

## Ethical and Legal Implications of Human Cloning

**Rovena Kastrati**  
*University of Tirana*

### Abstract

In February 1997, the media informed the entire world of the birth of the cloned Dolly the Sheep, which sparked a huge international debate encompassing the ethical, social, cultural and legal spheres. The cloning debates are defined as events that constitute milestones in the history of mankind. Those debates have exceeded the boundaries between the church and secular world, scientists and philosophers, and even those between politicians, ordinary people or prominent public figures, such as writers and actors, etc., thus engaging the entire society. Albania has also been involved in this vortex of significantly essential debate. What will happen further on? After successful animal cloning, will it be the turn of humans to be cloned? Should human cloning be absolutely prohibited? Or should scientists be allowed to work in order to perform medical services to the benefit of humanity? This paper shall deal with the ethical, religious and legal frameworks of human cloning, as well as the approach adopted by the legislation of Albania with regard to this global phenomenon.

**Keywords:** assisted reproduction, human cloning, reproductive cloning, therapeutic cloning, ethical contrast, legal regulation.

### Introduction

In bioethics, the ethics of cloning refers to a variety of ethical positions regarding the practice and possibilities of cloning, especially human cloning. While many of these views are religious in origin, some of the questions raised by cloning are faced by secular perspectives as well. The various forms of cloning, constitute one of the most controversial topics nowadays, as there have been numerous demands and attempts for all activity and progress in the human cloning field to be halted.

Cloning shall be understood as referring to those natural or artificial means that do not belong to sexual reproduction, whereby a group of living cells or organisms shall grow from a unique individual. On the other hand, a clone shall be defined as the entirety of cells or organisms that are genetically identical because they originate from a unique and common descendant (Çipi & Meksi, 2017).

Although the likelihood of human cloning was a subject of speculations for the most part of the 20<sup>th</sup> century, scientists and politicians began to consider this perspective more seriously around the mid-1960s. Following the cloning of a sheep known as "Dolly the Sheep" in 1997 by means of a nuclear transfer of somatic cells, the idea of human cloning became a hot topic of debate. The announcement of Dolly the Sheep triggered a whirlwind of reactions and ignited public imagination. The news was called "extraordinary", "scary", and even the "scientific discovery of the century." However, the majority of the comments focused not only on Dolly but also on the human cloning spectrum and the implications of this achievement in human well-

being. Meanwhile, the first human hybrid clone was created in November 1998 by Advanced Cell Technology. It was created using the somatic cell nuclear transfer – a nucleus was taken from a man's cell and implanted into a cow's egg whose nucleus had been removed and the hybrid cell was cultivated and let develop into an embryo for twelve days before it was destroyed (Details of hybrid clone revealed, 1999).

In recent decades, the use of the cloning technique is considered one of the most controversial issues in the world of science, and there has been a lot of discussion about the status that cloning should be accorded in society. Recent advances in cloning procedures have caused controversy and intense debate over the whole cloning issue, resulting in the adoption of numerous laws prohibiting cloning for specific purposes. In biotechnology there are two major cloning purposes, that is, cloning for reproduction purposes and cloning for therapeutic medical purposes. Cloning of the latter type involves the creation and subsequent destruction of a human embryo clone for scientific or medical research purposes. Therapeutic cloning in the context of cell replacement therapy shows a great potential for the permanent treatment of various diseases such as Parkinson's disease, Duchenne's muscular dystrophy and some types of diabetes as demonstrated in the conduct of *in vivo* studies (Kfoury, 2007).

Supporters of human therapeutic cloning argue that this practice may provide genetically identical cells for regenerative medicine, tissues and organs for transplantation. Further on, they argue that both the basic research and development of therapeutic applications in the case of serious diseases such as cancer, heart disease, and improvements in the treatment of burns and reconstructive and cosmetic surgery, are areas that can benefit from such a technology (Kfoury, 2007). Gregory E. Pence, an expert in medical ethics and professor of philosophy at Alabama University in Birmingham, is one of the few bioethics professors who strongly supports the practice of human cloning. His well-known work defending human cloning has labelled him as a rebel in the scientific community (Alvarez, 2004). As displayed in his many books on human cloning, this practice should not be banned but rather accepted in modern society as a future tool for creating wanted children, as well as due to biotechnology future promises which include extending human lifespan and assisting in the process of procreation. In 2001, Pence testified before the US Congress against a bill that would have criminalized all aspects of human cloning (Issues Raised by Human Cloning Research, 2001).

With regard to reproductive cloning, there is a multitude of scientific, governmental and religious organizations that strongly and convincingly oppose the cloning process. The American Association for the Advancement of Science and other scientific organizations have made public statements suggesting that human reproductive cloning be banned until safety issues are resolved. Moreover, serious ethical concerns have been raised by the future possibility of harvesting and using organs from clones (McGee, 2001). As Leon Kass points out in his work *The Ethics of Human Cloning*, any attempt to clone a human being would constitute an unethical experiment on the resulting child-to-be, because, as animal experiments indicate, there are grave risks of mishaps and deformities (Kass, Wilson, & Wilson, 1998, p. 31). In addition, cloning creates serious issues of identity and individuality as the cloned person

may experience concerns about his distinctive identity since, being saddled with a genotype that has already lived, he will be identical to another human being. He will not be fully a surprise to the world as the individual is likely always to compare his performances in life with those of his alter ego (Kass, Wilson, & Wilson, 1998, p. 32). Typically, cloning is discussed in one or more of three familiar contexts, which one might call the technological, the liberal and the meliorist (Kass, Wilson, & Wilson, 1998, p. 20). Under the technological context, cloning will be seen as an extension of existing techniques for assisting reproduction and determining the genetic makeup of children. Cloning is to be regarded as a neutral technique that is subject to multiple good or bad uses. The morality of cloning thus depends absolutely on the goodness or badness of the motives and intentions of the cloners. As one bioethicist defender of cloning puts it, "the ethics must be judged only by the way the parents nurture and rear their resulting child and whether they bestow the same love on a child brought into existence by a technique of assisted reproduction as they would on a child born in the usual way (Kass, Wilson, & Wilson, 1998)". The liberal perspective sets cloning in the context of rights, freedoms and personal empowerment. According to liberals, cloning is just a new option for exercising an individual's right to reproduce or have the kind of child he or she wants. Otherwise, cloning enhances the liberation of an individual (especially women's liberation) from the confines of nature, the vagaries of chance, or the necessity for sexual mating. Indeed, it liberates women from the need for men, because the process requires only eggs, nuclei, and, of course, a healthy dose of science. For those who hold this outlook, the only moral restraints on cloning are adequately informed consent and more specifically the avoidance of bodily harm. If no one is cloned without his or her consent, and if the clonant is not physically damaged, then the liberal conditions for licit, hence moral, conduct are met (Kass, Wilson, & Wilson, 1998). The *melioristic* perspective includes valetudinarians and also eugenicists. The latter were formerly more vocal in these discussions, but they are now generally happy to see their goals advanced under less threatening banners of freedom and technological growth. These people see in cloning a new prospect for improving human beings—minimally, by ensuring the perpetuation of healthy individuals by avoiding the risks of genetic disease, by producing "optimum babies", preserving outstanding genetic material, and (with the help of fast techniques for precise genetic engineering) enhancing inborn human capacities on many fronts. Here the morality of cloning as a means is justified solely by the excellence, that is, by the outstanding traits or individuals cloned (Kass, Wilson, & Wilson, 1998). From the religious aspect, religion is among the most powerful factors that create attitudes towards human cloning. Many conservative Christian groups have opposed human cloning and cloning of human embryos because they believe that life begins at the moment of conception. Moreover, Christians think that no one has the right to play the role of God, for He (God) is the only creator and the work of creation depends upon Him. The Catholic Church firmly condemns efforts aimed at human cloning, considering it an unethical act that violates human dignity (Campbell, 1998). From this viewpoint, there is no distinction between human reproductive cloning and therapeutic cloning and, therefore, both should be rejected because even in the case of therapeutic cloning destroying an embryo that has already been formed goes

against the fundamental rights of every human being, namely the right to live. Thus, the Catholic Church demonstrates an inner consistency in cloning matters. In 1987, the Congregation for the Doctrine of the Faith, *Donum Vitae*, condemned cloning as a violation of the dignity of the human embryo and the inner goods of human sexuality, stating that “...attempts or hypotheses for obtaining a human being without any connection with sexuality through “twin fission”, cloning or parthenogenesis are to be considered contrary to the moral law, since they are in opposition to the dignity both of human procreation and of the conjugal union. Although some traditions have dealt with the potential abuses of the cloning technology, Roman Catholic teaching upholds that the use of cloning techniques in relation to human beings is in itself contrary to human dignity (Campbell, 1998).

Islamic scholars do not express conservatism with regard to the reproductive technology, but consider that attention should be paid to potential abuse and priority should be given to human dignity. Islamic discussions about human cloning have also highlighted the opportunities for the evil present in commodifying knowledge and persons through profit motives. However, despite the fact that therapeutic cloning, within certain limits, is considered permissible by most Islamic scholars, reproductive cloning remains prohibited under Sharia law because such a procedure is considered to be “playing the role of God”, which runs contrary to the pillars of the foundation of Islamic faith (Fischer).

According to Buddhist ideology, although human cloning can be allowed, what runs into difficulty is the scientific research needed in order to achieve cloning. Buddhism believes that a new being comes into existence shortly after fertilization, and a research procedure will result in causing violence or harm to sensitive beings, which in Buddhism is forbidden. Moreover, embryo research would be a particularly problematic procedure especially when the research process is inefficient and causes loss of life (Schlieter, 2004).

### **International Legal Regulation**

Many countries have banned reproductive and/or therapeutic cloning, but in most cases their laws refer to the somatic cell nuclear transfer instead of cloning and thus fail to cover the state-of-the-art technologies. Likewise, laws on biomedicine are generally formulated in vague terms that do not distinguish between reproductive cloning and therapeutic cloning. The Convention on Human Rights and Biomedicine (the Oviedo Convention) contains inconsistencies because Article 13 thereof states that “An intervention seeking to modify the human genome may only be undertaken for preventive, diagnostic or therapeutic purposes...”, while Article 18 states that “The creation of human embryos for research purposes is prohibited”. Since reproductive and therapeutic cloning require an *in vitro* generation of a human embryo, the prohibition of reproductive cloning is likely to result in strict obstruction of significant medical research based on therapeutic cloning (Kfoury, 2007).

In 2005, in an effort to address this very sensitive issue, the United Nations adopted the Declaration on Human Cloning. The Declaration calls upon the Member States to “prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of human life”. This Declaration received only

ambivalent support from UN Member States where only 84 states voted for it, 34 voted against and 37 abstained. The formulation of the document left room for very different interpretations of the text, which reflected in part the lines of division between various Member States on this issue. The main point of the dispute was the question of linking reproductive and non-reproductive cloning issues, which was not accepted by many of the states that abstained or voted against the Declaration. The supporters regarded it as a historical moment for the protection of human dignity and promotion of human rights, and prevention of the potential exploitation of millions of women whose eggs would be harvested for scientific research purposes. They said that only a comprehensive legal framework that prohibits all kinds of human cloning would adequately protect the dignity of human embryos. The opponents criticized linking the prohibition of reproductive cloning with the prohibition of cloning for medical purposes, believing that an important opportunity had been missed to adopt a legally binding convention for a worldwide prohibition of reproductive cloning. It was also considered as an instrument too weak to prevent fraudulent research or promote legitimate scientific efforts (RM, GJ, & Nations, 2006).

There are currently no specific and binding rules governing the use of cloning methods on people at United Nations or European levels. However, relevant regulatory efforts are being made at both levels, including opinions and statements that, although non-binding, enjoy the status of recommendations.

The Universal Declaration on Human Genome and Human Rights, adopted on 11 November 1997 by the UNESCO General Conference and supported by the United Nations General Assembly Resolution 53/152 of 9 December 1998, is the first international instrument which prohibits human reproductive cloning. Article 11 of the Declaration states that *"Practices which are contrary to human dignity, such as reproductive cloning of human beings, shall not be permitted. States and competent international organizations are invited to 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."* (The Universal Declaration on the Human Genome and Human Rights: from theory to practice, 2000)

The provisions of the UN Declaration on Human Cloning state that *"Member States are called upon to adopt all measures necessary to protect adequately human life in the application of life sciences and prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of human life."* The Declaration is not binding and has simply the status of a recommendation.

The World Health Organization Resolution WHA 51.10 of 16 May 1998 states that *"cloning for the replication of human individuals is ethically unacceptable and contrary to human dignity and integrity"* (Session WHA51.10 Ethical, scientific and social implications of cloning in human health). Therefore, it *"urges Member States to foster continued and informed debate on these issues and to take appropriate steps, including legal and juridical measures, to prohibit cloning for the purpose of replicating human individuals"*. Article 3 paragraph 2 of the European Union Charter of Fundamental Rights, promulgated by the European Parliament, the Council and Commission on 7 December 2000, prohibits reproductive cloning explicitly. Explanations on the Charter emphasize the fact that: *"The Charter prohibits only reproductive cloning. It*

*neither authorizes nor prohibits the other forms of cloning. Thus it by no means prevents the legislator from prohibiting other forms of cloning.”* (Charter of Fundamental Rights of the European Union, 2012)

In its Resolution on Human Cloning, dated 15 January 1998, the European Parliament affirms that *“human cloning should be prohibited”* (Resolution on Human Cloning, European Parliament, 1998). Moreover, it calls upon the *“Council of Europe Member States to sign and ratify the Council of Europe Convention on Human Rights and Biomedicine and its Additional Protocol on the Prohibition of Cloning Human Beings.”* In a further resolution on human cloning, dated 7 September 2000, the Parliament upholds the position that *“therapeutic cloning”,* which involves the creation of human embryos for research purposes alone, represents a profound ethical dilemma, irrevocably crosses a boundary in research norms and is contrary to the public policy adopted by the European Union (European Parliament resolution on human cloning, 2002). The Resolutions adopted by the European Parliament have no binding legal power, although they usually exercise a formative influence on the European Union’s subsequent legislation and case law.

Another instrument that refers explicitly to human cloning is the Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings, adopted in 1998 (Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings, 1998). This Additional Protocol is designed to prevent abuses of medical techniques applied on humans by sanctioning that *“Any intervention seeking to create a human being genetically identical to another human being alive or dead is prohibited. For the purpose of this article, the term human being “genetically identical” to another human being means a human being sharing with another the same nuclear gene set.”*

At the national level, the regulations that provide for human embryo research and cloning differ and reflect the various cultural, religious, social and political backgrounds of the countries. Some states do not hold a clear-cut stand on cloning, such as Belgium, which has no legislative framework on cloning. Research involving therapeutic cloning is not subject to any national protocol: instead, research projects are under the control of local ethics committees. In France, the National Advisory Committee on Life and Health Sciences, established in 1983, voiced its opposition to the Directive 98/44/EC on the Patenting of Biotechnological Inventions, but accepted *“therapeutic cloning”* by a small majority (Human Cloning Regulation in Europe, 2001). The United Kingdom is among the countries that maintain a liberal position towards cloning. In January 2001, the House of Lords voted in favor of allowing the Human Fertilization and Embryology Authority to publicly and independently supervise research on embryos and IVF techniques, and authorize therapeutic cloning (Human Cloning Regulation in Europe, 2001). The same position has been adopted by Denmark, where the Ethics Committee has accepted and allowed therapeutic cloning. On the other hand, Germany is characterized by conservative legislation with regard to embryo research, and cloning in particular. The 1992 Law on the Protection of the

Embryo is a criminal law which foresees punishments by imprisonment of up to five years for those who violate the provisions set out therein. The Law prohibits all forms of research on human embryos and an attempt to fertilize an egg for any purpose other than to obtain a pregnancy is considered a criminal offense. In addition, it forbids human cloning expressly (Wheat & Matthews). However, taking into account the proportions that cloning is assuming, the initiatives undertaken by some states such as the United States and Spain advocate not only absolute prohibition of reproductive cloning but also a global prohibition of therapeutic cloning, thus facing a situation that might lead to an international agreement against cloning as a whole.

### Legal Situation in Albania

Should human cloning be allowed? Will it be humans' turn to be cloned after successful cloning of animal? Should human cloning be definitely prohibited? Or should scientists be allowed to work in order to achieve medical services to the benefit of humanity? Albania has also been involved in this vortex of global debate which is very essential in relation to cloning as an undisputed procedure and yet a taboo. In 2008, the government submitted to the Parliament a draft law on the protection of industrial inventions, which included a prohibition of cloning human beings, animals or human organs. By that legal initiative the Albanian state respected several international conventions that prohibited human cloning categorically. After its entry into force, the law was amended several times until 2017. Article 6 foresaw that there shall be no patenting of inventions whose commercial use conflicts with public order, morality or health and the lives of people, such as human cloning processes (Law no. 9947, On Industrial Property, 2008). This law constitutes the only legal basis containing specific provisions on cloning because the Albanian legislation does not make explicit mention of cloning, either reproductive or therapeutic; however, as it is carried out through practical and experimental research work, it is prohibited by the legal provisions that forbid the conduct of research and experimental procedures on embryos.

The legislator in Albania has prohibited any type of experimental activity that may be carried out on embryos, whether for medical or therapeutic purposes, or activities of a non-medical character (Law No.8876, On Reproductive Health, 2002). Article 38 of the Law on Reproductive Health lays down expressly that "*Use of human embryo for any other kind of commercial, industrial or experimental purposes shall be prohibited.*" Obviously this provision forbids any kind of experimental activity on an embryonal unit. This position is also reinforced by the Albanian Law on Cell, Tissue, and Organ Transplantation which states that "*Genetic manipulation of an embryo, even for transplantation purposes shall be prohibited*" (Law No.10 454 on Cell, Tissue, and Organ Transplantation, 2011). Genetic manipulation means interference with the genetic code of an embryo by means of novel technology which is promising with regard to the modification of genetic information in a fast and inexpensive manner. This technique may remedy various genetic errors that cause irreparable defects in humans (A, T, S, M, K, & BL, 2018). Article 56 of the Code of Ethics and Medical Deontology states expressly that "*Abuse of human embryos for research purposes, or any other purpose shall be prohibited. It shall be considered a legal and ethical violation and punished under these*

*normative acts.*" (Code of Ethics and Medical Deontology , 2011).

With regard to experimentation on embryos, the prohibitions set forth in the abovementioned provisions obviously point to the legal constraints imposed over the research and experimental activity on embryos, implying human cloning, too. Despite the benefits that can be reaped from the embryonic research work (whether redundant embryos or embryos created for research purposes and medical assessment), the Albanian legislator has provided for that prohibition explicitly indicating thereby the restrictive nature of any kind of scientific research activity on them. However, what should be emphasized is the fact that these provisions forbid those foreign clinics which cannot find legal space in the West and choose poorer countries from setting up clinics for purposes of researching cloning in practice, because Albania indeed lacks the human capacities, and also financial ones, to establish clinics of such a level.

### Conclusions

Although over fifteen years have elapsed since the entry into force of the Law on Reproductive Health, Albania still remains a country where assisted reproduction techniques are used freely and without restriction as a result of the deficiencies in the aforementioned legislation. In addition to the effective law, licensed clinics apply practices based on internal protocols, thus bringing additional "confusion" to this area. The lack of pertinent legislation not only brings about complications to the participants in assisted procedures, but also risks the establishment of unethical practices that cause irreparable moral and social damages.

Listening to and elaborating numerous ethical, social, legal, scientific, and medical considerations, and other perspectives on the complex issue of assisted human procreation, one becomes aware of the urgent need to have legislation imposing clear-cut limits on efforts to develop this reproduction mode and carry out interrelated research.

Evidence is indicative of the numerous advantages deriving from the applied procedures and practices, and the benefits obtained from the ongoing research in the area of assisted reproduction. The same evidence points out the potential for harm to individuals and the society if such practices are not controlled by applicable legislation and regulations. There is no doubt that cloning is one of those practices which in Albania is not subject of an adequate regulation despite the provisions in force. Where research activity has the potential to debase human life and violate the principles of equality and human dignity, that activity should face a powerful and meaningful legislative response. At this point, it is imperative and urgent for the Albanian legislator to intervene and regulate the area of human procreation through normative acts, even criminal ones, which set forth the legal and ethical principles whereupon assisted medical reproduction will operate in Albania, and above all foresee what activities are considered dangerous, unethical and contrary to the public, moral and social order.

### References

A, N., T, M., S, H., M, H., K, M., & BL, M. (2018). Cutting edges and weaving threads in the gene editing Revolution: reconciling scientific progress with legal, ethical, and social concerns.

*J Law Biosci.* , 5 (1), 35-83.

*Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings* . (1998, January 12). Retrieved November <https://rm.coe.int>, 2018, from Council of Europe.

Alvarez, H. (2004). Reviewed Work: Reproductive Ecology and Human Evolution by Peter T. Ellison. *Politics and the Life Sciences* , Vol. 23, No. 1, 71-73.

Campbell, C. S. (1998). Resistance and Meaning: Religious Communities and Human Cloning. *Valparaiso University Law Review* , 32. nr.2, 607-631.

*Charter of Fundamental Rights of the European Union*. (2012, October 26). Retrieved February 5, 2019, from Refworld: <https://www.refworld.org>

Çipi, B., & Meksi, S. (2017). *Etika Mjekësore*. Tiranë.

*Code of Ethics and Medical Deontology* . (2011, November 11). Retrieved January 10, 2019, from Qendra Spitalore Universitare "Nene Tereza": <http://www.qsut.gov.al/>

*Details of hybrid clone revealed*. (1999, June 18). Retrieved December 25, 2018, from BBC News: <http://news.bbc.co.uk>

*European Parliament resolution on human cloning*. (2002, September 7). Retrieved from European Parliament: <http://www.europarl.europa.eu/portal/en>

Fischer, N. (n.d.). *Reproductive Cloning in Islam: The Debate and the Arguments*. Retrieved December 2018, from Stem Cell Network North Rhine Westphalia: <https://www.stemcells.nrw.de>

*Human Cloning Regulation in Europe*. (2001, March 9). Retrieved from Aclj: <https://aclj.org/>

*Issues Raised by Human Cloning Research*. (2001, March 28). Retrieved January 10, 2019, from U.S. Government Printing Office: <https://www.govinfo.gov>

Kass, L., Wilson, J. Q., & Wilson, J. K. (1998). *The Ethics of Human Cloning*. American Enterprise Institute.

Kfoury, C. (2007). Therapeutic cloning: promises and issues. *Mcgill J Med* , 10(2), 112–120.  
*Law no. 9947, On Industrial Property*. (2008, July 7). Retrieved from Wipo: <https://www.wipo.int/portal/en/>

*Law No.10 454 on Cell, Tissue, and Organ Transplantation*. (2011, July 21). Retrieved November 2, 2018, from Infocip: <http://www.infocip.org/al/wp-content/uploads/2011/04/header-infocip-i-ri2.png>

*Law No.8876, On Reproductive Health*. (2002, April 4). Retrieved January 2019, from Infocip: <http://www.infocip.org/al/wp-content/uploads/2011/04/header-infocip-i-ri2.png>

McGee, G. (2001, February). *Primer on Ethics and Human Cloning*. Retrieved from Actionbioscience: <http://www.actionbioscience.org/biotechnology/mcgee.html>

*Resolution on Human Cloning, European Parliament*. (1998, January 15). Retrieved from University of Minesota, Human Rights Library: <http://hrlibrary.umn.edu/gifs/umsmlogo.gif>

RM, I., GJ, A., & Nations, U. (2006). To clone alone: the United Nations' Human Cloning Declaration. *Rev Derecho Genoma Hum* , 13-26.

Schlieter, J. (2004, January 1). *Some observations on Buddhist thoughts on human cloning*. Retrieved from Academia: [www.academia.edu](http://www.academia.edu)

*Session WHA51.10 Ethical, scientific and social implications of cloning in human health*. (n.d.). Retrieved Feb 1, 2019, from World Health Organisation: <https://www.who.int/>

*The Universal Declaration on the Human Genome and Human Rights: from theory to practice*. (2000). Retrieved January 2019, from Unesco Digital Library: <https://unesdoc.unesco.org>

Wheat, K., & Matthews, K. (n.d.). *World Human Cloning Policies*. Retrieved December 2018, from StydyLib: <https://studylib.net/theme/issuu2/static/logo-studylib.png>