomy.²⁴

Cloning is a complex and highly uncertain procedure. Therefore, there should be definitely some major ethical issues in terms of human cloning. Here we can see some major ethical aspects of human cloning which can be discussed on the basis of following important points.

a. Do Not Harm Others:

All cloning research violates a fundamental principle namely, doing no harm to other creatures. Animal cloning experiments, during which a large percentage of the clones die prematurely or have serious birth defects, obviously violate this principle.

Human cloning, many experts say, would involve the same failure rate. As a result, most people reject all kinds of human cloning, including animal cloning.

The principle of not to do any harm may have some application to cloning at its early stages. As human being we all are morally obligated not to inflict any harm on a child which is born through human cloning technique. However, the cloning procedure is found very much harmful for the child who is come out as a result after a long waiting procedure. Today, the present information of scientific development also indicates that this cloning technique is not fully safe to use in human beings.

b. Significance of Human Dignity:

In our society, we belief in individual human dignity. Each and every individual have the moral right and responsibility to confront for themselves and the most fundamental questions about the meaning and value of their own lives. In this sense, the existence of human cloning or genetic identical copy is interpreted not only as an assault on individuality but also an attempt to destroy the very essence of human dignity. Because, being a form of artificial asexual reproduction, human cloning represents an excellent manipulation of the essential relationship and interdependency which are at the origin of human having offspring as a biological act and an exercise of human desire. Therefore, treating a human being for the only purpose of producing therapeutic material, would not respect the dignity of the created human being.

Again, human cloning procedure objectifies human sexuality and modifies the bodies of women. In doing so, women are deprived from their innate dignity. They only remain as the suppliers of eggs and wombs. In other words, the dignity of a person who is cloned similarly threatened because other persons and the technological powers which are exercised undisputed control over the duration of the life of the

person as well as his or her unique identity. Reproductive cloning threatens biological uniqueness and imposes the genetic composition of an already-existing human being on the cloned human being.

The cloning technique in general would violate the human dignity and individual rights. It is observed that human cloning in any form and for any purpose should not be ethical because it violates human rights and certain basic ethical norms. Human cloning also violates the theory of equality and dignity. The instrumentation of human beings through the deliberate creation of genetically identical human beings is always contrary to human dignity. It is a parallel misuse of both biology and medicine. The UNESCO stated that practices which are contrary to human dignity, such as reproductive cloning of human beings, shall not be permitted.²⁵

c. Human Uniqueness and Individuality:

There is one more important ethical issue in case of human cloning. Human cloning creates persons by depriving them from their uniqueness. The born 'twin' form cloning technique will lack individuality or the freedom to create his or her own identity because of confusion about or expectations aroused by having the same DNA as another person. According to the Oxford English Dictionary, a 'person' is "a self-conscious or rational being." This is similar to the definition given by Derek Parfit, who claims that "to be a person, a being must be self-conscious, aware of its identity and continued existence over time."²⁶ But it obviously contradicts the concept of respect for the individual person which undermines our moral system of the society. Once human beings are deprived of their uniqueness, then they will be devalued. So, producing human being by cloning procedure also poses a serious risk to our humanity. Such a view was certainly shared by the National Bioethics Advisory

Commission, which cited “unknown risk” in its assessment of safety issues, as part of the justification of recommending a ban on human cloning.²⁷

d. Respect for Human Persons and its Identity:

It is true that our media always gives particular attention to the supposed danger to individuality and uniqueness. It is also concern about our losing uniqueness and even our individual identities derives from our anxiety over the clones as mere copies. Daniel Challahan, one of the founding father of American bioethics, cloning “a profound threat to what might be called the right to our own identity”.²⁸ There is a belief that human value or human dignity is a fixed unity attached to our genetic pattern. This attitude derives from the widespread belief in genetic determinism, that is to say our personalities and our behaviors are genetically determined, whether this is toward violence, a tendency to adultery or happiness etc. Many of the arguments against cloning have focused on the idea that clones would be harmed because they would lack of unique identity possessed by naturally begotten human beings.²⁹

e. Moral Significance of the Family and its Importance:

Again, the practice of human cloning also creates a threat in terms of the moral significance of the family. It creates problem in finding out the meaning of parenthood and the role of the family in the life of the entire community. In this situation people also starts fearing that the parents who like to choose their child’s genome through somatic cell nuclear cloning will expose the child just as a ‘commodity’ or an object which serve their own ends.

Perhaps cloned children would suffer through confusion over family relationships.³⁰ Any individual who is created by cloning procedure would be treading new ground in terms of family relationships. What would be the status of the original

cell donor? Are they the real father or mother of the child? Will we call more correctly as its sibling? What would be the consequence to say the father-daughter relationship, if the daughter and wife were genetically identical? Would a woman have a normal mother-daughter relationship with her clone? In this context, a cloned child might feel completely alone in the world as because clone is a product of science and machinery rather than the offshoot of a family hierarchy.

Again, some critiques expressed their view that nuclear transfer process of cloning using adult donor nuclei to generate a complete human being would have some negative impacts on our family relationships. In our society, from the time immemorial, sex, reproduction, and family structure have been connected in a consistent manner. However, concept of human cloning will radically alter these connections. For example, the mother of a clone could actually be considered as the child's sister. Again, a social father, for example, is not likely to suddenly rescind his responsibilities toward his daughter because the child is, genetically, his wife's twin sister.³¹ In addition to this, the significance of sexual intimacy in terms of having offspring may become very poor. Of course many others have rejected this view. Some of them also commented that these new prospects of cloning human beings from the genetic material of an adult cell challenge some of the most fundamental concepts which we respect ourselves as social and spiritual beings. These fundamental concepts include what does a parent, a brother or sister, a family exactly means.

Again, there may some unprecedented relational circumstances would arise if we accept the concept of human cloning. For instance, birth of distant relative may be genetic brother or sisters. There might be a question of marital prohibitions among them. A supposed destruction of the family unit is another additional argument against human reproductive cloning. Wide-spread cloning would exacerbate the

problem by distorting generational boundaries, which would add a layer of confusion to society's conception of the nature of the family, and the roles of its individual members.³² There may be huge possibility of negative impact on the concept of family because of these arguments against human cloning.

f. Lack of Respect for Nature:

Again, the rapid speed of scientific advances in cloning procedure has defeated public discussion about the control of the society and the environmental impact of human cloning. The earth is on the margin of experiencing a new kind of pollution. This kind of new pollution is known as biological pollution. The procedure of cloning animal as well as cloning human disrespects the species as well as the individual. There are some scientists who openly talk about redesigning, or improving, human beings and animals. However, before imposing such type of risks on individuals or society, the scientists must have a solid opportunity of what they propose. Today humanity stands on the brink of a totally new and alarming change in our earth, as well a change which could carry us into an entirely new realm of artificial existence and a new type of pollution biological pollution more ominous possibly than chemical or nuclear pollution.³³

1.7. Human Cloning: Different Opinions

Human cloning is the creation of a genetically identical copy of an existing human being. The term cloning is generally used to refer to human beings artificially produced. But it is found that the human cloning issue itself is very much controversial. There have been numerous demands for a temporary stop for all kinds of development in the field of human cloning.

1.7.1. Reproductive Cloning

A group of scientists confidently trying to advocate that human reproductive cloning may be especially beneficial for the purpose of fertility treatment. Human Cloning should advance because science must always be free to go where it wishes to go.³⁴ So, apart from the most controversial aspects of human cloning, let us look few points on its favor. Human reproductive cloning must help to relieve the suffering of infertile couples. As Professor Robert Edwards, the great English scientist who helped create the world's first test-tube baby in 1978, so eloquently prophesied recently "Cloning, too, will probably come to be accepted as a reproductive tool if it is carefully controlled."³⁵ Cloning procedure would allow infertile couples to have their own genetic offspring. It is helpful where a couple is infertile, due either to immature sperm or a low sperm count in the male, or damaged fallopian tubes in the female. It also helps couples who are at risk of transmitting a severe genetic disease, or those who cannot or do not wish to conceive a baby. It offers lesbian couples a way to have children of their own, as it is not normally possible in their relationship. The lesbian and gay couples also might decide to have a cloned child so that it would be genetically related to at least one of them. Reproductive cloning technique also helps normal couples to have their babies based on their own choice. It could also be used to bring back to life someone's beloved dead ancestors. If the couple wants to give birth to their beloved grandmother, it becomes possible with this procedure.

In another similar situation, if a couple knew that their 'naturally born' child may ran the risk of inheriting hemophilia or cystic fibrosis, their access to reproductive cloning technique would mean excluding the defective gene or giving birth to a healthy child.

Again, suppose a woman with one embryo produced during in vitro fertilization then she has only a 10 to 20 percent chance of becoming pregnant. If that embryo could be cloned and converted to two, four or eight embryos the possibility of successful pregnancy would increase significantly.

Our freedom of take decision whether to have an offspring is a deep concern of moral value which underlies many of our social practices. It is known as procreative liberty. We regard such liberty to be an important part of personal liberty and to have a great moral value for the individual.

It is true that human reproductive cloning is a much disputed ethical issue. The technique used in cloning human embryos is very similar to the technique used in cloning animal embryos. It is just because of the high rates of deformity, disability and death, resulting from animal cloning, people also raised question whether resulting humans would be healthy and treated like normal individual. For example, clone Dolly was the only survivor out of 277 embryos which were cloned in the experiment conducted by Wilmut at the Roslyn Institute in Scotland. Unfortunately, Dolly was euthanized in 2003 at the age of 6 years as she developed a virus-induced lung tumor. It is not clear how long Dolly might have been expected to live because the natural life spans of sheep have not been well studied. "Nine months and then we eat them," Dr. Wilmut said. He added that while it is possible for pastured sheep to live for 11 or 12 years, those who live indoors, as Dolly had, are prone to develop lung infections. Dolly was kept inside for security reasons.³⁶ This is itself might seem to argue for caution where cloning human beings is considered. John Harris has said that the safety consideration is the one decent argument against cloning.³⁷ This new technologies of reproduction have created both new risks and new rights. At this stage, the risk of congenital anomalies constitutes a strong argument against creation

of humans by human reproductive cloning. It is argued that human reproductive cloning should not be carried out because human clones are also likely to exhibit abnormalities like other experiments due to inappropriate epigenetic reprogramming.

1.7.2. Therapeutic Cloning

Therapeutic cloning is the procedure in which human stem cells are used in order to study human development and treat disease. It has been identified as one of the most divisive subjects in modern biology (*Nature* 2004). However, therapeutic cloning is closely related to reproductive cloning, in which a copy of an organism is produced. Of course, both these two procedures have very different goals. The therapeutic cloning is completely different from reproductive cloning technique and it does not involve the creation of a perfectly copied human being. No sperm fertilization is involved in therapeutic cloning, nor is there implantation into the uterus to create a child. The goal of therapeutic cloning is to produce a healthy copy of a sick person's tissue or organ for its transplant. It would be more trustworthy to rely on organ transplantation from other people. The main business of reproductive cloning is to create a human being. On the other hand, the main business of therapeutic cloning is to generate and direct the differentiation of patient-specific cell lines that is isolated from an embryo which is also not intended for transfer in uterus. Although, these two kinds of cloning were related by technique but both are distinguished by their intended result. It is observed that, the therapeutic use of SCNT can be distinguished from reproductive use of SCNT for policy purposes. This distinction most likely showed an option of allowing the former while banning the latter.

Human cloning is an important discovery especially in the field of science and technology, which has a dramatic and far-reaching effect as far as cloning for therapeutic purpose is concerned. The technique of Cloning at the level of human

molecules or cells, promise a great future for science as well as humanity. Therefore, it would be similar to the immoral, if modern science doesn't attempt to find out what cloning might achieve. That is why the research of cloning may result some clear perception of some difficult problems as diseases of the spinal cord, heart muscle, brain tissue and the findings may be used in the treatment of Alzheimer's disease, Parkinson's disease or severe heart failures of person.

The study of human cloning is a pure scientific research. Scientific research has already come a long way. After the birth of Dolly, scientific research has achieved success to clone another various animals. Obviously, cloning humans seems the next logical step of scientific development and it would result also a very important finding. Cloning could be used to produce new organs of human for organ transplants. Ultimately, with the help of therapeutic cloning technique, we may reach the level where every newborn baby would begin their life with its own "body repair kit", namely, an unlimited supply of embryonic or stem cells. It can be developed into blood, bone, muscle or any of the body's dozen of different systems under appropriate circumstances. All these could be transplanted without the fear of rejection.

Therefore, in case of therapeutic cloning, if cloning becomes successful using embryos, then replacement of organs with perfect matching could become freely available to sick and dying people. This technique would gradually eliminate organ and tissue shortage, ensuring that every patient who required something like a new liver or new kidneys could get easily that he or she needed. Trough this technique, the tissue could be experimented upon to understand why disease occurs. It could also be used to understand the genetic contribution to disease and to test vast collections of new drugs which could not be tested in human people. In this way the therapeutic cloning would save countless numbers of lives, and increase the quality of life. So,

this therapeutic cloning procedure would have a number of advantages, in comparison to the normal organ transplant procedure where organs are donated by a second person. In case of organ transplantation there are number of positive points which are as follows-

1. In case of therapeutic cloning there would not supposed be any danger of rejection of the transplant because the DNA of organ would match the DNA of patient exactly.
2. The patient would not have to wait until an unrelated donor dies to obtain a transplant in case of taking the help of therapeutic cloning technique. Here a new organ could be grown for the patient as per requirement.
3. In case of organ transplantation, the patient would not have to make any kind of adjustment with a replaced organ which is old. Sometimes this organ may have with reduced functionality. Therapeutic cloning technique would help us to produce a brand new organ which is specifically meant for them.
4. The therapeutic cloning procedure would also save lives by reducing the waiting time for a transplant. If that organ does not come in time the life would have otherwise been lost.
5. Again, the therapeutic cloning procedure may give us a greater insight into the aging process. It helps and us to determine the issues like how much is due to cell aging and whether or not it is curable. This kind of research may also increase our understanding of the origin of the cancer disease, which would have tremendous therapeutic implications.

In the context of therapeutic cloning, somatic cell nuclear transfer (SCNT) holds a huge potential for research. Its clinical application including the use of SCNT

product as a vector for gene delivery, the creation of animal models of human diseases, and cell replacement therapy in the field of regenerative medicine. But, Somatic cell nuclear transfer has not yet been refined and its long term safety has not yet been proven. Therapeutic cloning used in cell replacement therapy has the potential to create various types of tissues such as osteoblast to counteract osteoporosis, and spinal cord regeneration following trauma.

But, it is unethical to perform any procedure that might be regarded as an experiment on a human subject that will eventually become a human being. Therapeutic cloning is the ultimate misnomer, for it actually means killing.³⁸ Kass refers this as a conclusive reason not to clone human claiming that in the absence of any consent-obtaining mechanism, such experimental procedures are intrinsically unethical. So, before using therapeutic cloning procedure to treat human heart disease, diabetes, paralysis, etc., a number of ethical questions also have to be considered very seriously. Some of the important ethical questions are as follows-

1. Increasing Cures: It is found that research using therapeutic cloning technique is a very new field. Since the therapeutic cloning technique is new, the use of it is to be reconsidered more seriously. Because, it has already proved that developing stem cells from embryos have much greater flexibility than adult stem cells.

2. Treating Embryo as Human Individual: The Pro-life supporters generally have a believe that human being comes into existence at the time of its conception. It is also believed that the technique of somatic cell nuclear transfer (SCNT) is sufficiently similar to normal conception with an egg and spermatozoa that a human person also comes into existence during therapeutic cloning. In this sense, the process of extracting stem cells or choosing to cultivate stem cells from that egg would be a

questionable ethical decision. Because it indirectly involves the question of killing the embryo. Therefore, according to the pro-lifers, this process of therapeutic cloning is again like a way of killing.

3. Insecurity of Stem Cells: Again, there are numbers of shortcomings found in the field of therapeutic cloning procedure because the therapeutic cloning procedure is still in its early stages of its development. Now, it is obvious that feasibility of therapeutic cloning will not be satisfactory until these shortcomings have been overcome.

4. Exploitation of Human Eggs: Again, Thomas Okarma, the chief executive of Geron Corporation, a leading stem-cell research establishment, expresses his opinion that if the diseases like diabetes is cured through therapeutic cloning; it will have to take 1.5 billion eggs for experiment to cure at least 15 million diabetic patient. But, extracting eggs from women in this way is highly painful, costly and unreliable that is full of risk.

When the moral challenge of cloning, particularly human cloning started to haunt the questions related with the scheme of life in general and the creativity involved in human natural evolution, the three broad ethical frameworks come to the force are Virtue, Consequentialist and Deontological ethical frameworks. These three frameworks represent some of the most influential ethical thinking from across human history and around the world today.

1.8. Morality: An Overview

Morality is a kind of universal human phenomena. It works as a sub part of the broader of the normative thinking. However, all the normative questions are not moral. The moral is a sub part of the large normative domain of the practical field.

Morality identifies certain norms that apply to everyone in a certain group and that should be recognized as valid for everyone by each member of the group although their separate individual aims and desires may defer and lead them into conflict with one another.³⁹ The role of morality in terms of human existence is very important. It keeps society from falling apart, from sinking to a state of chaos where everyone is the enemy of everyone else. In this situation, fear and insecurity dominates the human mind and prevents peace and happiness. Therefore, the purpose of morality is not simply negative to prevent chaos and unjust suffering. Rather, morality tries to promote the flourishing of human life.

1.9. Concept of Ethics: An Overview

The word ‘ethics’ is derived from the Greek adjective ‘ethica’ which comes from the substantive word ‘ethos’. ‘Ethos’ means customs, usages or habits.⁴⁰ Ethics is defined as a normative science which deals with the habits and conducts of human beings living in the societies. Ethics is the branch of study which deals with the proper course of action for man. It tries to answer some primary question related to human life, namely, “What do I do?” It is the study of rightness and wrongness in human endeavors. At a more fundamental level, it is the method through which we categorize our values and try to pursue them.

Ethics also well known as moral philosophy. The word ‘moral’ is derived from the Latin substantive ‘mores’ which also means customs or habits.⁴¹ The moral philosophy is a branch of philosophy which involves systematizing, defending, and recommending concepts of right and wrong conduct of human beings. Moral philosophy refers to the systematic endeavor to understand moral concepts and to justify moral principles and theories. It undertakes to analyze such concepts as ‘right’, ‘wrong’, ‘permissible’, ‘ought’, ‘good’, and ‘evil’ in their moral contexts.⁴² So, moral

philosophy seeks to establish principles of right behavior that may serve as action guides for individuals and groups. It investigates that values and virtues which are greatest significant to the worthwhile life or society. Moral philosophy also builds and scrutinizes the arguments in ethical theories and tries to discover valid principles and the relationship between those principles.

Ethics is a foremost requirement for human life. It works as our means of deciding a course of action. Without ethics human actions would be random and aimless and hazards. It also increases our ability towards a successful human life. It is found that the act of striving for moral knowledge originates at the time of ancient Greek philosophers. It is because of the influence of their moral thought ethics reached a new shape today. Therefore, a proper foundation of ethics requires a standard of value to which all goals and actions of human being can be compared to. This standard of value is our own live and the happiness makes them livable. Ethics always aim at our ultimate standard of value.

Ethics is first a vision which shapes us as human beings, as persons able to take our responsibilities for our life with others and with the whole living world.⁴³ The imagination of what is good in human beings, society and nature is the ground of ethics. According to both Greek philosophical and Christian theological traditions, the field of ethics includes questions about achieving live in practice and about the relationships between persons.

Ethics in its widest sense stands to questions about what there is reason to do, as logic in its widest sense stands to questions about what there is reason in believe.⁴⁴ Ethics is the normative theory of conduct. It is the science of rightness and wrongness of conduct. As a branch of philosophy ethics tries to enquire a familiar type of evolution of people's character traits, their conduct and their institutions. Ethics also

tries to examine the nature of human being and recognizes his peculiar needs. Ethics is the science of the ideal involves with human life. Ethics is divided into three main divisions. There are three major divisions of ethical philosophy which is called Virtue Ethics, Consequentialism and Deontology. Philosophy through thought and reason tries to develop moral and ethical frameworks. Let us have a discussion of these different ethical frameworks.

1.10. Different Ethical Frameworks

An ethical framework is a way of structuring our deliberation about the ethical questions. By making a framework of the situation or choice human beings are facing in one of the ways to be presented here. It will bring specific features into focus more clearly. There are three ethical frameworks. Of course, it should be noticed that each ethical framework has its own limits. The three frameworks mentioned here correspond to the three central ethical questions that human beings have always been especially interested to ask. The three vital ethical questions related to the frameworks are as follows-

- Firstly- “what sort of person should I be?” This question obviously corresponds to a virtue-based framework of ethics.
- Secondly- “what sorts of outcomes or goals should I strive for?” This question also corresponds to a consequentialist framework of ethics.
- Finally- “what sorts of actions am I required to do or not to do?” This question again corresponds to a duty-based or deontological framework of ethics.

These three above mentioned frameworks also represents some of the most influential ethical thought which are available around the world even today. Of course, none of the frameworks are strictly identical with the perspective of any

specific ethical tradition or thinkers. Though the majority of ethical perspectives can be clearly understood as a specific way of looking through these three ethical frameworks. The ancient Greek ethics normally focused almost exclusively on the nature of virtue and many other non-western and contemporary feminist views. On the other hand, Utilitarianism provides a specific way of evaluating the consequences of human conduct. While deontological theory of Kant provides a specific way of understanding the nature of moral duty.

1.10.1. Virtue Ethics

Socrates is the great name with which the Western traditions of ethics begin with. According to him, man himself is the object of philosophy. Socrates was primarily motivated by the question of the good life, its definition and techniques how one can live good life. In this way, Socrates and Plato laid the foundation of the history of ethical thinking. But, after Socrates and Plato, Aristotle was the first person to develop a systematic ethical system for the first time in the history.

Virtue ethics is one of three major ethical frameworks in normative ethics. The virtue-based ethical framework is based primarily on the person who is faced with an ethical problem. Under this self-reflective framework, a person must come to a decision what virtues that he or she should morally attempt for as a human being. Its theoretical makeup is first clearly stated by Aristotle. However it is wrong to think of it as peculiarly Aristotelian, since it underlines all of ancient ethical theory. A virtue is a state of disposition of a person. It is a disposition of act but not an entity built up within one individual and productive of behavior. Virtue is one's disposition to act in certain ways and not others. Therefore, unlike a mere habit, virtue is a disposition of act for reasons. It is a disposition that is exercised through the agent's practical reasoning. A virtue is built up by making choices and exercised in the making of

future choices of individual. In this sense, a virtue-based proponent is such who chooses to live honestly and may decide to tell the truth even if doing so hurts other people or even herself.

The founding fathers of Virtue ethics was Plato and, more specifically Aristotle. According to Aristotle, an ethical life is integral to human achievement. He advocated a teleological view about the world. For him, in this world everything has a specific function and purpose to perform. Ethics is a form of practical reason. Aristotle defined virtue by pointing out that practical wisdom is the ability to choose the right thing in the right way at the right time. For him, Virtue is a skill which is developed time to time and become part of our character. Aristotle, in his Book II of the *Nicomachean Ethics* defined virtue as a purposive disposition, which is lying in a mean that is being determined by the right reason. According to him, a virtuous person always chooses virtuous action knowingly and for its own sake. He also pointed out that Virtue “lies in a mean” because the right response to each situation is neither too much nor too little. In short, Virtue is the appropriate response to different situations and different agents. It is also associated with feelings of human being. For Aristotle, our courage is associated with fear; and it is modesty is associated with the feeling of shame.

As an ethical framework virtue is based primarily on the human beings who is faced an ethical dilemma. In this framework, as a human being, a person must have to decide what virtues that he or she should morally strive for attainment. When it is presented with an ethical dilemma, one should choose the course of action which is mostly in line of these virtues. Thus a virtue-based advocate chooses to live honestly. They may decide to tell the truth and while doing so it may hurt other people. Classical virtue theories are marked both by realistic recognition of the socially

embedded nature of our ethical life, and by instance that if we are thinking ethically, we are striving to be better, to reach an ideal that is not already attained, And all classical virtue theories are very demanding in this regard.⁴⁵

The Virtue ethics seeks to produce excellent persons, who comes out of spontaneous goodness and also to serve as an examples to inspire other persons. But, this kind of ethics not only deals with the rightness or wrongness of individual actions. It also provides proper guidance to develop our characteristics and behaviours which a good person tries to achieve. The Virtue ethics is an ethical approach which never emphasizes on rules, consequences and particular acts and places. It also focuses on that kind of person who is acting.

Virtue ethics is person based rather than action based ethics. It deals with the virtue or moral character of the person carrying out an action. Virtue does not look at the ethical duties and rules, or the consequences of particular actions. The issue of virtue ethics is not mostly concern whether an intention is right, though that is important; nor is it mainly concern whether one is following the correct rule; nor is it mainly concern whether the consequences of action are good, though these factors are not irrelevant. It means the Virtue ethical theory judges a person by his or her character rather than by an action that may deviate from his or her normal behavior. The virtue ethics takes the person's morals, reputation and motivation into account when rating an unusual and irregular behavior that is considered unethical.

Again, the virtue ethics also emphasize 'the role of character' and 'virtue in Moral philosophy'. Unlike Deontologists and Consequentialists, it does not deal with either doing one's duty or acting in order to bring about good consequences. Initially, it may be identified as the one which emphasizes the virtues, or moral character, in contrast to the approach which emphasizes duties or rules, namely, deontology or that

which emphasizes the consequences of actions, namely, Consequentialism. In virtue ethics morals are internal. Virtue seeks to produce good people who act well out of spontaneous goodness. It also emphasizes living well and achieving excellence. Virtue ethics does not aim primarily to identify universal principles which can be applied in any moral situation. This theory basically deals with certain very interesting broad questions, namely, “How should I live?”, “What is the good life?”, “What are proper family and social values?” etc. Virtue ethics is primarily concerned with the good life and the kinds of persons we should be. Of course, there is a teleological aspect in virtue ethics, but this teleological aspect usually differs from utilitarianism those talks about the sort of action with maximum happiness.

The virtue ethics theories have been mostly inspired from Aristotle. Aristotle declared that a virtuous person is someone who always maintains an ideal character. According to him, virtue ethics can be used to determine the rightness or wrongness of an action by relating the choice to admirable character traits. Again, a person’s character is the totality of his character traits. Our character traits can be good, bad or somewhere in between. It can be admirable or not. This character trait derives from ones natural internal tendencies which need to be well nurtured. Aristotle points out that an act or choice is morally right if, in carrying out the act, one exercises, exhibits or develops a morally virtuous character. Therefore, it is morally wrong to the extent that by making the choice or doing the act one exercises, exhibits or develops a morally vicious character. However, once it is established persons will become stable. The character of a virtuous person is such who comes across many difficult situations over a lifetime. The growth of virtue ethics has provided one challenge to the idea that metaphysics is somehow privileged with regard to ethics. Because many workers in ethics are irritating with the idea that metaphysics is ‘first philosophy’, which only

can lay down rules for ethics prior to any work in ethics. The rapid growth of modern Virtue ethics has gone along with an explosion of interest in applied ethics that likewise takes it that our first task is to get the ethics right and then ask about metaphysical implications, rather than vice versa.⁴⁶

The virtue ethics has another important feature namely that our character traits are stable, fixed, and reliable dispositions. According to Virtue ethics, a character trait must embody a commitment to some ethical value to qualify as a virtue. These ethical values are justice or benevolence. The admirable character traits, the marks of perfection in character, are called virtues, their opposites are vices. The virtue of disposition is to be just benevolent and so on. The virtue is to give others their share, treat others' in considerate ways and stand up for others' right. For instance, if an agent possesses the character trait of kindness, one would expect from the agent to act kindly in all sorts of situations. The agent would work towards all kinds of people over a long period of time, even when it is difficult to do so.

It is found that Aristotelian conception of virtue ethics is playing a dominating role in the field of ethical framework still today. Since its inception in the twentieth century, virtue ethics has been developed in three major directions. These three major directions are 'Eudemonism', 'Agent-based theories', and the 'Ethics of care'. Now, 'Eudemonia' is an Aristotelian term inadequately and very loosely translated as happiness. Eudemonia, meaning 'happiness' or human 'flourishing'.⁴⁷ In virtue ethics the role of eudemonia is to be understood while looking at Aristotle's function argument. Accordingly, all ordinary versions of virtue ethics agree that living a life in accordance with virtue is necessary for eudemonia. This supreme good is not perceived as an independently defined state or life which possession and exercise of the virtues might be thought to support. It is, within virtue ethics, already understood

as something of which virtue is at least partially essential. In this argument, Aristotle recognizes that our actions are not pointless because they have an aim. For him every action aims at some good. For example, the case of doctor's vaccination of the baby aims at the baby's good health. But, sometimes these things are done for their own sake or an end in themselves and sometimes it is done for the sake of other things or means to attain some other ends. In this way, virtue ethicists claim that a human life devoted to physical pleasure or the possession of wealth is not eudemon, but a completely exhausted life, and also accept that they cannot produce a dismantle argument for this claim proceeding from premises which the satisfied hedonist would acknowledge. Here, Aristotle claims that all the things that are ends in themselves also contribute towards a broader end. According to him, it is the greatest good of all which is called Eudemonia. So, according to Aristotle, Eudemonia is happiness, contentment, and fulfillment. Eudemonia is the best kind of life, which is an end in itself and a means to live and fare well.

The third branch of Virtue ethics is the ethics of care. The ethics of care is another influential version of virtue ethics. The ethics is only a few decades old. Some theorists do not like the term 'care' to designate this approach to moral issues and have tried substituting "the ethics of love", or "relational ethics", but the discourse keeps returning to 'care' as so far, the more satisfactory of the terms considered, though dissatisfactions with it remain.⁴⁸ This ethics of care has been developed as an ethical theory not only to the so called private sphere of influence of the family and friendship, but also to medical practice, law, political life of man. It is also related to the organization of society, war and the international relations. It is found as a potential ethical theory which can be used as a substitute to some other

dominant ethical theories like Aristotelian Virtue ethics, Utilitarianism and Kantian ethical theory.

The ethics of care suggests that there is moral significance in the fundamental elements of relationships and reliance in human life. Normatively, in a network of social relations, ethics of care strives to maintain relationships by contextualizing and encouraging the well-being of care-givers and the care-receivers. Very frequently, ethics of care is defined as a practice or virtue rather than a theory as such. In this sense, 'care' involves maintaining the world of, and meeting the needs of, our self as well as others. Ethics of care develops the motivation to care for those individuals who are mostly dependent and vulnerable. Ethics of care is motivated by both memories of being cared for and the idealizations of the self.

Again, the ethics of care also challenges the idea that ethics should focus solely on two things namely, justice and autonomy. Care ethics refuses to relegate care to a realm "outside morality". It deals with particular others moral claims, for example, about one's child whose claim can be regardless of universal principles. It also respects others with whom we always share our actual relationship. Milton Mayeroff's short book, *On Caring* is treated as one of the original works of ethics of care. But the emergence of care ethics as a distinct moral theory is most often attributed to the works of psychologist Carol Gilligan and philosopher Nel Nodding in the mid-1980s.⁴⁹ Of course, both the thinkers were charged traditional moral approaches with male preference. They have affirmed the "voice of care" as a well founded alternative to the "justice perspective" of liberal human rights theory. Annette Baier, Virginia Held, Eva Feder Kittay, Sara Ruddick, and Joan Tronto are some of the most influential among many subsequent contributors to care ethics.⁵⁰ According to the advocates of the ethics of care, showing strong interest towards

moral claim of the particular other may be valid even when it conflicts with the requirement which is usually made by the moral theories that moral judgments be universalizable, and it is fundamental moral importance.

Again, a few non-Aristotelian forms of virtue ethics have developed. The most radical departure from the ancient Greek tradition is found in Michael Slote's 'agent-based' approach was inspired by Hutcheson, Hume, Martineau and the feminist ethics of care.⁵¹ The agent based theory of virtue emphasizes that virtues are determined by common sense intuitions. In this context, Michael Slote makes a distinction between agent-focused and agent-based theories. An agent-focused theory understands the moral life in terms of what it is to be a virtuous individual. Here the virtues are inner dispositions. Slote discusses well-being rather than eudemonia, and maintains that this consists in certain "objective" goods. He argues that virtuous motives are not only necessary but also sufficient for well-being. Aristotelian theory is an example of an agent-focused theory. The agent-based theories are more radical in their evaluation of actions. It is dependent on ethical judgments about the inner life of the agents who perform those actions.

First and foremost, the feminist thinkers have developed the ethics of care. In his account of virtue ethics, Annette Baier advocated that men always think in masculine terms such as justice and autonomy, whereas woman always thinks in feminine terms such as caring. The feminist also advocates a change regarding the view of morality and the virtues, shifting towards virtues exemplified by women. They have also shown how the greater social, political, economic and cultural power of man has structured this private sphere to the disadvantage of women and child, by rendering them extremely susceptible to domestic violence without outside interference. This indicates the matter of taking care of others, patience, the ability to

nurture and self-sacrifice, etc. In this context, these virtues have been marginalized because so far as our society has not adequately valued the contributions of women. However, mere discussions in this particular area do not always explicitly make a connection with virtue ethics. Of course, there is much more in their discussions. However, there are specific virtues and their relation to social practices and moral educations, etc. which are also central to the study of virtue ethics.

Again, modern virtue ethicists have developed their theories in a different way which has a central role for character and virtue. They have also claimed that it gives us a unique understanding of morality. The emphasis on the character development and the role of the emotions allows virtue ethics to have a persuasive account of moral psychology. In this way, Virtue ethics can be avoided from the problematic concepts of duty and obligation in favor of the rich concept of virtue. Therefore, according to virtue ethics the Judgments of virtue are the judgments of whole life rather than of one isolated action.

Finally, it can be noticed from the above discussion that virtue ethics initially emerged as a rival account to both Deontology and Consequentialism. So, virtue ethics is developed from the dissatisfaction with the notions of duty and obligation and its central roles in understanding morality. It means that virtue ethics is grown out of an objection to the use of inflexible moral rules and principles and their application to diverse and different moral situations. Virtue ethics is not only about action but about emotions, character and moral habit. As Richard Taylor puts it, it is an ethics of aspiration rather than an ethics of duty.⁵² It is clear that, virtue ethics makes a claim about the central role of virtue and the character in its understanding of moral life.

Unfortunately, Virtue ethics is somewhat a confusing term as it is used as a label for two different approaches to ethics. A narrow definition of Virtue ethics states

that a virtue is a dispositional trait of character that is considered praiseworthy in general and in a particular role. This definition of Virtue ethics does not go far enough in setting up a framework for decision making about the rightness or wrongness of individual activities. Again, the Virtue ethics more broadly defined involved not only the virtues, but the integration of the virtues with what has been separately called practical wisdom. It is the ability to choose patterns of actions made desirable and revealed as desirable by reasoning that has been informed not only by habits of emotional experience or virtue.

The theory of Virtue ethics judges a person by his or her character rather than by an action which may be turned from normal behavior of the person. Virtue ethics also takes into account person's morals, reputation and motivation. By rating an unusual and irregular behavior of the person, it considers person as unethical. If a person plagiarized a passage that was later detected by a peer, the peer who knows the person well will understand the person's character and will be able to judge the friend. If the plagiarizer normally follows the rules and has good standing amongst his colleagues, the peer who encounters the plagiarized passage may be able to judge his friend more leniently. Perhaps the researcher had a late night and simply forgot to acknowledge his or her source appropriately. Conversely, a person who has a reputation for scientific wrongdoing is more likely to be judged severely for plagiarizing because of his consistent past of unethical activities. The weakness of this ethical theory is that it does not take into consideration a person's change in moral character. For example, a scientist who may have made mistakes in the past may honestly have the same late night story as the scientist in good standing. Neither of these scientists intentionally plagiarized, but the act was still committed. On the other

hand, a researcher may have a sudden change from moral to immoral character may be ignored until a considerable amount of facts mounts up against him or her.

1.10.2. Consequentialism (Utilitarianism)

Another very prominent ethical theory is Consequentialism. Consequentialism is the idea that rightness and wrongness of an action is determined by the goodness or badness of its result.⁵³ This ethical theory accepts the view that we have obligations to help people, because helping people produces a better result than not helping people. According to this theory, an action is permissible if and only if the consequences of that action are at least as good as those of any other action available to the agent. The Consequentialist theory of ethics states that the rightness or wrongness of an action is determined by the goodness or badness of the results that follows from it. It is the end, not the means that counts. It points out that the end justifies the means. In the year 1958, the word ‘consequentialism’ was coined for the first time by G. E. M. Anscombe in her essay “Modern Moral Philosophy”. Anscombe also described the main problems of certain moral theories which were propounded by Mill and Sedgwick. According to her, the rightness or the wrongness of an action is brought by the action in terms of its consequences. Consequentialism refers the moral theory which holds that the consequences of a particular action is depends on the basis of any valid moral judgment about that action. So, from the consequentialist point of view, an action is morally right which produces a good result or consequence.

The most important features of Consequentialists ethical theory is the value which is given to the consequences in evaluating the rightness and wrongness of actions. In this framework the consequences of an action or rule generally given more importance than any other considerations. Apart from these main features, there are a few points which can be unambiguously mentioned about Consequentialism. Again,

in the Consequentialist theory, the following questions are also addressed. Some of the questions are-

- What sorts of consequences or results are to be counted as good consequences?
- Who will be the primary beneficiary of a moral action?
- In what way the consequences are to be judged and who judges these consequences?

Based on by the types of consequences, Consequentialism can be divided into two prominent varieties. The first variety is called the theory of ethical egoism. This theory is based on the desired end which is the long term self interest of the individual. The chief of advocator of this theory ethical egoism is Thomas Hobbes and Ayan Rand. Ethical egoism claims that before making a moral decision, one should consider the end of long term self interest, and if by using a reasonably moral means the long term self interest can be achieved then that action should be performed.⁵⁴

On the other hand, the second variety of Consequentialism is called Utilitarianism. This theory is based on the desired end that is the greatest happiness of the greatest number. Jeremy Bentham (1798) and J. S. Mill (1863) were the chief advocator of this theory. According to Utilitarianism, a good action is such that results in an increase in pleasure. The best action is one that results in the maximum pleasure for the greatest number. It considers the desired end to be the greatest happiness of the greatest number of people. Again, the action that achieves this desired end by using a reasonably moral means should be performed. This idea is also closely related is eudemonic consequentialism. According to this theory, the ultimate

aim of full flourishing life may or may not be the same as enjoying a great deal of pleasure.

On the other hand, one might adopt an aesthetic consequentialism. The ultimate aim of this Consequentialism is to produce beauty. In this situation, one might fix on some non-psychological goods as the relevant effect. An individual may pursue an increase in material equality or political liberty instead of something like the very short term 'pleasure'. The other theories may also decide to accept a package of several goods, which all to be equally promoted. A particular Consequentialist theory focuses on a single good or many, conflicts and tensions between different virtuous states of affairs are to be expected and they must be decided legally.

Again, the Consequentialists' theory has two different types which are based on the focus on the effects of particular actions. These two types are namely, Act-consequentialist methods and Rule-consequentialist methods. Act-consequentialist theories evaluate actions on a case-by-case basis. The Contemporary Act-consequentialists is that type of consequentialist theory which analyze the probable consequences of different courses of action and assess those actions according to their probable balance of good effects over bad effects. Many of the Act-consequentialists are also utilitarian's. Act-consequentialists may face uncertainties about that course of action which would satisfy the principle of utility. Of course, they never face moral dilemmas created by conflicting principles.

On the other hand, many Rule-consequentialists are also utilitarian. Rule consequentialist theories points out that an action is permissible only if it is in accord with the relevant rules. Rules are selected so that following them will yield better consequences overall than would result from following any other rules. This theory has a different and larger set of considerations than happiness, pleasure, or individual

preferences for evaluating the consequences of various actual and proposed moral rules. The Rule-consequentialists method employs rules which are justified by their anticipated overall consequences if implemented. This method of Rule-consequentialists clearly presupposes a different moral psychology from the Act-consequentialism.

Utilitarianism is the most prominent Consequentialist theory. The most familiar, but not the only, form of Consequentialism is Utilitarianism. Utilitarianism or social consequentialism holds that one should go accordingly as to do the greatest good for the greatest number. Most of the utilitarianism involves adding up the aggregate of pleasures and pains suffered by the members of the community. Its main focus is from its name, on the consequences of one's actions. This theory quantifies the utility, which defines as 'happiness' or 'pleasure.' It means any given action which will produce and weighs that number against the amount of utility produced by another action. So, according to this theory, whichever action produces the most utility is the one that is to be obligated.

Utilitarianism is one of the major ethical philosophies of the last two hundred years, especially in the English speaking world. As a moral philosophy, Utilitarianism begins with the work of Scottish philosophers Hutcheson (1694-1746), David Hume (1711-1776) and Adam Smith (1723-1790); and comes into its classical stage in the writings of English social reformers Jeremy Bentham (1748-1832) and the most influential philosopher in the English-speaking world, John Stuart Mill (1806-1873).⁵⁵ Utilitarianism is the view that the well being of each and every individual has intrinsic ethical value. The greater the well being the greater its value, and that nothing else has intrinsic ethical value. In this sense, all introductory courses in ethics include utilitarianism as one important theory to be considered. As an ethical framework

utilitarianism evaluates the morality of an act through its consequences. Jeremy Bentham in the late 18th century and John Stuart Mill in the 19th century formulated this way of thinking. Bentham and Mill were the two central figures mainly responsible for this thought. Bentham was a leading theorist in Anglo-American philosophy of law and one of the founders of Utilitarianism. Bentham developed a moral calculus which is based on the principle namely, ‘greatest happiness of the greatest number.’ He interpreted happiness in terms of pleasure and the avoidance of pain. According to him, “nature has placed mankind under the governance of two sovereign masters, pain and pleasure.”⁵⁶ On the other hand, Mill presented a more sophisticated form of Utilitarianism by making a qualitative distinction between pleasures. Mill’s essay entitled Utilitarianism is the most widely read presentation of a utilitarian ethical philosophy. Mill introduces Utilitarianism in the following way, “The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to produce the reverse of happiness.”⁵⁷ He holds that the distinction of quality is independent of quantity, and that the qualitative distinction is as real as the quantitative. In this way, Bentham also emphasized the importance of education and its role in training individuals for the attainment of the higher pleasures.

Utilitarianism has two different kinds. One is Act-utilitarianism and the other is Rule-utilitarianism. Act-utilitarianism is that kind of Utilitarianism according to which we assess the rightness or wrongness of each individual action directly by its consequences. Jeremy Bentham, J. S. Mill and Henry Sedgwick are the most prominent thinkers mainly associated with Act-utilitarianism theory. Bentham, as like Act-utilitarian, apply the principle of utility and says that ideally we ought to play the principle to all of the alternatives opens to us at any given moment. For the Act-

utilitarianism, an act is right only if it results in as much good as any available alternative. Henry Sidgwick, the third of the great trio of British Utilitarians, suggested that it might also be taken as the average: that is, that the greatest ethical value is realized when average, rather than aggregate, well being is at its highest.⁵⁸

On the other hand, the Rule-utilitarianism is that kind of Utilitarianism which does not consider the consequences of each particular action but considers the consequences of adopting some general rule, such as “keeping promises”. The Rule-utilitarianism is a different kind of theory, which has also been developed by Mill. Rule-utilitarianism is the theory which emphasizes the centrality of rules in morality. It also insists us to tell what to do in particular situations by appeal to a rule like that of truth telling rather than by asking what particular action will have the best consequences in the situation in question. According to Rule-utilitarianism, an act is right if and only if it is required by a rule that is itself a member of a set of rules whose acceptance would lead to greater utility for society than any available alternative. It means the principle of utility comes in, normally at least, not in determining what particular action to perform, but in determining what the rule shall be.

Again, there are three different kinds of Utilitarianism. Firstly, there is Act-utilitarianism. This theory holds that in general or at least where it is practicable, one is to tell what is right or obligatory by appealing directly to the principle of utility. The second kind of Utilitarianism may be called General utilitarianism which holds that one is not to ask in each situation which action has the best consequences, but it does not talk about the rules. The idea behind general utilitarianism is that if somebody is right for one person to do in a certain circumstances, then it is also right for anybody else who is correspondingly situated to do, and hence one cannot ask

simply what effects one's future action will have in a particular case, one must ask what the result would be if everyone were to act likewise in such cases.

1.10.3. Deontological Theory (Kantian)

The third common ethical framework is known as Deontological theory. The chief advocator of this theory has been Immanuel Kant. Immanuel Kant (1724-1804), the greatest philosopher of the German Enlightenment and one of the most prominent philosophers of all time. Kant was both an absolutist and a rationalist. The term Deontological ethics or deontology follows from the Greek term 'Deon' which means obligation or duty.⁵⁹ It is an approach of ethics which determines goodness or rightness from examining acts, or the rules and duties that the person doing the act strive to fulfill it. The Deontological ethics consider human actions to be intrinsically right or wrong, regardless of their consequences whatever it may be.

Deontological ethics is a framework of ethics which determines goodness or rightness from examining its acts, rather than third party consequences of the act as advocated by Consequentialism, or the intentions of the persons doing the act as advocated by virtue ethics. According to this theory of ethics, we have a duty to act in a way which does the things that are inherently good as acts, or follow an objectively obligatory rule. Again, in Deontological theory, an act may be considered as right even if the act produces a bad consequence. It means the deontological approaches to morality stress, what is obligatory or what one ought to do. It follows a particular rule that "one should do unto others as they would have done unto them". The person who does the act lacks virtue and had a bad intention in doing the act. The deontologist also considers the rightness and wrongness of at least some acts which is to be independent of their consequences. It means some acts are good or evil by themselves. The strengths of the deontological position are its emphasis on the moral

significance of the individual. According to Deontological theory, every man has a duty to act in a certain way which does those things that are inherently good as acts. For instance- 'telling the truth' or following an objectively obligatory rule. These theories argue for the priority of the right over the good or independence of the right from the good.

Immanuel Kant is undoubtedly treated as the most prominent deontological thinker. According to Kant, an action's moral worth is not found in what it tries to accomplish but in the agent's intention and the summoning of one's energies to carry out that intention.⁶⁰ Again, there are two more prominent thinkers who also developed the deontological theory. These two thinkers are W. D. Ross and J. A. Rawls. Ross, being a prominent twentieth century British philosopher, developed a deontological theory. His development of deontology is known as ethical intuitionism which is intended to assist in resolving the problem of conflict of duties. He calls these duties as prima facie duties which are contrast to actual duties. According to Ross, there are several basic rules of moral duty and they do not derive from either the principle of utility or Kant's categorical imperative. He also points out that people can intuit the rules of morality through reflection on ordinary moral belief. These rules of moralities are duties as such one ought to keep promise and tell the truth. So, like Immanuel Kant, Ross also points out that one is obliged to follow one's moral duty without any thought of the consequences.

Again, right-based ethical theory is Contractarianism. This theory is another species of Deontological ethical reasoning which is developed by J. A. Rawls. He presents a deontological theory as a direct challenge to utilitarianism or grounds of social justice. According to Rawls's framework, a society is one that requires "equality in the assignment of basic right and duties."⁶¹ Rawls points out that valid

principle of justice are those to which we would all agree if we could freely and impartially consider the social situation from a standpoint outside any actual society.

Now, the ethical theory of Kant is considered as Deontological theory for a few particular reasons. Firstly, Kant points out that to act in the morally right way, people must act from the point of duty. Secondly, he also argued that it was not the consequences of actions that make them right or wrong, but the motives of the person who carries out the action. So, it is noticed that deontological approaches are usually contrasted with the Consequentialist ones. The deontologists also hold that some features of actions other than their consequences make those actions right or wrong, obligatory, or optional. In this regard, deontological considerations always, in general or sometimes become key resource for Consequentialist considerations.

Again, in a very narrow sense, deontology means the study of obligations. It attempts to follow from reason alone. These obligations are simply because of the rationality of human being. According to the Deontological theory the morality of an action is evaluated by its intention and not by its consequences. Kant, in his Deontological theory argued that the only 'good will' is the good, which is without qualification. He also pointed out that human beings are constituted by their will. As human are natural beings we have to conform to the laws of nature. Kant developed his idea of the moral law on the ground of universality of the laws of nature. We also have the freedom to choose our action in certain ways.

According to Kant, the highest good must be both good in itself, and good without any qualification. Something is 'good in itself' if it is intrinsically good. Again something is 'good without qualification' if the addition of that thing which never makes a situation ethically wrong. He also argues that those things are usually ought to be good, such as intelligence, perseverance and pleasure which fails to be

either intrinsically good or good without qualification. Pleasure appears not to be good without qualification. But, when we take pleasure in watching someone suffering, then it seems clear that the situation is ethically worse. In this situation Kant points out that there is only one thing which is truly good. So, nothing can be conceived which can be called good without qualification except a 'good will'.

Again, Kant's theory of Deontology advocates that the morality of any action is evaluated by its intention and not by its consequences. Here, Kant used his own model namely, the idea of the moral law on the universality of the laws of nature where every decision is based on a subjective principle or maxim that guides the action. According to him, an action is moral only if the maxim can be universalized. In other words there are no exceptions to that. This is popularly known as Kant's concept of categorical imperative. The categorical imperative is arrived at through reason alone.

Again, deontological theories of ethics are also of two different kinds, depending on the role they give to general rules, just as there are act and rule-utilitarian. These two kinds are known as Act-deontological theory and Rule-deontological theory. The act-deontologists or particularism advocated that our moral judgments expressing obligations must be specific. For example, in this situation 'I must not break my promise'. Act-deontological theory is an extreme reaction to the ethics of traditional rules. It is one which remains on the deontological side as against egoists and other teleologists. Act-deontological theory holds that the individual in any given situation must grasp immediately what ought to be done without relying on rules. Because, each situation is potentially unique and different from another one. It may not be included under a general rule. So, particular and changing features of moral experience must determine the right action.

The Act-deontological theories do not offer us any common criterion or guiding principle. It provides only the rules of thumb. This theory also points out that the basic judgments of obligation are all purely particular ones. For example, it is like “in this situation, I should do so and so”, and not that general ones like “We ought always to keep our judgments”. In this way, the extreme Act-deontologists maintain that we must see or somehow decide separately each particular situation. In a particular situation, what is the right or obligatory thing to do, without appealing to any rules and that also without looking what will promote the greatest balance of good over evil for oneself or the other.

On the other hand, the more common approach is known as Rule-deontology. It is found that the Rule-deontology and generalism seems to have made a greater appeal than the act deontology for various reasons. The Rule-deontological ethics points out that the standard of right and wrong consists of one or more rules, either fairly concrete ones. The Rule-deontologists also maintain that the morality consist of general rules which are expressed as duties or obligations. This Deontological theory holds that there is a non-teleological standard consisting of one or more rules, though it need not to be existing ones. According to this theory, one deduces one’s particular obligation from a general rule or duty. This theory accepts the principle of universalizability as well as the notion that in making moral judgments we are appealing to principles or rules.

The central teaching of Deontological ethics is that certain types of actions are intrinsically right or wrong. It means some actions are right or wrong in themselves, which is not related to their consequences in any way. There are three main types of Deontological theories, they are-Kantian Ethics, Divine command theory, and Agapism. Out of these three important types of deontological ethics, the most famous

theory is Immanuel Kant's Deontological theory. Kantian deontological ethics is primarily based on reason. According to him, we can derive moral laws from rational precepts. It is also stated that anyone who behaves immorally also behaves irrationally. Here, Kant points out that the moral law is always derived in the form of the Categorical Imperative. It always acts according to a maxim that is at the same time valid as a universal moral law. Again, the second type of deontological theory is known as Divine Command Theory. The Divine command theory mainly points out that God's commands are the basic source of ethics. Therefore, according to this theory, God is a moral authority. Hence, we ought to obey always his commands, irrespective of the consequences follows from the command, does not matter whatever the command may be.

Another important Deontological ethical theory is known as agapism. Agapism is a theory mostly influenced by the Christian tradition. Being a Deontological system of ethics, Agapism is consists of one simple command, namely, in every situation, do the loving thing, whatever that may be. This theory also argues that there is one source of rightness that is love. If someone performs an action out of love, then it is right whatever the consequences. Joseph Fletcher summarizes this view in this word- Nothing is inherently good or evil, except love (personal concern) and its opposite, indifference or actual malice. Anything else, no matter what it is may be good or evil, right or wrong according to the situation.⁶² According to Agapism, to work as a deontological ethical theory it must move from single rule to the multiple prima facie rules. Therefore, out of a sense of love, one cannot torture someone else until he resents what you take to be an unorthodox opinion.

Therefore, as an ethical framework, Deontology claims that actions are considered as intrinsically right should be carried out, even if there is a negative

result. The Deontological standpoints of ethics are very clear in some of the religious teachings which and prominently appear in the sacred texts like ‘the Bible’ and ‘the Quran’. Again, the Catholic believes also maintains their Ten Commandments that “thou shall not steal”. Here, stealing a piece of bread may relief one’s hunger, but this action is considered an inherently bad action. Therefore, stealing should not be done under any circumstances.

So, it is clear that Deontology is one of those kinds of normative theories in contemporary moral philosophy, about which choices are morally required, forbidden or permitted. It falls within the domain of moral theories that guide and assess our choices of what we ought to do, in contrast to that fundamentally, at least guide and assess what kind of person we should be. Within this domain, deontologists subscribe their theories of morality which stands in opposition to Consequentialist’s theory of ethics. The main business of Deontological ethics is to be concern with what people do, but not with the consequences of their actions. Under this framework of ethics we cannot justify an action by simply showing that it produces good consequences. In this sense, this theory is sometimes also called as Non-consequentialist theory. Deontological theory is duty-based and this kind of ethics teaches that our acts are right or wrong because of the sorts of things they are. People have a duty just to act accordingly, irrespective of the good or bad consequences that action may be produced.

Again, there are three important features of deontological ethics. First, duty should be done for duty’s sake. It means the rightness or wrongness of an action or rule is at least in part, a matter of the intrinsic moral features of that kind of action or rule. For example, promise breaking, acts of lying, or murders etc. are intrinsically wrong. Therefore we have a duty not to do these perform these kind of activities.

Secondly, as individual should be treated as objects of intrinsic moral value. It must be applicable for everyone who is in the same moral situation. The moral statements never say, “If you want to maximize pleasure, and then do such and such.” On the other hand, moral statements are imperatives or commands which hold for all type of actions in consideration, such as telling the truth.

The Deontological theory judges the morality of an action which is based on the action's that is stick to rules. An action is ethical which is depends on the intentions behind the decisions they have taken rather than the outcomes or result. According to Immanuel Kant, all the individual actions should be done, as if they could become universal law (i.e. categorical imperative). Act always in such a way that you can also resolve that the maxim of your action should become a universal law (categorical imperative). Kant also points out that you should act in that way so that you treat humanity, both in your own person and in that of another, always as an end and never merely as a means (principle of ends). Deontology never emphasizes primarily at the consequences of actions, but it examines a situation for the essential moral value of the intention of act, or rightness or wrongness of the act. Several religious traditions are based upon this idea of deontology.

1.11. Concluding Observation

The first chapter was an attempt to describe and discuss cloning and human cloning in its detail. The study in this chapter recognizes that cloning /human cloning has a scientific, social, cultural, historical and religious dimension, which in each of this field generates ethical issues and challenges.

The ethical issues and challenges related with cloning primarily bring to the fore the question of human dignity of life, personal dignity and the spontaneity and

creativity of life. Therefore, it can be noticed that ethical theories can be applied to a problem to explain our thoughts. According to Aristotle, the telos, or purpose, of a human life is to live according to his or her reason. This leads to 'happiness' in the sense of human progress. This kind of development is achieved by the habitual practice of moral and intellectual excellences, or 'virtues'. Aristotle mentions two kinds of excellences. For him, a moral virtue is an excellence of character, a 'mean' between two vices. Courage is one of the Aristotle's virtues which are a mean between two vices, namely, carelessness and cowardice. On the other hand, modern virtue ethics initiates the assignment of discerning the virtues for our time. However, in the context of human cloning what scientists like to acquire self-control, truthfulness, generosity, compassion, sensitivity, integrity etc. when they work out virtues.

Again, according to the Consequentialist accounts of morality the moral value of an act, rule or policy is to be found in terms of its consequences. It is not found in intentions or motives. In any situation the morally right action is to perform the action which promotes the greatest happiness for the greatest number of people. However, the later utilitarians points out that pain and pleasure are not the only criteria which is used to evaluate the consequences of actions, rules or policies. The welfare-utilitarians consider the contribution of human welfare. Again, the preference-utilitarians also try to establish and satisfy human preferences. In case of human cloning procedures considering the right course of action, we intend gradually to think about the consequences which are arising from the different options. However, it is often very problematic to predict the consequences with a certainty. The Consequentialist theory is so concerned with ends. In this way, the Consequentialist

may overlook the moral importance of means through which the ends are to be achieved by an individual.

Finally, the Deontological theory uses the rules instead of using consequences to justify an action or policy. In his theory, Kant has defended some rules, such as ‘do not lie’, ‘keep promises’, ‘do not kill’ etc. based on which he claimed the rational grounds. According to Kant, rules should be obeyed with the categorical imperative. The categorical imperative holds that our moral rules should be universal. It can be applied to all rational, moral individuals of the community rather than just to someone. In this context, Kant also pointed out that individuals should be treated never simply as means. They should be always treated as an ends in themselves. Members of the moral community should take the initiative in making the laws as well as living with the laws. The Deontological theory is manifested in the idea of duties which is obligated to a patient, namely, the duty of care and not to harm others.

Hence, the ethical frameworks discussed by the study in this chapter place the above mentioned ethical issues and challenges as per their understanding of ethical theorization. As the chapter elaborates the major ethical frameworks such as virtue ethics, Consequentialism and deontological ethics the study makes an attempt to lead as per the theoretical necessity the ethical issues and challenges of cloning/human cloning to the single most important concept of autonomy.

Notes and References:

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- 1 DNA is something which is found in all living organisms except some viruses, reproduces itself and is the means by which hereditary characteristics pass from one generation to the next. Microsoft® Encarta® 2008. In late 1940's the study of deoxyribo nucleic acid (DNA) began, for scientist recognized that every inherited characteristic has its origin somewhere in the code of each early person's DNA. The structure of DNA was discovered in the early 1950's. (International Encyclopedia of Ethics.)
 - 2 Wilmut, Ian and Campbell, Keith. "So what exactly is a Clone?" Ian Wilmut, Keith Campbell and Colin Tudge. ***The Second Creation***. New York: Farrar, Straus and Giroux, 2000. p. 45
 - 3 While the term cloning began circulating in 1903, the science of plant cloning goes back to ancient times. (Webber 1903).
 - 4 Nuclear transfer is a technique whereby an animal may be produced from a nucleus, originating from a single cell, that is transferred to an enucleated egg from which the genetic material had been removed. In 1938, Hans Spemann described the technique for the first time, in the history of science.
 - 5 The diploid egg, before meiosis is complete. Eggs are released from the mammalian ovary as MII oocyte, the favored cytoplasts in the creation of embryos by nuclear transfer.
 - 6 Logston, Amy. ***THE ETHICS OF HUMAN CLONING***. Saint Vincent College, January 13, 1999. p.1
 - 7."Cloning."***AmericanHeritageDictionary***.<<http://www.lycos.com/cgi-bin/pursuit?mat...=id&query=A0021899&maxhits=1&mtemp=entry>
 - 8 D. Nelkin & S. Lindee (article). "Cloning in the Popular Imagination"- ***The Cloning Sourcebook-A***. J. Klotzko. Oxford University Press, 2001. p. 83
 - 9 Wilmut, I., Campbell, K. and Tudge, C. ***The Second Creation***. Farrar, New York: Straus and Giroux, 2000. p. 46
 - 10 Human Cloning: ethical issues. United Nations Educational, Scientific and Cultural Organization. UNESCO, 2005. p.8.
 - 11 Logston, Amy. ***THE ETHICS OF HUMAN CLONING***. Final Draft..Saint Vincent College, January 13,1999. p. 2.
 - 12 Lee. M. Silver (article). "Thinking Twice and Thrice about cloning"- ***The Cloning Sourcebook-A***. J. Klotzko, Oxford University Press, 2001. p. 63
 - 13 Glannon, Walter. "Genes and Future People", in ***Philosophical issues in Human Genetics***. West View Press, 2001. p. 109
 - 14 Campbell, K. H. S., MacWhir, J., Ritchie, W. A. and Wilmut, I. "***Sheep Cloned by Nuclear Transfer from a Cultural Line***" *Nature* 380, March 7, 1996. p. 64-66
 - 15 Wilmut, Ian. "***Viable Offspring Derived from Fetal and Adult Mammalian Cells.***" *Nature* 385.6619: 1997. pp. 810-813.
 - 16 Gearhart, John D. "New Potential for Human Embryonic Stem Cells," ***Science* 282: 1061**, 1998.
 - 17 Freed. Curt. R. "Double-Blind Controlled Trial of Human Embryonic Dopamine Cell Transplants in Advanced Parkinson's Disease: Study, Design, Surgical Strategy, Patient Demographics, and Pathological Outcome", April 21, 1999. (presented to the American Academy of Neurology).

-
- 18 Voltarelli, Julio C. "Autologous Nonmyeloablative Hematopoietic Stem Cell Transplantation in Newly Diagnosed Type 1 Diabetes Mellitus." *Journal of the American Medical Association*, 297.14: 2007. pp. 1568-1576.
- 19 Human Cloning: ethical issues. United Nations Educational, Scientific and Cultural Organization. UNESCO, 2005. p.11
- 20 Huxley, A. *A Brave New World*. Harmondsworth: Penguin, 1955.
- 21 Glannon, Walter. "Genes and Future People", in *Philosophical issues in Human Genetics*. West view Press, 2001. p. 109
- 22 Ibid. p. 109
- 23 Kass, Leon R. and James Q. Wilson. *The Ethics of Human Cloning*. Washington, DC: The AEI Press, 1998. p. 5
- 24 Harris, John. "Goodbye Dolly? The Ethics of Human Cloning' .in *Journal of Medical Ethics*. 23:6. December, 1997. pp. 350-360
- 25 UNESCO, The Universal Declaration on the Human Genome and Human Rights. 11 November 11, 1997.
- 26 Glannon, Walter. *Genes and Future People*. Oxford: West View Press, 2001. p. 22
- 27 National Bioethics Advisory Commission, report on Human Cloning, ch.2.
- 28 Singer, P. (Article). "Cloning Humans and Clonig Animals". A. J. Klotzko. (Ed). *The Cloning Sourcebook*. Oxford: Oxford University Press, 2001. P.161
- 29 Hayry, M., Takala, T., Herissone, P, - Kelly and Gendar Arnason, Rodopi. *Argument and Analysis in bioethics*. Amsterdam: New York, 2010. p.211
- 30 The Report of the Human Genetic Advisory Commission, Cloning Issues in Reproduction, Science and Medicine, December, 1998.
- 31 Wachbroit, Robert. "Genetic Encores: The Ethics of Human Cloning." In *Institute for Philosophy and Public Policy*, 17.4: 1997. pp. 1-7
- 32 Kass, Leon. "The Wisdom of Repugnance: Why We Should Ban the Cloning of Humans" in *Ethical Issues in Human Cloning*. Edited by Michael C. Brannigan. New York, NY: Seven Bridges Press, 1998. pp. 43-66.
- 33 *Ibid*. p.65
- 34 Stolberg, S. G. A small spark ignites debate on laws on cloning human. January, 1998. p.19.
- 35 Woodward, John. (Ed). *The Ethics of Human Cloning*. New York: Thomson Gale, 2005. P. 24.
- 36 Kolata, Gina. *First Mammal Clone Dies; Dolly Made Science History*. The New York Times, Feb 15, 2003.
- 37 Harries, John. *On Cloning*. London: Routledge, 2004. p.109.
- 38 Kass, Leon , (Article). "Be warned, Mr. Blair, cloning is killing". *Sunday Telegraph*, 20 August 2000.
- 39 Borchert, Donald M. (Ed). *Encyclopedia of Philosophy*, (2nd Edn). New York: Macmillan Reference USA, 2006. p. 380
- 40 Sinha, J. N. *A Manual of Ethics*. London: New Central Book Agency (P) Ltd., 2009. p.1

-
- 41 *Ibid.*
- 42 Pojman, Louis. P. *Ethics: Discovering Right and Wrong* :California. Wadsworth Publishing Company, 1994. p. 2.
- 43 Kemp, Peter. *From Ethics to Bio ethics*. Oxford: Oxford University Press, p. 283
- 44 John, S. (Article) “Ethics.” in Nicholas B. and E. P. Tusi-James. *The Blackwell Companion to Philosophy*. 2nd Edn. Oxford: Blackwell Publishing. 2002. p. 203
- 45 Annas, Julia. “My station and its Duties: Ideal and the Social Embeddedness of Virtue”. *Proceedings of Aristotelian Society* n. s. 102: pp. 109-123.
- 46 McDowell, John. *Virtue and Reason*. *Monist* 62: pp. 331-350.
- 47 Pojman, Louis P. *Ethics, Discovering right and wrong*. Belmont, California: Wodsworth Publishing Company, 1995. p. 167
- 48 Copp, David. (Ed). “The Ethics of Care” (Article).in *The Oxford Handbook of Ethical Theory*. Oxford: Oxford University press, 2006. p. 537.
- 49 Maureen Sander-Staudt. ‘Care Ethics’. *Internet Encyclopaedia of Philosophy*, A Peer-reviewed Academic resource.
- 50 *Ibid.*
- 51 Slote, Michael. *Morals from Motives*, Oxford: Oxford University Press, 2001. p. 531
- 52 Taylor, Rechar. *Ethics, Faith and Reason*, Pantice Hall, 1985. p. 166
- 53 Roth, John K. *International Encyclopedia of Ethics*. London: Fitzroy Dearborn Publishers, 1995. p.191
- 54 *Ibid.*
- 55 Pojman, Louis, P. *Ethics: Discovering Right and Wrong*. California: Wadsworth Publishing Company, 1994. p. 109
- 56 Sinha, Jadunath. *A Manual of Ethics*. Kolkata: New Central Book Agency (P) Ltd, 2009. p.74
- 57 West, Henry R. *An Introduction to Mill’s Utilitarian Ethics*. Cambridge: Cambridge University Press, 2004. p.3
- 58 John, S. ‘Ethics’ (Article) Nicholas B. and E. P. Tusi-James. *The Blackwell Companion to Philosophy*. 2nd Ed. Oxford: Blackwell Publishing, 2002. p. 210
- 59 Roth, John K. 1995. *International Encyclopedia of Ethics*. London: Fitzroy Dearborn Publishers. p. 219
- 60 *Ibid.*
- 61 Rawls John, A. *A theory of Justice*. Cambridge. Mass: Harvard University Press, 1971. p. 173
- 62 Fletcher, Joseph. “Love is the only measure”, *Commonweal* (January 14, 1966) cited in Bernard, Rosen. (Ed) *Ethical theory: Strategies and Concepts*. Mountain View, CA: Mayfield Publishing Company, 1993. p.168.