



The Emergent Bioethics of Human Cloning Debate in Global Context

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Abstract

This paper begins with the idea of technology generally and its influence over the global world in family and reproduction sectors particularly. The ARTs have taken over the lead in this sector but human cloning is not a phenomenon endorsed and greeted by everyone around the globe. This paper examines and analyses the arguments of the proponents and opponents on the subject of human cloning from the moral and ethical perspectives. Such concerns over the idea of human cloning evolve around all the stakeholders and do not spare anyone from observation of certain code of conduct proposed by the moral and ethical values. The proponents argue that it is the need of the hour to welcome such an innovative technique and rejection of this technique would be totally unjustified and contrary to the norms of human rights and notions of the freedom of choice in reproduction and healthcare sectors.

Key Words: Human Cloning, Morals & Ethics, Values, Bioethics, Dignity, Individuality, Designer Babies

Introduction

In the present era technology has set down a great impact over the society and gives different trends and fashions while maintaining its progressive position. Likewise, the advancements of science and technology are also influenced by the think tanks and traditions set by the moral and ethical values prevailing in a society (Stirling, 2007).

Family is the fundamental unit where the husband and wife or the partners procreate their offspring together who play their role for the evolution and progress of the society and fulfill the emotional and social needs of their parents as well in society. But every couple is not capable of having kids and some of them are affected with any of the known or unknown types of infertility. It was till the recent past that only medication was considered a treatment for infertility and hormonal deficiencies and imbalances (Vayena, Rowe & Griffin, 2002).

Then the Assisted Reproductive Technologies (ARTs) modified the whole picture magically and infertile couples started having their offspring with the help of new reproductive techniques such as artificial insemination, In Vitro Fertilization, donor eggs and donor sperms, surrogacy etc which initiated a new debate by paving way to cloning, the most controversial of them all (Franklin & Ragoné, 1998).

The nature of social scientific issues is always debatable and controversial from different aspects because they are directly linked with morality and ethics. Biotechnology has taken a significant place since its emergence as unique and innovative form of technology in the modern era hence paving many bioethical issues in the fields of genetic engineering and reproductive technology methods such as cloning (Sadler & Zeidler, 2009).

This idea of cloning human beings has given rise to widespread moral outrage even if this outrage cannot be declared as universal. It is often argued by the liberals that a ban over reproductive cloning or the free reproductive right is interference in the basic human right of reproduction and procreation with choice. Such a ban would deprive many men and women of exercising their basic right but on the other hand the critics argue that the harm and loss caused to the individuals and society if human cloning would be allowed is far greater than the benefits arising out of premising such a right. Thus in such a situation a ban over human cloning is justified Foley (2001:660).

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Cloning

Since 1917 embryology is the most notable field of science which has discovered that embryo might be formed by other means than the traditional mean of fertilization of eggs by sperms. This method is called “asexual reproduction” or cloning where all offspring are genetically identical to the parent from whom they are derived. All the identical organisms are jointly called a “clone.” There are many plants such as the strawberries which reproduce both asexually and sexually naturally (Wilson, 2011:130).

Man has used many techniques of cloning on the plants successfully since ages. Later this technique has been practiced by the scientist in order to have desired traits of cattle or sheep. This procedure was started over 50 years ago when a biologist John Gurden transferred cells from tadpoles into frog's eggs from which the nucleus had been removed, successfully producing new tadpoles which survived to maturity. Even after this, it was believed for long that mammalian cloning was impossible. This connotation was rejected in 1997 when the scientist in Scotland announced that they have successfully cloned a lamb named “Dolly.” The speculation about the possibility of cloning other mammals including human beings began as soon as the birth of Dolly was announced. It is to be noted that since that time this technique has greatly improved and many cattle, sheep and other animals have been produced by the use of cloning technique (Shapiro, 2008).

Human Cloning

Human cloning can be broadly categorized into three kinds: Reproductive cloning, Therapeutic cloning and DNA cloning (recombinant DNA technology).

Reproductive cloning is the most controversial form of cloning but it has not been practiced over the humans so far. Reproductive cloning aims to reproduce another human being from a cell of the parent which is called a “clone.” This technique has been used and aimed to be used on a larger perspective to save endangered species, domestic pets, and agricultural animals. Therapeutic cloning is also known as “somatic cell nuclear transfer” (SNCT). This type of technique is based upon cell replacement formula through “nuclear transfer.” This name is given to the therapeutic cloning by the scientists in order to make it more acceptable and less objectionable by the general public (Bowring, 2004:214).

DNA cloning recombinant DNA technology is the type of cloning which consists of the process where the DNA fragment is cut off from the chromosomal DNA by using restriction enzymes and it is attached to a plasmid that has been cut using the same restriction enzymes (Bowring, 2004:214).

Therapeutic cloning has great potential and can be used in much beneficial and progressive way for the greater benefit of human beings. It has many implications and diverse applications. Its benefits make it more acceptable by the critics in religious, legal and moral and ethical sectors.

Benefits of Human Cloning

Cloning technique has the potential to serve in many innovative dimensions in human development and genetic studies. It has enabled the scientist to comprehend the genetic basis of human evolution and development. Human insulin and interferon to fight viral infections are some of the new and important drugs and therapies invented on the cloning based knowledge. Cloning has greater potential and probability to produce therapeutic stem cells continuously that are genetically identical and harmonized to a patient. This attribute would minimize the chances of rejection and risk of non-acceptance of newly formed/developed bodily organs. Likewise cloning can offer golden chance of having babies to the infertile couples, gays, lesbians and the transgender who would not have been capable of having children otherwise. If this technique is polished and achieved with full excellence it can groom and tailor human intelligence ingenious which would be helpful to produce more intelligent children. Likewise cloning can have potential of curing hereditary diseases (Robertson, 1997).

The transplantation of major human organs is a big issue in today's medical world as many diseases of liver heart kidneys and pancreas and has caused their scarcity. The nonavailability of the required organs is causing death of thousands of patients every year worldwide. In order to meet this need of the patients the scientists have been using organs of animals for instance; pigs which have some similar organs like of humans such as lungs,

kidneys, pancreata, and hearts. But the adaptability of new organs by the old body is a big issue which can be tackled by using the technique of cloning (Lechler, Sykes, Thomson, & Turka, 2005: 605)

Cloning technique is also a very useful method in disease diagnosis and its cure. When unaffected skin cell is minutely studied and observed, potential and prospective new treatments can be tested upon the affected tissue. There are many diseases which cannot be evaluated by the direct examination of the patients so this technique would make the research visible and easier on such diseases. Likewise, the technology of cloning can provide chances to give a detailed study of rare or exceptional diseases such as genetic disorders, etc. Cloning technique is also perceived to have great potential for cancer diagnosis with patient-specific treatment options (Hall, Stojkovic, & Stojkovic, 2006: 1628-1637).

Disadvantages of Human Cloning

Living organisms produced by the method of cloning may have serious and complicated genetic problems in the long term. The individual liberty and variety of human species are one of the reasons of its existence and survival but it is argued that there is a greater possibility of extinction of the cloned people as they would have some common traits which would increase their death probability by any deadly virus.

If the cell to be cloned is affected with any disease then it would be carried on with by the clone and it will be transferred to him. Likewise, some seriously dangerous diseases such as premature aging, different types of cancers and biological disorders can be frequent attackers to the clones. Likewise cloning can give birth to many social issues including the abolition of the institution of marriage and promoting unnatural types of sexual relations. As it is argued that gay, lesbian and transgender couples would go for such options. This would encourage the LGBTs to refrain themselves from the customary and respectable married life if they wish to have kids. Devaluation of humanity with the laws of morals and ethical values is also considered a drawback of human cloning. It is also argued that many weak minds would doubt the authority of God over the creation of human beings. It is also feared that cloning can eventually replace the traditional and natural belief behind human reproduction (Robertson, 1994:6-14).

Companies can make their designed workers and even the military men run their business which would cut down the importance of manpower and unemployment ratio would definitely increase, is an economic and commercial drawback set forth by the critics. It is also argued that the notorious minded people would tend to reproduce a black market for the eminent scientists, celebrities and other significant human beings. The clones may be treated as second class citizens. The stability of family as a unit of society and its importance in such a character would also be shaken if cloning is practiced regularly. Cloning can give rise to unnecessary birth defects in children likewise the rich would have unfair advantage in comparison to the poor parents. The unlicensed scientists and unauthorized professionals would tend to promote this technique for ulterior motives and malafide intention. The critics argue that a clone would be deprived of natural confidence and self-respect that would give him serious psychological shocks while he will go out to interact with people. Some of the healthcare practitioners hold the opinion that cloning would be a reason for high mortality rate, deteriorating health conditions and making humans an easy prey to diseases which would be a reason for short life spans. The critics also argue that the evolution of humanity would also be stopped and hampered due to the technique of cloning. When people are given a choice to select their preferred traits they would go for their own race and color which would endanger the natural process of diversity and amalgamation of races (Robertson, 1994: 6-14).

Moral and Ethical Values

It is imperative to mention that moral and ethical values do not enjoy the full acceptance and adaptability by all sectors of society in the modern era. Many misunderstandings revolve around moral and ethical values. The preservation of one's own personal actions and responsibility can be taken as the most acceptable meaning of the moral and ethical values in the current era (Campbell, 2008:360).

As far as the moral and ethical values related to the scientific innovations and inventions are concerned such type of values can be categorized under two major heads including the moral and ethical values related to the scientific education and such values related to the practical aspects or the practicability of science.

Witz (1996) argues that after the 18th century the world has witnessed rapid scientific and technological advancements. Globalization is influencing society, science, education, and even teaching practices.

Morality is a complex concept which may consist of different beliefs about the nature and psyche of the man, his ideas and his likes and dislikes or his goals in life. The meaning of morality extends to the rules specifying: What needs to be done? What should be done? What can be our motive when we intend to opt for a particular option declaring it our choice? or how we refrain ourselves from choosing a morally wrong decision (Edwards, 1970, p.150).

Most of the times the English words “Moral” and “Ethics” are used as synonyms. If we go for their literal meanings Earle (1992) sees that the word “moral” is derived from the Latin language which means “customs”, “manners” and “character” etc whereas the word “ethics” is derived from the Greek word “ethos” which means “usage”, “character” and “personal disposition.” As far as their application is concerned moral and ethical issues are related to both the character and behavior. (Emmett 1994). Does it mean that they answer the question such as what should I do? or what I should not do? or how should I act? or how the society or an individual should be here with me in a particular situation? Sigelman (2014) mentions that “the term moral gives an inference to the ability to distinguish the right from the wrong or this is any act giving an inference to such a distinction.”

As far as the meaning and definition of value are concerned it can be said that value is something that is “looked for, to get pleasure” or “something that is in interest of others which makes it lovable because of its good attributes.” It can also be said that the term value may mean the consciousness of right and wrong or the consciousness of just and unjust etc (Benninga, 1991:131).

Moral value is a value that must be separated from other types of values. But it is also important to mention that only that value qualifies for some importance which has a quality relationship with other values. For example truthfulness is example of moral values but this value does not have merit if it is not applied with the other values.

Such a unique attribute of moral values makes them important from many other aspects of personal and social life. For example the moral values create responsibility and give birth to moral rights. Likewise moral values draw a distinction between good and bad, right and wrong (Rosyadi, 2004:123).

Bioethics and Its Principles

Bioethics was introduced by VP Rotter (1970), formally. Historically its evolution is also not too old to be traced while it is believed that in the 1960s this field of ethics was discovered by the Christian theologians who tried to develop a relationship between the innovative treatment methods and the older medical technologies. With the passage of time others experts and theologians from the natural, social and medical sciences also joined them and bioethics took the shape as we find in the modern era. It is also observed that this discipline was greatly influenced by the Western lines and thoughts mainly until the 21st century when it became more pluralistic and adapting to the non-western traditions and values. This gave rise to the concept of cross-cultural bioethics (Qaiser, 2009, p.40).

The term bioethics is a combination of two words extracted from the Greek language. “Bios” which means life and “ethike” which means ethics. Therefore the simplest definition to bioethics can be: “The systematic study of human conduct in the area of life sciences and healthcare in so far as this conduct is examined in the light of moral values and principles.” Bioethics embraces somehow traditional or old topics such as population control etc to the modern concepts in biomedical ethics such as the IVF technologies, cloning, and surrogacy, etc. The traditional bioethics works on the basis of four major principles.

Autonomy

The first principle is called autonomy. Autonomy can be described as the “self-rule.” It means that when people have been given autonomy they become capable of choosing the beneficial options for themselves. Extraction and application of autonomy varies and has different implications and applications in medical service. Medical confidentiality is an important implication for autonomy. Abstinent from deceit and lie is another important aspect of autonomy in medical ethics. Well and free communication of the patient with the medical practitioner and revealing of necessary information to the patient are also some of the implications of autonomy (Tsai 1999).

Non-maleficence

The Latin Maxim “primum non nocere” which means “above all do no harm” is the most distinguished maxim used as a standard in bioethics which means that the healthcare officers and medical practitioners are under an obligation to not do any kind of harm to their patients.

Thomas Percival is of the opinion that this principle is the most important and primary principle setting forth and describing the physicians’ obligations and accomplishments. The basic and primary concepts related to the common rule of morality such as: not killing anyone or depriving anyone of his organs, not giving pain to someone or causing harm to anyone are the examples falling under this category (Sewell 1847).

Beneficence

This concept comes at the applied stage in the bioethics where the medical practitioner does not only refrain himself from anything harmful to the patient but also promotes himself to do good or necessary for the patient. It is also argued that the principle of beneficence has more applicability and extension than the principle of non-maleficence. The notions of minimizing possible harms and maximizing possible benefits also come under the extent of this principle. It means that not only the injury or harm must not be given to the patient but he must be treated at the best level possible where he has been given best opportunity to cure his sufferings and physical problems and diseases (Post, 2004).

Justice

The fourth and last principle in bioethics is justice, which can quite often be used as a synonym to the word “fairness” which means that if there are two competing claims the decision should be based on the moral obligation of fair adjudication. Even though it is generally perceived that equality is the core element of justice but as the Aristotle views “Justice is more than mere equality,” it means that people can be treated unjustly even if they are treated equally and they can be treated justly even if they are not treated equally. The philosophers extract conclusion in the words; “treat equals equally and treat unequal unequally.” Many ethical standards in modern bioethics are derived from the principle of justice for example; providing sufficient healthcare to all and equal access to it be given everywhere, etc (Beauchamp, 2003, pp.269-274).

Analysis of the Arguments by the Proponents and Opponents on Cloning: In the Light of Moral and Ethical Values

Human Dignity

Reproductive cloning is widely considered as a threat to human dignity by the common men, legislators and opposing activists (Kuppuswamy, Serbulea, & Tobin, 2007). For example article 11 of the “Universal Declaration on the Human genome and human rights” by the UNESCO States that: “Practices which are contrary to human dignity such as reproductive cloning of human beings shall not be permitted,” it also goes on to add: “States and competent international organizations are invited to co-operate in identifying such practices and in taking at national or international level the measures necessary to ensure that the principles set out in this declaration are respected.”

On the other hand, the proponents argue that every reproductive technology or technique is linked with some questions of human dignity, human values, human worth and other related notions that need to be kept in one’s mind while exercising their right of reproduction. It is also to be noted that it is impossible to have an identical copy in the form of a clone and even if we are capable of having human clone that clone in real is no lesser than a normal or ordinary human being and he would enjoy equal rights under the UN declaration of Human rights or any other national or International document attributed to that individual. Moreover they also link the issue of hampering the human dignity because of cloning with social and ethical norms stating that if the overall dignity of man is present in a society in such a case the dignity of a cloned individual would also be equally present in the society and legal documents (Cherfas, 1985:61). They further argue that genetic distinctiveness or identity does not mean having an identical personality. Even genetically identical twins are different people (Gillon, 1999, p.3-12).

Designer Babies

The critics argue that human reproductive cloning deals children as designed products or commodities. In such a process the children are manufactured like any other type of production. Such an act is not only against human dignity but it also lowers the status and rank of man as an individual with distinctive characteristics (Spar, & Fattore, 2006).

The proponents comment that the involvement of money in any reproductive function does not make the children as manufactured goods or products. Such children are as much loved by their parents as the children got by their parents through natural means of reproduction. They support their views by this example that children are begotten by so many other techniques of IVF technologies yet they are loved, cared and adored by their parents.

Individuality of Man

The critics argue that human reproductive cloning lacks some important traits in the reproductive procedure such as the individuality of newly born. They argue that a clone will be a copy or replica of the original and would not enjoy his own distinctive and unique personality. This drawback will make him less contributive and fruitful to society. On the other hand the proponents argue that even the identical twins are not same and they have different genetic characteristics, same is the case with clones who would have the different characteristic from their parents. They support their views by rejecting some misinformation and misconceptions as depicted in the movies, fiction or the literature on cloning which portray that human life can be repeated or played again and again. Human clones go through different psychological, physical and environmental phases and establish their own personality and characteristics like any other human being (Mohaghegh, 2012).

Destruction of Humanity

The critics object that if human cloning is made common and easily accessible the clones would conquer not only the world and its resources but they will also create a serious threat to human race, environment, and atmosphere. Such population of clones would be vulnerable and easy prey to many infections which would be a source of chaos and destruction in the society (Harris, 1997, p.353-360)

On the other hand, the proponents argue that the notion that cloning can overpopulate the world is totally misleading and unrealistic. The cost or expenses to create a clone is much more than an average human being can afford to produce a new person of his choice, no matter if he is a superhero or a villain. Hundreds of thousands of babies are born every day through normal means of sexual reproduction and if reproductive cloning is practiced only a small number of persons will be produced by following this technique which would amount not more than a drop in the sea as only the infertile couples, gays, lesbian and carriers of heritable diseases would choose this method of reproduction (Pence, 1998).

Right of Free Procreation

The proponents of human cloning argue that free procreation is a fundamental human right which must be respected and allowed freely no matter what method is selected by the partners for their reproduction (Foley, 2001:625). They base their argument on the principles of consent, will, no harm, maximum benefit to the patient/client and equal opportunity.

The opponents, on the contrary, do not set the right of procreation as free as without being bound with moral and ethical limitations. They set forth criteria to be met before applying for the right of procreation with their own choice. They are of the view that there would have been much destruction and chaos in the society had the human cloning adopted by our forefathers. They argue that free will and choice are to be exercised only within the authorized limits and standard to check the beneficence is not a private matter but a matter to be weighed according to the general/public interest. The harmful things can never be allowed to opt no matter what amount of benefit is expected to be associated along with them (Risse-Kappen, Risse, Ropp & Sikkink, 1999).

Safety Issues

The critics argue that human reproductive cloning is an unsafe method of human reproduction and it produces

children with birth defects which makes it a dangerous choice for all the parties concerned such as the medical practitioners, the legislators, the state, the society, the clone to be and the parent/parents (Rafter, 1997).

It is also argued that a greater number of embryos, eggs, fetuses, and even the mothers die while having the process of cloning on them. The results are acquired in much lesser ratio than the attempts. Even the sheep Dolly was got on 277th attempt after 276 failed attempts (Wilmut, Schnieke, McWhir, Kind, & Campbell, 1997, p.810).

The proponents argue that it is totally unjustified to question the efficiency of cloning while it is in developing stage yet. It always takes time for a technology to achieve excels and expertise of the practitioners are also achieved with the passage of time (Macintosh, 2005, p.113)

The large offspring syndrome LOS has also attributed the defect caused to the animals conceived by the method of cloning. But LOS is greatly observed in the animals conceived with IVFs and other reproductive techniques as well. The role of reprogramming, if wrongly acquired, in the cloned animals is also considered a serious health issue denoting the process dangerous. Dr Wilmut and his associates confirmed this objection by publishing a letter in the "Nature" Magazine that Dolly's telomeres were 20 percent shorter than those of her age's sheep.

Conclusion

Cloning is that modern technology which has a great potential no matter the subject of practice belongs to the plants, animals or human beings. It is a truth that the implications of human cloning are of severe and complicated nature as discussed under this article but it goes without saying that cloning gives a good chance to save many extinct birds and animal species. It also gives a solution to meet the limited food resources for the growing world population.

Human cloning has two important types the reproductive and therapeutic. The reproductive cloning is much more objectionable due to its nature, as perceived by the scientist and moral and ethical values so far. But a section of the stakeholders supports even this type of cloning owing to its possible potential of bestowing with the offspring ones who would never have been capable of having them otherwise. They take it as their reproductive right which they have full liberty to exercise at their own. On the other hand, therapeutic cloning has another type of potential which is even more constructive and beneficial for almost all of the stakeholders including common man, the atheists and the ones propagating and upholding the religious or moral and ethical beliefs and practices in the reproduction and family sectors. It is also observed that most of the speculations and perceptions responsible for the criticizing attitude consisting of the feelings of hatred and rejection of human cloning do not exist in reality or they are not in that much greater amount to declare human cloning particularly the therapeutic type of it undesirable or rejected. There is a great need to throw light on the subject with the help of scientist, think tanks, educationists and the welfare workers along with the ethicists and the activists.

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