



# **Is Human Reproductive Cloning Inevitable: Future Options for UN Governance**



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*UNU-IAS Report*

## *Is Human Reproductive Cloning Inevitable: Future Options for UN Governance*

*This report was prepared by:  
Chamundeeswari Kuppuswamy  
Darryl Macer  
Mihaela Serbulea  
Brendan Tobin*

*Comments and feedback on this are sought. Please contact the following:*

*Biodiplomacy Programme  
United Nations University – Institute of Advanced Studies,  
6F, International Organizations Center, Pacifico – Yokohama,  
1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-8502, Japan  
Fax: +81-45-221-2303  
Email: [chamu@justice.com](mailto:chamu@justice.com), [d.macer@unescobkk.org](mailto:d.macer@unescobkk.org), [serbulea\\_m@hotmail.com](mailto:serbulea_m@hotmail.com),  
[tobin@ias.unu.edu](mailto:tobin@ias.unu.edu)*



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## Preface

Human cloning has been one of the most emotive and divisive issues to face UN negotiators and the international community in recent years. This report examines how, that despite a widespread consensus amongst nations that it is desirable to ban reproductive cloning, efforts to negotiate an international convention ground to a halt due to fundamental divisions regarding so-called research or therapeutic cloning. Firm positions on both sides of the debate led to the compromise position of a non-binding UN Declaration on Cloning, (A/RES/59/280).

Scientists committed to carrying out research in this area, can do so in many countries where domestic regulations allow it, or in countries which have not yet regulated cloning research. Although reports claiming the growth of cloned human embryos into fetal stages or beyond have not been substantiated, many predict that the birth of a human clone is inevitable. Attempts at production of cloned humans, and the development of techniques that more easily enable this, raise many ethical, moral, legal, social and cultural concerns. The United Nations University Institute of Advanced Studies (UNU-IAS) has undertaken a scholarly review of the process, and the current international situation. This report suggests, that customary international law may have emerged that may be a barrier to reproductive cloning of humans.

The issue of cloning is unlikely to disappear as scientists continue to research medical therapies, and it is an issue on which an international moral consensus is impossible. As part of the bioethics research and capacity building of the Institute's Biodiplomacy Programme, an analysis of the opportunities, challenges and options for international governance of cloning has been conducted. This report seeks to encourage reflection on the different governance options for human reproductive cloning until the debates re-emerge.

A.H. Zakri  
Director, UNU-IAS  
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## Executive Summary

This report evaluates the responses of the United Nations to the questions of human cloning governance. The difference between reproductive human cloning and using of cloning technology for research is explained followed by an ethical analysis of cloning.

Discussion of ethics at the UN level often brings to mind the notion of deep, profound, commonly held principles to guide human actions. While general ethical principles, such as the principle of doing no harm in medical practice, are widely respected, the question of what amounts to harm is less easily defined. The debate on reproductive and research cloning has demonstrated the diversity of ethical beliefs. It is interesting, for instance, that while there is an almost complete consensus amongst countries with regard to the need to ban reproductive cloning, a number of academics and some religious groups do not necessarily believe that such cloning is unethical. The analysis of the ethical considerations revolves around the questions of - human dignity, what is natural, human health, social justice, freedom of research and choices.

The UN General Assembly Cloning debate evolved from calls for a Convention to the formulation of a Declaration, as a way to bridge the division over the international governance issues. The United Nations Declaration on Human Cloning (A/RES/59/280) was thus adopted on 8th of March, 2005. The Declaration was passed with 84 countries supporting it, 34 against, while 37 abstained. Comparisons are made between the reasoning of countries for and against the Declaration. Research efforts on reproductive as well as therapeutic cloning continue to be governed by national law and policy.

The Formation of Customary International Law is reviewed, and the report concludes that an analysis of existing municipal legislation on cloning indicates strong evidence of state practice and *opinio juris* supporting the prohibition of reproductive cloning. In the case of reproductive cloning, over 50 countries have legislated to ban reproductive cloning and there is no country that legislated to allow the practice. The Universal Declaration on the Human Genome and Human Rights, approved by UNESCO General Conference in 1997, was endorsed unanimously by the General Assembly, as a prohibition on reproductive cloning. There is however no consensus on use of human embryos for research cloning, as described.

Future options for international governance of cloning could include further work by UNESCO IBC on the issue of reproductive and research cloning, in the context of resolution A/RES/59/280 and also in the context of the Universal Declaration on Bioethics and Human Rights, which was adopted by the General Conference of UNESCO on the 19th of October 2005. The UN GA Sixth committee takes up the issue of customary international law on cloning. The current status quo is one option, but the report presents discussion relevant to the different options that exist to establish temporary moratorium, total bans or to leave the decision to the national governments. The report hopes to contribute to dissemination, discussion and debate on cloning issues at the international level, so that all countries including the developing and least developed countries can participate and put forward their concerns regarding this new technology. This issue however is one that affects all of humanity, and the report is intended to provide a basis on which the international community may wish to revisit the issue of human cloning, at a time which may be not too distant.

# Introduction

The prospect of human cloning has been one of the most emotive and divisive issues to face UN negotiators and the international community in recent years. Despite widespread consensus amongst nations regarding the desirability of banning reproductive cloning, efforts to negotiate an international convention ground to a halt due to fundamental divisions regarding so-called research or therapeutic cloning. Research cloning, viewed by some as a possible source of new therapeutic remedies for degenerative diseases, see by others as unethical where it involves the production of embryos as a source of stem cells upon which such therapies are based. Firm positions on both sides of the debate led to a compromise position in the form of a non-binding UN Declaration on Cloning, (A/RES/59/280).

As a result of the failure to adopt an internationally binding legal instrument to regulate reproductive cloning activity, scientists committed to carrying out research in this area can do so in many countries where domestic regulations allow it, or in countries which have not as yet regulated cloning research. Although claims to date reporting the growth of cloned human embryos into fetal stages or beyond have not be substantiated, many predict that the birth of a human clone is inevitable. The attempted production of cloned human persons raises many ethical, moral, legal, social and cultural concerns.

The Biodiplomacy Initiative at UNU-IAS has been carrying out analysis of the opportunities, challenges and options for international governance of cloning. This study builds upon an earlier working paper on governance options for cloning submitted to parties at one of the UN meetings discussing the Declaration and critically examines the international process for development of measures to regulate cloning, from the perspectives of bioethics and national and international law. It is divided into four sections. Section I provides an overview of cloning, and Section II examines ethical issues related to cloning. Section III, discusses national and international law, in particular customary international law relating to cloning. Section IV elaborates a range of options for future international governance of cloning and makes a number of recommendations and conclusions to inform the development of law and policy in this area.

The study concludes that regulators missed an opportunity to develop clear and unequivocal measures banning cloning intended for the purposes of bringing about the birth of human life. However, the study argues, that despite failure by the UN to develop an international convention on cloning, the adoption of the UN Declaration on Cloning is an important milestone on the road to formation of customary international law in this area. Although it can be argued that there is overwhelming international opposition to reproductive cloning, coupled with numerous national legislation which make it a criminal offence, it is still difficult to establish that there exists a clear custom that prohibits reproductive cloning. However, there are strong grounds to believe that if such a case were to come before the International Court of Justice, the emerging custom against reproductive cloning will be a strong argument for the prosecution. The United Nations Declaration on Human Cloning is an important milestone on the road to customary international law on cloning.

# Section I – Cloning

## Understanding Cloning

Cloning in essence means ‘making an exact copy’. Cloning of cells is a commonplace procedure in the life sciences and reproductive cloning of some animals is now possible. Dolly, the sheep was the first such mammal to be born, in 1997.<sup>1</sup> Although there has been some opposition to the cloning of mammals, by and large it has been generally accepted by society, however, it has brought the possibility of the cloning of human beings too close for comfort. While the majority of people do not support cloning of human beings, there are a small minority that do largely base their positions on issues of scientific freedom, reproductive rights and what some see as the inevitability that cloning will some day occur.<sup>2</sup>

Opponents have portrayed reproductive cloning as a violation of human dignity<sup>3</sup>, a position supported by the international community, in the Universal Declaration on the Human Genome and Human Rights (hereinafter ‘the Universal Declaration’) which was unanimously adopted by all member states of UNESCO in their General Conference in November 1997, and unanimously endorsed by the General Assembly in 1998.<sup>4</sup> 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’. Although the Universal Declaration is not a legally binding instrument, it does provide ethical guidance that had global unanimity in 1997, and a number of countries have subsequently adopted legislation banning reproductive cloning. The concept of human dignity is further discussed in Section II on Ethics and Cloning.

The global community is split much more evenly with regard to debates over the way to govern scientific research using techniques of human cloning, which do not have the aim of reproduction. This split is in part due to ethical concerns but may also be due to a certain level of confusion over what this term means in practice, the scientific reasons for use of cloning techniques for medical research, and the actual relationship of such research to human reproductive cloning.<sup>5</sup>

While reproductive cloning is meant to result in an animal with the ‘exact’ genetic imprint as the person whose cells are cloned, research cloning<sup>6</sup> is meant to produce tissues, which are an exact match to the person whose cells are cloned. There could be other uses for research cloning, as the name suggests.

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1. See generally Roslin Institute, <http://www.ri.bbsrc.ac.uk/public/cloning.html>

2. Amongst the arguments put forward in defence of cloning are those which argue that the cloned individual has a distinct personality, as in the case of identical twins. There are those also believe that human cloning is going to happen sooner or later. Others view a ban on cloning as a restriction of procreative liberty. The argument has also been raised that any impediment to cloning is an infringement of the human right to have children and a family. See Riordan, P.J., Cloning Consensus: Creating a Convention to ban human reproductive cloning, 26, Suffolk Transnat'l L.Rev.411 at 412, where he discusses the potential market and commercial application of the technology; Tully, P, Dollywood Is Not Just A Theme Park In Tennessee Anymore: Unwarranted Prohibitory Human Cloning Legislation And Policy Guidelines For A Regulatory Approach To Cloning, 31 J. Marshall L. Rev. 1385; Kunich Westport, J.C., The Naked Clone: How Cloning Bans Threaten Our Personal Rights, Praeger Publishers, 2003; Katz, K.D., The Clonal Child: Procreative Liberty and Asexual Reproduction, 8 Alb. L.J. Sci & Tech. 1, 40-51 (1997) Also see [www.clonaid.com](http://www.clonaid.com)

3. Many scholars have a problem with viewing reproductive cloning as contrary to human dignity. See Caulfield, T., Human cloning laws, human dignity and the poverty of the policy making dialogue, BMC Medical Ethics 2003, 4:3 <http://www.biomedcentral.com/1472-6939/4/3>. The author argues that on most counts -autonomy, uniqueness, instrumentalisation and replication, reproductive cloning does not violate human dignity. He is of the view that we are in danger of trivializing and degrading the potential normative value of human dignity and that unless we apply it in a logical and coherent fashion, the notion of human dignity is in danger of being eroded to the point where it stands as nothing more than a symbol of amorphous cultural anxiety. In Beyleveld D, Brownsword R: Human Dignity, Human Rights, and Human Genetics, The Modern Law Review 1998, 61:661-681, Beyleveld and Brownsword feel that “from any perspective that values rational debate about human genetics, it is an abuse of the concept of human dignity to operate it as a veto on any practice that is intuitively disliked”. In Wright TG: Second Thoughts: How Human Cloning Can Promote Human Dignity, Valparaiso University Law Review 2000, the author argues against a deterministic conception of a human being and human dignity stating that ‘Human cloning may well serve to highlight, to emphasise, and to set off with greater clarity, quite apart from anyone’s intentions, the mysterious capacities that comprise and express our human dignity’. (Quoting from the Article by Caulfield, T.)

4. A/53/152

5. Box 1 lists several definitions of cloning

6. Research and Therapeutic cloning are used alternatively in this paper.

## Box 1 Definition of Human Cloning

The Human Genome Organization (HUGO) defines “The term ‘cloning’, while used in a general sense to refer to the production of genetic copies of individual organisms or cells without sexual reproduction, involves a number of different techniques, including embryo splitting; somatic cell nuclear transfer into an enucleated egg; and development of cell lines, derived from a somatic cell, in cell culture. Types of cloning may also be distinguished according to the organism in question and to the purpose for which the technique is employed. Human cloning, for example may be subdivided according to the purposes for which it is carried out reproductive cloning, basic research and therapeutic cloning.”

The UNESCO/IUBS/Eubios Living Bioethics Dictionary<sup>7</sup> includes the following definitions:

**CLONE:** A collection of cells or organisms that are genetically identical. An identical genetic copy of an organism - animal/ plant/ human being.

**CLONING:** The process of asexually producing a group of cells (clones), all genetically identical to the original ancestor. In recombinant DNA manipulation procedures to produce multiple copies of a single gene or segment of DNA. The production of a cell or an organism from a somatic cell of an organism with the same nuclear genomic (genetic) characters - without fertilization.

**REPRODUCTIVE CLONING:** Use of CLONING technology to produce one or more individuals genetically identical (apart from the genes in MITOCHONDRIA and CHLOROPLASTS) to another individual. In the late 1990s reproductive cloning was used to produce clones of the adults of a number of mammalian species, including sheep, mice and pigs. The most famous of these was DOLLY. Many countries rushed to outlaw the possibility of reproductive cloning in humans. Most bioethicists supported such bans though a minority

were more ambivalent.

**THERAPEUTIC CLONING / RESEARCH CLONING:** Medical and scientific applications of cloning technology, which do not result in the production of genetically identical fetuses or babies.

**EMBRYONIC STEM CELLS:** (Anglo-Saxon stemm tree or trunk & Latin *cella* storeroom). A formative cell whose daughter cells give rise to other cell types; for example, pluripotent embryonic stem cells are capable of generating all cell types compared to the multipotent adult-derived stem cells which generate many but not all cell types. Thus, stem cells may originate from embryonic tissue and from adult tissue and both types are suitable for cloning technology; that is, therapeutic and/or reproductive. Therapeutic cloning is the cloning of embryos containing DNA from an individual’s own cell to generate a source of embryonic stem cell-progenitor cells that can differentiate into the different cell types of the body. The aim is to produce healthy replacement tissue that would be readily available and due to immunocompatibility, the recipients would not have to take immunosuppressant drugs for the rest of their lives. The ethical status of embryonic stem cells is a matter of controversy because the label ‘embryo’ is associated with cloning technology when typically embryonic stem cells are used. Strictly speaking, the early preimplantation blastocyst is not yet an embryo and is more properly called a pre-embryo. For this reason ethics commissions in several nations have approved research on the human pre-embryo up to 14 days because the conceptus is not yet differentiated. In this sense, the pre-embryo cells are no different from those in standard tissue cultures. On the other hand, it is true that a human pre-embryo could, in unscrupulous hands, be guided to develop into a human being. The protagonists against cloning maintain that by virtue of the pre-embryo’s special status, it’s wrong to carry out destructive experiments on them.

## Reproductive Cloning

Reproductive cloning has been common place for some plants that we eat<sup>8</sup>, but it has been possible in animals for less than half a century. After the development of the technique of asexual reproduction of clonal frogs in the mid-1960s there was a period of much debate considering the possibility and ethics of cloning humans. However the 1950s and 1960s experiments in nuclear transfer in amphibians that could generate clones in some species could not be applied to mammals in scientific attempts at nuclear transfer from the 1960s until 1997.

Robert Edwards, a pioneer of IVF, suggested in 1984 that making identical human twins could be useful in IVF as twin transfers give higher rates of implantation than single transfers. When it is only possible to obtain a single embryo from collecting eggs, it would increase the chances of a pregnancy if that embryo was split. Animal studies suggest this would present no extra harm to the babies born. In 1993 scientists reported experiments on splitting human embryos, and the growth of these “cloned twins”. It has probably been technically possible for a decade. Most mammalian embryos can only be split into 2-4 clones, after that the cells lack the ability to start development into a human being.

7. Available on website, <http://eubios.info/biodict.htm>

8. Asparagus is a common vegetable; Orchids are a common flower, reproduced by cloning. Many plants propagate vegetatively in nature, which is the same as cloning.

In 1997 the paper in *Nature* reported the birth of the first cloned mammal from the transfer of an adult nucleus, “Dolly” the sheep.<sup>9</sup> This followed a paper the year before which made “Morag”, the first cloned mammal, also a sheep, made by nuclear transfer from embryonic stem (ES) cells lines into an enucleated egg cell. Both sheep have since died and their stuffed bodies are displayed in the National Museum of Scotland, as symbols of scientific progress.

On 24 November 2001 in Worcester, Mass, USA, a company reported in *Scientific American* “The First Human Cloned Embryo”. It included cloned early-stage human embryos—and human embryos generated only from eggs, in a process called parthenogenesis (<http://www.sciam.com/>). In 2002-2003 the Raelian religious cult claimed that human cloned babies had been born, which is widely thought to be a publicity stunt. No scientific proof or baby has been presented.

## Research Cloning

Research or therapeutic cloning as it is often referred to seeks to develop therapeutic remedies for degenerative diseases. This research requires the use of stem cells. Both embryonic and adult stem cells are being utilised in this research. Results from the use of adult stem cells have to date proved generally less favourable than those with embryonic stem cells. There is a general consensus that embryonic stem (ES) cells offer significantly more scientific chances of success than limiting research to adult cells. However, as discussed later, ES cells are controversial to use from an ethical point of view, hard to grow, hard to control (can become cancerous), are rejected in the body unless made to order for an individual by cloning or used in an immune protected site like the brain.

The preference of scientists to work with embryonic stem cells is at the root of research cloning activity which involves the development of embryos as a source of stem cells. This in turn has proved to be the catalyst for opposition to research cloning, opposition which is based on what is seen as the unethical and immoral development of embryo whose sole purpose is to provide stem cells.

In research that has subsequently been retracted, Woo Suk Hwang and colleagues of Seoul National University in Korea announced in the journal *Science* in February 2004<sup>10</sup> that they had successfully cloned healthy human

embryos, removed embryonic stem cells and grown them in mice. This was the first claim that a human embryonic stem cell line could be made by research cloning in humans. They followed this up in May 2005 with claims of the successful cloning of stem cells from patients with Lou Gehrig disease, which showed proof of principle for the concept of making stem cells tailor-made to a patient for therapeutic ends.<sup>11</sup>

The 2004 findings were later shown to be fraudulent in one of the highest profile fraud cases of modern science. The media has been blamed as one of the causes for the widespread utopia that led many to argue for the need for embryonic stem cell research.<sup>12</sup> In spite of the continuous criticisms from bioethicists in Korea regarding the use of junior researchers as egg donors, Hwang was made a national hero and international star, fully supported by the government, mass media and people. Thanks to the information of a whistleblower and the tenacious investigation by the producers of MBC TV, his research was disclosed to be a huge fake. It was fortunate that the verification efforts of young scientists and prompt investigation by Seoul National University brought the case to conclusion. The Korean government hurriedly began to make a guideline for research ethics, and research integrity committees are appearing in many universities. The high profile case illustrates how a transparent research endeavour is necessary.<sup>13</sup>

There were, however, other cases reporting similar research results, but all have found it a major scientific challenge to improve success rates. There have also been reported to be some positive results from adult stem cell research with conversion of cells from one human organ into cells of another.<sup>14</sup> Others have restored normal function to rats whose spinal cords have been cut. Clinical trials using bone marrow to rebuild heart muscle have been successful. Regeneration of adult brain has been seen using adult cells in animals. There has also been a report of making liver cells from bone marrow of an adult - without cloning technology being needed.<sup>15</sup> Having said that, there is still a clear scientific consensus despite the Hwang case from the international community that research should be explored in ES lines because of the promising results to date. Support for ES research has been framed around a variety of themes, including freedom of scientific research, the expectation of medical benefits, and rights of patients to their dignity.

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9. Wilmut, I., et al. 1997. Viable offspring derived from fetal and adult mammalian cells. *Nature* 385(Feb. 27):810

10. Woo Suk Hwang, et al, Evidence of a Pluripotent Human Embryonic Stem Cell Line Derived from a Cloned Blastocyst, *Science* 303, 1669 - 1674; 2004 (subsequently retracted)

11. Hwang, W. S., Roh, S. I., Lee, B.C. et al (2005) 'Patient-specific embryonic stem cells derived from human SCNT blastocysts', *Science*, 308: 1777-1783.

12. Karori Mbũgũ, Stem Cell Research: Science, Ethics and the Popular Media, *EJAIB* 17 (2007), 6-11.

13. Solbakk, J.H. (2006) 'Stem cell research and the ethics of transparency', *Regenerative Medicine* 1 (2006), 831-5.

14. Professor Jonathan Slack at Bath University has managed to convert human adult liver cells into pancreas cells producing insulin, using a simple chemical switch. *Nature Cell Biology*, 2, 879-887, 2000.

15. May 15, 2002 *Journal of Clinical Investigation*. <http://www.jci.org>

## New Genetics and Cloning

Cloning is mistakenly considered by many to be a part of the genomics revolution, which it is not. Cloning is usually considered in laws governing assisted reproductive technology, rather than genetics, because the essential ethical debates regard human embryos and control of reproduction. Nevertheless, representatives from numerous member states, for instance, have made references, in the General Assembly, to the genomics revolution and cloning as if they are part and parcel of each other. In fact, cloning is more closely related to IVF practices than to genetics.

In the words of Watson:

'.. [O]ur research on DNA has had no impact on cloning. Cloning could have been done without knowing about the structure of DNA. It's not a moral dilemma created by DNA research, but it's created by understanding the biology of human reproduction better. Human cloning is something that really became possible as a result of techniques developed for in vitro fertilization. It didn't require all these advances in DNA -- it's something that actually could have happened a lot sooner. And it has not yet happened.'<sup>16</sup>

Despite this distinction, there is a growing tendency to link cloning issues with those of genetics in both international and national legislation. This appears at times to be more for reasons of political expediency than for any sound legal or ethical purpose. The 1997 Genome Declaration, for instance, which focuses primarily on genetics and human rights, also addresses the issue of cloning (Article 11). The reference to human cloning did not appear in drafts produced by UNESCO's International Bioethics Committee (IBC), during over five years of deliberations. The IBC considered that no reference should be made to specific techniques in the Declaration as the document outlines general ethical principles. However, the timing of the final meeting of government representatives to review the text before the UNESCO General Conference in mid-1997 was in the midst of great concern raised by the publication of the paper reporting the cloning of Dolly the sheep.

The overlap between regulations on germ-line genetic intervention and reproductive cloning is reflected in Opinion 54 of The French National Consultative Ethics Committee in 1997<sup>17</sup> where it cited Art.16-4 of the civil code, which prohibits genetic modification of descendants as an implicit ban on reproductive cloning. Another example is the Law on Healthcare in Georgia<sup>18</sup>, which states 'Human cloning through the use of genetic engineering methods shall be prohibited'. In the Sixth Committee, a delegate was of the view that 'the great expansion in knowledge of the human genome could lead to important discoveries ... and also to serious abuses (referring to cloning)'.<sup>19</sup> Reprogenetics the combination of new genetics and cloning is no doubt very powerful and gives rise to a host of new ethical issues, beyond the scope of the current study

The genomics revolution or the new genetics started around the mid-eighties and in 1990 we saw the commencement of the human genome project. Ethical issues on the human genome and research on the embryo overlap but they have a distinctive legislative history and debate. Actually, the issue of cloning has been around ever since the British biologist John Gurdon successfully cloned a tadpole from a somatic cell.<sup>20</sup> The ethical concerns about cloning gathered pace with the birth of the first test tube baby in 1978. David Rorvik's book, *In His Image: The Cloning of a Man*, published in 1978 sparked a worldwide debate. Theologians have seriously engaged the issues surrounding human cloning almost from the outset of contemporary bioethics in the context of scientific studies of cloned frogs, expanded use of reproductive technologies (such as the birth control pill), and general societal concern about prospective overpopulation<sup>21</sup>.

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16. TIME 100 Scientist & Thinker, Time Yahoo Chat with Dr. James Watson, Transcript from March 24, 1999 <http://www.time.com/time/community/transcripts/1999/032499watson100.html>

17. National Legislation concerning human reproductive and therapeutic cloning, (SHS-2004/WS/10), Division of science and technology UNESCO 2004

18. Ibid

19. A/C.6/56/SR.27 at para 11

20. Human cloning, Ethical issues, UNESCO 2004. The possibilities of human cloning began to be speculated even in 1938 when the Nobel Prize winner, Hans Spemann proposed a "fantastical experiment" to transfer one cell's nucleus into an egg without a nucleus, the basic method that would eventually be used in cloning. He performed the first nuclear transfer experiment in 1928. <http://library.thinkquest.org/24355/data/details/media/spemannnt.html>

21. Campbell, C.S., In Whose Image?, <http://www.parkridgecenter.org/Page168.html>; Cloning Human Beings, Religious Perspectives on Human Cloning, Commissioned Paper by Campbell C.S., Oregon State University <http://www.georgetown.edu/research/nrcbl/nbac/pubs/cloning2/cc4.pdf>

## Section II - Ethics and Cloning

Discussion of ethics at the UN level often brings to mind the notion of deep, profound, commonly held principles to guide human actions in accordance with some higher purpose, which may emanate from belief of a religious nature, or from concern for human, animal, environmental welfare. Definition of the boundaries and scope of any ethical principle and the measures necessary to adhere to it faithfully is however not an exact science, especially when recognizing that there are several thousand different ethnic groups in the world and their cultural ethos vary. While general ethical principles such as the principle of doing no harm in medical practice are widely respected, the question of what amounts to harm is less easily defined. The debate on reproductive and research cloning has demonstrated the fluidity and diversity of ethical beliefs in this area. It is interesting for instance to note that while there is an almost complete consensus amongst countries with regard to the need to ban reproductive cloning, a number of academics and some religious groups do not necessarily believe that such cloning is unethical.

Perhaps unsurprisingly, the ethical debate on cloning tended to blur the lines of separation between the church and state, to an extent that had not been so obvious at the international level for some time. This highly charged issue challenges the bases of many religious beliefs and places science and religion at loggerheads. Questions were raised such as, whether it is appropriate to allow for the creation and destruction of embryos for the sole purpose of harvesting stem cells which may save the life of a sick person is at the very heart of this debate. Whether responsibility to respect the human dignity of a person dying with a debilitating illness outweighs responsibility to prevent scientists from culling cells from destroyed cloned embryos is a dilemma which cannot be easily resolved through impassioned international debate. In the search for a common ethical standard by which to be guided the global community is frequently hampered by intransigence, dogma and personal and institutional ambition. This polarised atmosphere is not conducive to development of a consensual position based upon the need for respect of diverse and sometimes conflicting views, and while national governance mechanisms can be constructed to reach compromise decisions, it has not proved possible at the global level.

Discussion of the broad range of ethical perspectives that address the issue of cloning is beyond the scope of this study. However, it is considered important to provide readers with a brief overview of some of the key ethical concepts that have direct bearing upon the development of international law and policy in this area. To this ethical

considerations will be looked at under the following five areas: a) Human Dignity, Cloning and Nature, Human Health, Social Justice, Freedom of Research and Choices

### *Human Dignity*

Protection of human dignity is one of the cardinal principles of bioethics and has been enshrined in a number of international instruments. Most notable in relation to the present discussion is the UNESCO Universal Declaration on the Human Genome and Human Rights which state in article 11, 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."

This unequivocal statement on reproductive cloning is a clear indication of the existence of an emerging principle of customary international law banning such cloning, an issue which will be discussed in detail below. The Declaration does not specifically refer to research cloning, which will be read by some as an indication that the international community did not consider this to be contrary to human dignity. Conversely some will argue that the ban extends to all cloning which brings about life, which depending upon the definition of life may include embryos produced by cloning techniques. The Declaration did not therefore resolve the underlying differences regarding the ethics of cloning, and neither did the UNESCO International Bioethics Committee (IBC) discuss cloning in the development of that Declaration because, the publication of the "Dolly" paper came after the deliberations of the IBC. The IBC subsequently released a report on stem cell research in 2001.<sup>22</sup>

Dignity may be considered from both intrinsic and extrinsic perspectives. Intrinsic dignity relates to the internal sense of dignity felt by an individual due to their own feeling of self-worth, capacity for autonomous decision making, and ability to meet their responsibilities. Extrinsic dignity relates to the manner in which individuals respect the dignity of others and are entitled to be free from external harm to their own dignity. The concept of dignity is inherent in foundational UN texts that were written at the end of World War II when there was political unanimity that abuses of war were against human dignity, and it was accepted that everyone knew what was meant. However, 60 years after there is a need to more fully explore this concept in the international context with respect for

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22. UNESCO Proceedings of the Seventh Session of the IBC, report on the use of embryonic stem cells in therapeutic research

numerous cultures of the world, which will take more research than possible in this report.

Amongst the arguments raised against cloning has been concern that reproductive cloning would lessen the respect for individuals because of the feeling that they could easily be replaced.<sup>23</sup> Every form of reproductive technology raises some question of human values, dignity, worth and juridical rights, some linked to the notion that the person should not be used as a mere mechanical instrument, and that every human individual is a non-repeatable being.<sup>24</sup> Disruption of family relations and sexual relationships has been suggested to also be a common concern with other forms of reproductive technology. The same is true of other concerns include individual psychological problems of the cloned persons.<sup>25</sup> All these issues are felt to influence the individuals' sense of self and thereby their sense of personal dignity.

One of the key considerations in the debate on dignity and cloning relates to the science of cloning, its inexactness and the extent to which it may cause significant suffering to humans. The issue of the scientific merits, challenges and impediments to cloning are discussed further below as are issues regarding human health and well-being. This section will, therefore, focus primarily on the notion of dignity and its relationship to identity.

#### **a) Persona, Perceived and Legal Dignity**

The relationship between identity and dignity has been the subject of debate for centuries. Identity may be considered from a number of different standpoints including, personal, perceived and legal. From the standpoint of personal identity the question arises as to whether a cloned individual will have a full sense of personal identity. In more recent times individualism linked to identity may be seen to have played an ever increasing role in the conception of personal dignity. As identity becomes a more personal and less community related concept the notion of personal dignity has taken on new connotations which demand a degree of individual recognition less prevalent in more communally based societies. Consideration of the potential identity crises of a cloned human is closely linked to consideration of the possible perception of the clone as a full human being. There may of course be cases where cloning may be linked to the desire of an individual to continue their own life in some form or fashion through the production of cloned offspring. However, the ontological identity of each individual is drawn from their education, relationships and life experiences and a cloned individual may be no

more condemned to live in the shoes or mind of their biological parent than are children born by natural means. As the Universal Declaration on the Human Genome and Human Rights states, a person cannot be reduced to their genetic characteristics. While some parents may wish to "replace" dead children, the persons made through cloning would not be identical.<sup>26</sup> There could be changes to social structure by clones, however if we note that the clones would always be different to their predecessors. In governance debates we need to separate science fiction images of replacement persons from the facts, which have been introduced in the documentation of numerous scientific academies.

Many human societies have tended to identify and marginalise all kinds of people based upon their real or perceived difference to an accepted common standard, whether racial, physical, cultural or otherwise. Fear of diversity has led to prejudice, victimisation and oppression. It is hardly inconceivable to imagine that cloned humans at least during the early stages of introduction of clones into society may be the subject of abuse which runs contrary to their well being. Prejudice and small mindedness in the population at large would not in itself however seem to be a strong argument against cloning, but rather an argument for the development of awareness building programs to educate the populace and protect human dignity of all humans.

The legal status and identity of a cloned individual is likely to prove a complex but not insurmountable problem for the legal community to resolve. However, ethically as a human being any cloned individual would have equal rights under the UN Declaration of Human Rights.

The intrinsic and extrinsic dignity of a cloned individual depends upon the manner in which they are treated by family, society and the law. Respect for any person's dignity and the manner in which it is respected is a societal issue rather than an individual one. The question then arises whose dignity would be affected by the cloning of humans, and why has the international community sought to ban reproductive cloning as being against human dignity.

#### **b) Dignity of the Individual or of Society**

If it cannot be seen to be the dignity of the cloned individual which is in question then it must be the collective sense of human dignity of society which would be the subject of infringement by cloning. This may be viewed from a number of differing angles. It is frequently argued, for instance, that reproduction should occur by chance and

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23. Chadwick, Ruth (1982) "Cloning," *Philosophy* 57: 201-209.

24. Cherfas, Jeremy (1985) "Make Way For the Female Clone," *New Scientist* 108 (21 Nov.), 61-62.

25. Ramsey 1970, Glover 1984, LaBar 1984

26. Popular fantasy also imagines "reviving" dead beloved ones or creating new human beings to serve as organ donors for ailing members of the family. This would simply be murder in the case the donors were human persons.

through natural selection. This argument may be based upon religious lines, which defer to a supernatural or higher power for choice, or to natural selection and the importance of ensuring continued human diversity. More convincing for some are arguments against the commoditisation of life. Fears exist that allowing reproductive cloning will lead to a spare parts market for harvesting human organs from cloned “brain-less bodies” for the rich as they seek to extend their life-span<sup>27</sup> A result which many see as a contravention of individual and collective human dignity.

These are not issues which can be lightly dismissed; however, it is clear that any debate on human dignity needs to separate the various elements of the debate in order to consider whether opposition to cloning stems from concern for human dignity or respect for divine dignity. As well as to determine whether it is designed to protect the individual that may be cloned or the society whose sense of personal and collective identity might be challenged by the concept of sharing the world with cloned individuals.

There has been extensive debate regarding the potential of cloning technology to help infertile couples to have children which are genetically linked to its parents. This has included claims that preventing couples from seeking out cloning as a means to realise their desires to be parents is a breach of human rights and individual dignity which is seen as being linked to the capacity to reproduce. This is an emotive issue and one which further impassions the debate on cloning; it is however, at this time a distraction rather than an aid to dealing with the underlying ethical questions regarding the cloning of humans, which must be linked to the rights of any child or embryo which arises from the use of cloning technology. If there is any right to reproduce using safe reproductive cloning technology it is in a general sense of having a child, and not intended to allow making a copy of oneself.

The foregoing debate is however largely superfluous in the face of the current level of cloning technology which could not guarantee the birth of healthy humans, and would be likely to lead to many failed births, deformities, and cloned humans with debilitating and wasting diseases. To quote the InterAcademy Panel statement of 22 September 2004, “scientific research on reproductive cloning” - in mammals other than humans - “shows that there is a

markedly higher than normal incidence of fetal disorders and loss throughout pregnancy, and of malformation and death among newborns, and that there is no reason to suppose that the outcome would be different in humans. Therefore”, the statement asserted, “even on a purely scientific basis, it would be quite irresponsible for anyone to attempt human reproductive cloning given our current level of scientific knowledge.”<sup>28</sup>

Concerns about the level of technological capability make it much easier to build a consensus regarding the need to protect human dignity by preventing experimentation in cloning. For now there is an alliance between both the religious and scientific communities regarding the need to ban reproductive cloning, this alliance may however, disappear in coming years as advances in cloning techniques developed for animal cloning, as well as that carried out in research cloning for the purposes of harvesting stem cells show greater possibilities of achieving successful cloning in humans. Failure to exploit the current consensus on the need to ban human cloning may in the future be seen as the defining moment after which human reproductive cloning became inevitable.

There could be changes to social structure by clones, however if we note that the clones would always be different to their predecessors. In governance debates we need to separate science fiction images of replacement persons from the facts, which have been introduced in the documentation of numerous scientific academies.

### c) Research cloning

There are a variety of religious views that oppose the destruction of human embryos that is needed in creation of ES cell lines.<sup>29</sup> Although Thai Buddhists accept the possibility of human cloning as a technique they are reserved about therapeutic cloning primarily because it involves the destruction of embryos in the procedure,<sup>30</sup> many Christian faiths consider human life to begin with conception and see the destruction of embryos as equating with the destruction of life. Reproductive cloning has been viewed by the Holy See as the creation of life for the purpose of its destruction. The official Roman Catholic position is in the 2000 Declaration of the Pontifical Academy for Life, which stems firstly on the destruction of human embryos as human life.<sup>31</sup>

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27. Patrick Dixon, *The Genetic Revolution*, May 1993

28. <http://www.interacademies.net/IAP/iaphome.nsf/>

29. Leroy Walters, Human embryonic stem cell research: An intercultural perspective, *Kennedy Institute of Ethics Journal* 14 (2004), 3-38; Brock, D. W. (2006) 'Is a moral consensus possible on stem cell research? Moral and political obstacles', *Journal of Medical Ethics*, 32: 36-42. In June 2007 scientists at the US-based Advanced Cell Technology (Worcester, Massachusetts) announced that they have successfully produced a human embryonic stem cell (hESC) line without destroying an embryo, which if confirmed may make ES-cell research acceptable to more persons.

30. Ratanakul, above.

31. Pontifical Academy for Life. *Production and the Scientific and Therapeutic Use of Human Embryonic Stem Cells*. 25 August 2000.

In the area of research cloning an alliance between such views and science has not been achieved. In fact, the potential of science in this area acts as a beacon for church opposition to cloning, representing as it does for some a usurpation of God's power and the commoditisation of life. Here the church has found new allies amongst the non-governmental and civil society organisations who have opposed the turning of life into a new market product. Books such as the *Human Body Shop*<sup>32</sup> have helped to highlight the potential abuse of cloning techniques for the purpose of building life science industries, involving not only commoditisation of body parts but the allocation of rights over the products of research and development. There is concern that if the market allows, and intellectual property rights regimes and other instruments of market control are available then cloning technology may be utilised to develop a spare parts industry based upon the use of donor clones, which are treated as less than human. In this scenario the possibilities for abuse of human dignity are indeed multiple. However, the generation of isolated human organ parts such as valves, tissues such as skin, or even replacement hearts, are not usually considered against human dignity.

### ***Cloning and Nature***

The issue of human control over reproduction is not fundamentally new, but one of degree. A number of persons have said that human reproductive cloning is going too far because it is no longer sexual reproduction. The key concern here is the extent that humans control nature, as well as the potential impact this control will have on genetic diversity and human psychology. It is argued that design of persons takes away autonomy of children whose biological characteristics would be due not to chance, as in sexual reproduction, but to the choice of the person responsible for the cloning. On the other hand it has also long been argued that for a child to exist at all cannot be against their interests.

Human biological diversity is considered a fundamental part of human natural heritage, and diversity is recognised as part of the concept of human dignity in the Universal Declaration on Human Genome and Human Rights. This has led some to oppose any attempts to clone persons who would be identical to the cell nuclei donors. However, biologists would argue that a clone is not "identical" to its original. Not only

genes influence the development of an organism. Gene plasticity, environmental factors, and neural topography structures differentiate clones from their parents. Thus while there are concerns of human dignity with respect to decrease in human diversity, it would only become significant if it was very widely practiced. The continuous mix of genetic data via sexual reproduction is a basic mechanism of natural evolution. The possibility of continuously recombining genetic data allows adaptive processes.

### ***Human Health***

The ethical relation between cloning and human health may be best considered from the perspective of biomedical ethics. One of the common approaches to modern bioethics is principlism, which commonly asserts four principles: autonomy, non-maleficence, beneficence, and justice.<sup>33</sup> Autonomy means respect for self-rule of the individual and their ability to make choices and decisions with regard to their own health and future. Beneficence is the principle of doing good, which argues that we should develop science and technology that may help all. Non-maleficence is the principle of avoiding harm, well expressed in the ancient medical maxim, *primum non nocere* (first do not harm). Justice in the ethical sense means social justice or distributive justice; being fair or just to the wider community in terms of the consequences of an action. Some of these principles are discussed in this paper under "Human dignity" and "Social justice". Regarding beneficence and non-maleficence principles, there are arguments that cloning offers both potential benefits and potential harms to human health.

Research cloning used for regenerative medicine is one area which has been promoted as offering great hope for producing replacement tissue without the fear of immunological rejection. This technique if successful may enable millions of people suffering from the most common diseases of the industrialized world - diabetes, stroke, spinal injury, neurodegenerative diseases such as Alzheimer's or Parkinson's - to be cured. Whether embryos should be used for research and how such research activity should be regulated are crucial questions. The embryonic stem cells are obtained from aborted fetuses or spare early-stage embryos donated by couples undergoing in vitro fertilization (IVF) treatment for infertility. Their uses raises concerns about respect for human life and the extent

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32. Andrew Kimbrell, *The Human Body Shop: The Cloning, Engineering, and Marketing of Life*, 1998

33. Eisenberg, Leon (1976) "The outcome as cause; predestination and human cloning," *Journal of Medicine and Philosophy* 1: 318-331.

34. Glover, Jonathan et al. *Fertility and the Family. The Glover Report on Reproductive Technologies to the European Commission* (London: Fourth Estate, 1989).

35. Gordon 1999

36. A recent enunciation of these is by Beauchamp T L, Childress: *Principles of Biomedical Ethics*, 5th ed., 2001, J.F. Oxford University Press,

to which cell perhaps representing such life may be used or destroyed to provide material for therapy or research.<sup>43</sup>

The serious safety concerns based on the non-maleficence principle apply to reproductive cloning. The high perinatal mortality rate suggests that cloned individuals have physiological weakness.<sup>44</sup> Even if a few cloned babies are born apparently normal we will have to wait up to 20 years to be sure they are not going to have problems later -for example growing old too fast. The doubts include the current immature state of cloning technology, the possibility of mutations, potential physical harm and general long term health risks. The ethical impediment to cloning may change if technological advances fix those problems at some point in the future.

The discussion also requires informed knowledge of the scientific differences in the types of nuclear transfer cloning that have been used in animals<sup>45</sup>, because there are significant differences in mortality between clones made from adult cell nuclei, which is how human clones are envisioned to be made, and the high mortality in animals cloned from nuclei from embryonic stem cell lines. There have been questions raised over the safety of using stem cell therapy, as those techniques will have to be subject to the same range of clinical trials as to their safety and efficacy when they are developed. There are currently clinical trials of a variety of adult stem cells underway around the world.

### **Social Justice**

Many critics have argued that the funds directed towards research on human cloning could be put to better use on pressing global issues such as famine, desertification, infant mortality and diseases, including the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)<sup>47</sup>. This question of distributive justice on the use of research funds can be applied to many areas of scientific technology, and even more broadly to the utility of human activities including research and development for global welfare.

Repeated UN declarations have promoted more equitable sharing of the benefits of human knowledge. The UN Millennium Development Goals call for a global partnership for development.<sup>48</sup> Similarly the Universal Declaration on the Human Genome and Human Rights states, "The applications of research [...] shall seek to offer

relief from suffering and improve the health of individuals and humankind as a whole." One of the most contentious areas of global ethics discourse in recent years has been related to access to patented pharmaceuticals necessary for dealing with major human diseases. This led to the acceptance in the Doha Declaration of commitments to allow for developing countries to manufacture generic drugs and override patents held by major pharmaceutical in times of national health crises. This marks the first WTO acknowledgement that prices of drugs manufactured by these large patent-holding companies are preventing access to medicine in developing countries.<sup>49</sup>

At the same time that the UN was debating cloning, UNESCO was developing a Universal Declaration on Bioethics that attempts to outline some practical expressions of a principle of social responsibility. Justice Michael Kirby, chair of the IBC drafting committee stated that, "Except in relatively few developed countries, the real urgencies of contemporary bioethics include access to healthcare, to adequate nutrition and drinkable water, to the reduction of poverty and illiteracy, the improvement of living conditions and the elimination of unjust marginalization of individuals and groups."<sup>50</sup>

Concern that access to any eventual beneficial scientific developments arising from human cloning technology has been raised. Some commentators have questioned the need for such extensive UN GA debates on issues which may only bring benefit to a small and wealthy percentage of the global community. There are also fears, that as research is curtailed in some countries, experimentation would be carried out in developing countries with weak or non-existent governance mechanisms. In this case issues of social justice can be seen to be related to respect for the human dignity of all. This implies a global responsibility to prevent exploitation of poverty and lack of national legal capacity which may allow for unethical research activities to proceed, contrary to human dignity.

There is a danger that cloned human beings may be exposed to the risk of discrimination, which needs to be prevented.<sup>51</sup> Orphans of father and mother, the children produced by cloning would be simultaneously considered to be the offspring and the twin of an adult person. Legal complexities would need to be carefully examined, and these are future topics for governance of reproductive technology. Restrictions should not prevent an improvement in the proportion of persons who can

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37. Friedrich, M.J: Debating Pros and Cons of Stem Cell Research, *JAMA*, August 9, 2000, Vol.284, No.6, 681

38. Cohen 1998:4

39. Perry, ACF. Nuclear transfer cloning and the United Nations. *Nature Biotechnology* 22 (2004), 1506-8.

40. A/C.6/59/L.2

41. UN Millennium Development Goal 8.

42. <http://library.thinkquest.org/04apr/00460/txt/knowledge/dohadeclaration.html>

43. Kirby, Michael, "The UNESCO Bioethics Declaration – 12 points", Presentation to the UNESCO International Bioethics Committee and Intergovernmental Bioethics Committee, made in Paris 24 January 2005.

reproduce, noting that in some developing countries infertility affects a third of couples.

### **Freedom of Research and Choice**

Some commentators have argued that there are ethical issues in favour of cloning, including freedom of science, and research as freedom of expression. These arguments are usually applied to research cloning. Because the groups that have led some campaigns against cloning have often religious ties, some point out that the ethics of society should be secular, not religious. Freedom of science can take various views depending on culture.<sup>52</sup>

In September 2004 sixty-six members of the InterAcademy Panel on International Issues (IAP) called on the UN General Assembly to avoid voting a second time on a resolution to ban both therapeutic and human reproductive cloning. The IAP issued a statement that "cloning for research and therapeutic purposes has considerable potential from a scientific perspective, and should be excluded from the ban on human cloning." Such efforts could foster new therapies for millions of people suffering from diabetes, Parkinson's Disease and spinal cord injuries.<sup>53</sup>

There have been numerous academic societies that have argued for the need to explore scientific research on therapeutic cloning, while often at the same time rejecting research on reproductive cloning, at least at the current stage of research. The Human Genome Organization released such a statement in November 2004.<sup>54</sup>

When it comes to reproductive cloning, a few persons have argued that cloning is part of reproductive freedom. As argued above, we can see it is widely agreed that to attempt such a dangerous technology now would be unethical. However as technology develops, and if it is expected to be safe, support for the use of cloning technology may increase under the guise of promoting

human reproductive freedom. Arguments in favour of the use of cloning technology have sought to use the 1984 UN recommendation on basic human rights, "all couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education, and means to do so." This in turn has led to questions regarding human rights to genetic freedom, such as the freedom to bring about the conception of a child with any characters, be they good or bad, or desired or undesired.<sup>55</sup>

Most experiments so far have been on cloning of other animals than human beings. In most societies that use animal breeding, and support wildlife conservation by captive breeding programs, there may be few moral concerns over the use of animal cloning when appropriate, consistent with the principles of bioethics. For animal cloning scientists see three clear areas of application, to salvage endangered animals, to cultivate fine species and to replicate transgenic animals of great agricultural and/or medical value. There are still arguments to restrict the freedom of research against animal cloning because it may pose unpredictable risks of harm to animals formed in the process<sup>56</sup>.

### **Input of Ethics into Governance**

Pursuit of better human health, increased reproductive choices, and freedom of research need to be tempered by concerns of human dignity. Similarly, freedom of research has to be tempered by social justice in the interest of human dignity and peace and security. Is cloning a special form of science that needs its own governance? These tensions bring out the contesting freedoms involved in regulating human cloning. The successful international governance of human cloning can result only from a careful deliberation of the interplay among these issues at the international level. The general conclusion of many academic studies is that reproductive human cloning is

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44. Glover, Jonathan. *What Sort of People Should There Be?* (Harmondsworth: Penguin 1984).

45. An interesting reference to the ancient science of alchemy, which attempted for centuries to heal, to achieve immortality and transmute the material world, is made by Laurie Zoloth. "Stem cell research is not unique in this and it is especially tempting because it holds the promise, unlike cloning or esoteric interventions, of actually being scalable, cheaper and more accessible to large numbers of patients and distributable." [Laurie Zoloth Reasonable Magic and the Nature of Alchemy: Jewish Reflections on Human Embryonic Stem Cell Research, *Kennedy Institute of Ethics Journal* Vol 12, Nr 1, 65-93, March 2002]. The question about limits to knowledge is raised by also by a Chinese scholar and his proposed answer is that creating a discerning global community, with overlapping ethical norms is indispensable for promoting responsible research. [Xu Zongliang - Human Cloning: Reflections on the Meaning of Life and Morality in Macer, DRJ., ed., "*Challenges for Bioethics from Asia*" (Eubios Ethics Institute, 2004).] Education and research in a way that allows for questions to be asked and even utter certainty and absolute authority to be queried, is permitted. "Even if sorcery challenges essential orders of creation, its study is permitted".

46. <http://www4.nationalacademies.org/IAP/iaphome.nsf/Multi+Database+Search/8CoDAC1629962FAD85256DFE003040C2?OpenDocument>.

47. HUGO Ethics Committee Statement on Stem Cells (November 2004), <http://hugo.hgu.mrc.ac.uk/PDFs/Statement%20on%20Stem%20Cells%200%202004.pdf>

48. Darryl Macer, *Shaping Genes* (Eubios Ethics Institute, 1990).

49. Maurizio Salvi, To what extent should animal cloning be permitted?, *EJAI* 12 (2002), 59-63.

so novel that human society needs to carefully consider whether it wishes to allow this for a range of reasons, however at least for a decade or more any attempt to clone a human baby would pose unacceptable risk of harm to the child so born that existing international guidelines on medical research need to be applied to forbid this.<sup>57</sup>

Bioethics considers the ethical issues raised in biology and medicine, and especially those raised by human activity in society and the environment using biotechnology.<sup>58</sup> A variety of ethical arguments are used in the discussions on cloning, and these discussions have a long history.<sup>59</sup> There are a range of ethical perspectives regarding cloning, including a number of perspectives that go beyond the dominant “western”, “Anglo-Saxon”, “Judeo-Christian” views that have been largely expressed in UN GA debates until now. The question about dignity of life, the moment when life has begun for a particular being is considered in every culture. We need to find what issues are raised for people in different cultures of the world.<sup>60</sup> The UN is better not to issue Declarations if it cannot adequately represent the diversity of cultures across the world when attempting to construct positions on difficult ethical issues. The academic level of discussion required suggests it is better to explore these bioethical issues in existing forums inside the UN system such as the UNESCO IBC.

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50. HUGO Ethics Committee - Statement on cloning *Eubios Journal of Asian and International Bioethics* 9 (1999), 70.

51. Macer, DRJ., *Bioethics is Love of Life: An Alternative Textbook*; 162pp. (Eubios Ethics Institute, 1998).

52. Labar, Martin (1984) “The Pros and Cons of Human Cloning,” *Thought* 59: 319-333.

53. *Ethical Issues in Human Cloning-Cross Disciplinary Perspectives*, ed. Michael Brannigan. New York: Seven Bridges Press, 2001.

## Section III - International Governance of Cloning

### ***The General Assembly and the Cloning Debate***

International attention to governance of human cloning began in earnest in August 2001 in the UN General Assembly, when under rule 14 of the rules of procedure of the General Assembly, the Permanent Missions of France and Germany requested the Secretary-General to include a supplementary item in the agenda of the fifty-sixth session entitled 'International convention against the reproductive cloning of human beings'.<sup>61</sup> In the explanatory memorandum, they recalled Art.11 of the Universal Declaration and stated that given its 'multidisciplinary nature, the issue could not be dealt with in all its aspects in any of the specialized agencies (such as the Commission on Human Rights, UNESCO, WHO) and it therefore falls within the competence of the General Assembly.' They also recommended that the Sixth Committee take up this issue.

The Sixth Committee (legal) considered the matter and adopted a resolution<sup>62</sup> aimed at setting in motion a process that would lead to the negotiation of a legally binding, universally applicable instrument banning reproductive cloning of human beings. The German representative called for the mandate to be 'focused, by narrowing down the issue to the cloning of human beings for reproductive purposes in order to win a speedy consensus that would deter irresponsible researchers.'<sup>63</sup>

The first proposal to widen the scope of the mandate was made by the Observer of the Holy See, in that same meeting, arguing that action must also be taken to prohibit the production of human embryos as suppliers of specialized stem cells. He observed that in the view of the Holy See embryos have an equal status as human beings and therefore the destruction of innocent human beings for the purpose of collecting stem cells 'constituted even more serious offences against human dignity and the right to life'.

### **The Ad Hoc Committee**

Based on the report<sup>64</sup> of the Sixth Committee, the General Assembly established an Ad Hoc Committee to consider the elaboration of a mandate for development of an international instrument with the understanding that 'the

committee will open with an exchange of information and technical assessments provided by experts on genetics and bioethics'. The resolution also recommended that a Working Group of the Sixth Committee be set up during the next GA session.<sup>65</sup>

The Ad Hoc Committee was in broad agreement that reproductive cloning should be prohibited but divisions existed as to whether the scope of any convention should be expanded to include research cloning. Concern that the first successful cloning of a human being could take place soon led some delegations to call for a pragmatic approach to the problem urging the Assembly to concentrate on closing the deal on reproductive cloning.<sup>66</sup> The compromise solution put forward was for a step-by-step approach to cloning, beginning with a convention on banning the reproductive cloning of human beings.<sup>67</sup> This proposal did not, however, make much headway. The Ad Hoc committee produced a lot of debate and it became clear that research cloning was going to wrestle its way into the agenda item.

### **The Sixth Committee**

A Working Group of the Sixth Committee was convened for consideration of the development of an international convention against the reproductive cloning of human beings at the start of the 57<sup>th</sup> session of the General Assembly in 2002. A clear polarization of views among the delegations can be seen from the report submitted to the Sixth Committee<sup>68</sup>. Some delegations expressed the view that it was vital for the international community to send a clear message that the reproductive cloning of human beings was unethical, intolerable and illegal, by hastening to draw up a convention. They supported the step-by-step approach. They considered the delay to ban reproductive cloning an affront to the prevailing consensus. Those who wanted a comprehensive ban on all types of cloning were of the view that a ban only on reproductive cloning would send the wrong signal to the international community as it would implicitly authorize the creation and destruction of human embryos for experimentation. The issue was entering a deadlock. However, the pragmatists pointed out that the international ban on reproductive cloning solely would not preclude tough national legislation on research cloning. Since there was no general consensus on the issue of research cloning, it would be best left to

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54. A/56/192

55. A/C.6/56/L.19

56. Ibid at para 5

57. A/56/599

58. Resolution 56/93

59. First cloned baby, 2nd May, 2002, [cnn.com/Sci-Tech](http://www.cnn.com/Sci-Tech), <http://www.cnn.com/2002/TECH/science/04/06/human.clone/>; First cloned baby "born on 26 December", 27 December 2002, NewScientist.com news service, <http://www.newscientist.com/news/news.jsp?id=ns99993217>; Cloned baby claim met with doubt, Friday, 27 December, 2002, BBC News, <http://news.bbc.co.uk/1/hi/health/2608655.stm>

60. A/57/51 at para 25

61. A/C.6/57/L.4 Annex II

be dealt with, by individual states. Various proposals<sup>69</sup> were submitted for the elaboration of a mandate for the convention reflecting these views.

The Sixth Committee considered the reports of both the Working Group of the Sixth Committee and the Ad Hoc committee. In its series of meetings, delegations stressed that this was a race against time. The ‘all or nothing’ approach it was argued benefited the wrong side - irresponsible researchers, fraudulent doctors promising babies for astronomical sums of money, and obscure sects such as the United States based Raelians who claimed that pregnancies from cloned embryos were already under way.<sup>70</sup>

However, this position was not accepted by all and the US representative stated that ‘because reproductive and therapeutic cloning were indivisible intellectually, scientifically and practically, the international community should outlaw in its entirety the most troubling and serious assault on human dignity the United Nations had ever encountered.’<sup>71</sup> A contrasting position held that any convention should allow and regulate research cloning bearing in mind ‘the potential dangers of restricting the development of scientific knowledge’<sup>72</sup> Following from its meetings and discussions, the Sixth Committee recommended to the General Assembly that the Working Group be reconvened in the fifty-eighth session of the Assembly in order to continue the work undertaken during the fifty-seventh session. None of the proposals for a mandate were recommended to the Assembly since there was no consensus.

### **The Deadlock**

As the General Assembly convened for the fifty-eighth session the stalemate that arose from powerful uncompromising positions brought about frustration on both sides.

One representative aired his views thus: ‘it is clear that there is no consensus with respect to therapeutic cloning research. But, by ignoring that fact and pressing for action to ban all cloning,’ ...[has] ... “effectively destroyed the possibility of action on the important area on which we are all agreed - a ban on reproductive cloning’.<sup>73</sup> In contrast others claimed that a ban on reproductive cloning

only would be a false ban since it would be confusing, ineffective and impossible to enforce<sup>74</sup> and it would prove impossible to control what went on in laboratories’.<sup>75</sup> A partial ban they argued left ample room for wrongdoing or regulatory abuses. Those who wanted a comprehensive ban also believed that ‘while the goal of finding cures to chronic illnesses is laudable, adult-stem-cell research is a promising field of study that can provide an ethical source of stem cells for scientific investigation’<sup>76</sup>.

### **Pragmatism and Belief**

The realisation that a deadlock meant further delay got most delegations arguing for ‘the United Nations [to] act immediately, pragmatically and responsibly’.<sup>77</sup> A sense of urgency has been the underlying feature of the debate in the General Assembly, because of the feeling that a convention offered a chance to control the actions of scientists such as the Italian doctor Antinori and the United States-based doctor Zavos, who had announced that the first cloned baby might be born within a year or two.<sup>78</sup> One delegate noted that ‘whether or not the international community concludes such a convention before attempts at reproductive human cloning actually materialise, it is imperative that, through international action and national legislation, member states deny safe haven to those scientists willing to defy the international community’.<sup>79</sup>

In the fifty-eight session which took place, attention was drawn to the fact that ‘despite two years of discussing the topic in the General Assembly, limited progress had been made.’<sup>80</sup> The initial proposal by Germany and France envisaged that ‘in view of the urgency of the issue, it would be desirable if the GA could consider at its fifty-seventh session the mandate for the negotiation of the convention, so that the second stage, the elaboration of the convention, could proceed in 2003’.<sup>81</sup>

Despite the urgency of the issue, the Sixth Committee voted narrowly, 80 in favour of and 79 against, for an adjournment of the debate until the 60<sup>th</sup> session of the GA in 2005. This recommendation was, however, not taken up by the General Assembly, which decided to include the item in the provisional agenda of its fifty-ninth session. No provision was made for meetings of the Ad Hoc committee or the Working Group till then.

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62. By France and Germany, Mexico, Holy See, Brazil, United Kingdom of Great Britain and Northern Ireland, China.

63. A/C.6/57/SR.16 at para 6

64. A/C.6/57/SR.16 at para 43

65. A/C.6/56/SR.27 at para 10

66. A/58/PV.72 agenda item 158 at page 11

67. A/C.6/58/L.9 Annex II

68. A/C.6/57/SR.17 at para 19

69. A/58/PV.17 at pg.12 I

70. A/C.6/57/SR.16 at para 14

71. A/C.6/57/SR.16 at para 6

72. A/57/PV.9 at page 12

73. A/C.6/58/L.9 Annex II

74. A/C.6/56/SR.27 at para 4

While the GA debate did not comprehensively cover all issues related to cloning<sup>82</sup>, the need for cross border and international regulation was well emphasised. The scope for misuse of any technology across borders exists and hence the need for a comprehensive debate and law at the national and international level. Forum shopping<sup>83</sup> is a real problem that will lead to 'an atmosphere of procreative tourism'<sup>84</sup>. There are precedents in the use of reproductive surrogate motherhood by persons living in countries where it is not available such as Germany and Japan who use the services of clinics and persons in more permissive jurisdictions. The sponsors of the first resolution on the issue, while favouring 'the universal context of the United Nations' sought to answer the challenge posed to human dignity based on international law since it 'would have an impact on the entire human family'<sup>85</sup>.

The delegations felt that 'action against them (research laboratories who might be planning to do reproductive cloning) at the national level would not be enough: the situation calls for international cooperation to harmonise national approaches, set limits and provide for deterrent measures'.<sup>86</sup> 'Reproductive cloning of human beings posed a serious threat to human dignity and hence necessitated a legally binding instrument to prevent competition among research institutes around the world.'<sup>87</sup> 'Regulation of human cloning should be established at the global level since domestic measures are either non-existent or [in]sufficient due to the complex ramifications of human cloning'<sup>88</sup> The President of the 59<sup>th</sup> GA session, in his

inaugural speech delivered on the 14<sup>th</sup> of September 2004, reiterated the importance of a 'harmonious international environment'<sup>89</sup> to tackle the problem of reproductive cloning. The importance of international law in the issue of cloning has been firmly established in that the current General Assembly, while adopting its Agenda approved a recommendation of the Sixth Committee to shift the categorisation of the item on an international convention against the reproductive cloning of human beings from 'organisational, administrative and other matters' to that of the 'promotion of justice and international law'.<sup>90</sup>

### From Convention to Declaration

In the face of the political stalemate members of the United Nations agreed to abandon efforts to put in place an international Convention for the prohibition of human reproductive cloning. The sixth committee (legal) of the General Assembly was tasked with drafting a Declaration rather than a Convention because of irreconcilable differences on the issue of research cloning.<sup>91</sup> This led eventually to the adoption of the United Nations Declaration on Human Cloning was adopted on the 8<sup>th</sup> of March 2005 (A/RES/59/280). The Declaration was adopted in an acrimonious debate which went to a vote, an unfortunate precedent, which further marked the lines of division on this emotive issue. The Declaration was passed with 84 countries supporting it, 34 countries voting against, while 37 abstained.<sup>92</sup>

75. It can be justified, since the GA debate was only a 'scoping' discussion

76. Greene, A., Note - The World after Dolly: International Regulation of Human Cloning, 33 Geo. Wash. Int'l L. Rev. 341, 355-60 (2001) The examples of Dr. Seed (US) and Dr. Cassim (South Africa) are discussed and the statement of Dr. Reed proposing to move to Tijuana, Mexico if the US regulated cloning. Greene argues that as long as there is one country where human cloning research is unregulated, this person will have a locale to fulfil his mission.

77. Corsover J.T., The Logical Next Step? An International Perspective On The Issues Of Human Cloning And Genetic Technology, ILSA Journal of International and Comparative Law Spring, 1998

78. A/56/192

79. A/C.6/56/SR.27 at para 26 See generally Development - Shanin E.L., International Response to Human Cloning, 3 Chi. J. Int'l. L. 255

80. A/C.6/56/SR.27 at para 5

81. Statement by Indonesian Representative, 30th September 2003

82. 59th GA President in his inaugural speech, Press Release GA/10253 14th September 2004

83. Press Release GA/10256 17th September 2004

84. Countries voting. In favour: Afghanistan, Albania, Andorra, Australia, Austria, Bahrain, Bangladesh, Belize, Benin, Bolivia, Bosnia and Herzegovina, Brunei Darussalam, Burundi, Chile, Comoros, Costa Rica, Côte d'Ivoire, Croatia, Democratic Republic of the Congo, Djibouti, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Georgia, Germany, Grenada, Guatemala, Guyana, Haiti, Honduras, Hungary, Iraq, Ireland, Italy, Kazakhstan, Kenya, Kuwait, Lesotho, Liberia, Liechtenstein, Madagascar, Malta, Marshall Islands, Mauritius, Mexico, Federated States of Micronesia, Monaco, Morocco, Nicaragua, Palau, Panama, Paraguay, Philippines, Poland, Portugal, Qatar, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, San Marino, Sao Tome and Principe, Saudi Arabia, Sierra Leone, Slovakia, Slovenia, Solomon Islands, Sudan, Suriname, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Timor-Leste, Trinidad and Tobago, Uganda, United Arab Emirates, United Republic of Tanzania, United States, Uzbekistan, Zambia.

Against: Belarus, Belgium, Brazil, Bulgaria, Cambodia, Canada, China, Cuba, Cyprus, Czech Republic, Democratic People's Republic of Korea, Denmark, Estonia, Finland, France, Gabon, Iceland, India, Jamaica, Japan, Lao People's Democratic Republic, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Republic of Korea, Singapore, Spain, Sweden, Thailand, Tonga, United Kingdom.

Abstain: Algeria, Angola, Argentina, Azerbaijan, Bahamas, Barbados, Burkina Faso, Cameroon, Cape Verde, Colombia, Egypt, Indonesia, Iran, Israel, Jordan, Lebanon, Malaysia, Maldives, Mongolia, Myanmar, Namibia, Nepal, Oman, Pakistan, Republic of Moldova, Romania, Serbia and Montenegro, Somalia, South Africa, Sri Lanka, Syria, Tunisia, Turkey, Ukraine, Uruguay, Yemen, Zimbabwe.

Absent: Antigua and Barbuda, Armenia, Bhutan, Botswana, Central African Republic, Chad, Congo, Dominica, Fiji, Gambia, Ghana, Greece, Guinea, Guinea-Bissau, Kiribati, Kyrgyzstan, Libya, Malawi, Mali, Mauritania, Mozambique, Nauru, Niger, Nigeria, Papua New Guinea, Peru, Russian Federation, Senegal, Seychelles, Swaziland, Togo, Turkmenistan, Tuvalu, Vanuatu, Venezuela, Vietnam.

85. UN vote urges human cloning ban, 8 March, 2005 BBC News: <http://news.bbc.co.uk/2/hi/health/4328919.stm>

The Declaration which does not have legally binding effect will not achieve the purpose which was originally sought by France and Germany when they brought the issue of reproductive cloning before the UN. Their intention was to bring about an international ban on human reproductive cloning so as to effectively stall forum shopping for activities they considered to be contrary to human dignity. The UN Declaration cannot of itself achieve this purpose. Research efforts on reproductive as well as therapeutic cloning continue, therefore, to be governed by national law and policy. As a result maverick scientists, whose announcements of plans to clone human beings first led the General Assembly to take up the issue, will be free to carry on experiments in certain jurisdictions. The scientists who want to clone embryos for research purposes can also breathe sigh of relief, as there does not seem to be a threat to ban research cloning in the near future. Such research is currently allowed in many countries under very strict regulation. The scientific and economic interests of countries in encouraging scientific research have played an important role in bringing about the present outcome.

### The UN Declaration on Human Cloning

The Declaration calls upon member states to (a) 'prohibit all forms of human cloning in as much as they are incompatible with human dignity and the protection of human life'. Section D calls upon member states to 'adopt and implement without delay national legislation to bring into effect sec (a). Although there is no direct reference to research cloning the section can be construed as urging countries to ban all types of cloning.

The Declaration may for some be seen as a victory for countries which stood opposed to research cloning on the grounds that any type of research was impermissible because it was destructive of human life. They even managed to insert the phrase 'protection of human life' alongside protection of human dignity in sections (a) and (b) of the Declaration. While a ban solely on reproductive cloning, as envisaged by the French and German initiative back in 2001 would have tacitly accepted the practice of research cloning, the Declaration makes no such concession. Rather it has brought into question the totality of cloning procedures, thereby drawing sharp remarks from scientists in countries where research cloning is permissible. Professor Richard Gardner, Chair of the UK Royal Society's working group on stem cell research and cloning, for instance has called the result an 'ambiguous and badly-worded political Declaration'<sup>93</sup>.

The developing countries scored a point as their lobby managed to draw attention in section (f) of the Declaration

to the 'prioritising of financing of medical research into pressing global issues, such as HIV/AIDS, tuberculosis and malaria' which affect vast numbers of people.

### Legal Status of Declarations

The 2005 Declaration discussed above and the Universal Declaration on the Human Genome and Human Rights, 1997 are both resolutions passed in the General Assembly. They have no immediate binding effect. They play a significant role in the formation of customary international law. There are many different forms of law making in international law and although an international convention or a treaty is a source of binding rules, the importance of other methods of formation of international law cannot be underestimated. It is our argument the GA debates need to take into account customary law in the area of reproductive cloning. It is also our claim that the 1997 and 2005 Declarations make an important contribution to an emerging principle of customary law, which relates to the banning of reproductive cloning.<sup>94</sup> It is noteworthy that customary law relating to reproductive cloning also did not figure in the 'list of legal issues' that was drawn up for consideration, in the course of debating a draft convention in the legal committee. This demonstrates either a lack of awareness of issues of customary law or a belief that state practice has as yet not defined clear guidelines from which a customary principle of international law could be identified. It is pertinent to note that regulation of biomedical research is relatively a new area and it is only now coming within the purview of international law as a separate discipline in need of regulation.

The analysis below attempts to shed some light on the issue of reproductive cloning and customary international law. It concludes that there is enough evidence to seriously consider the emergence of customary law prohibiting reproductive cloning.

### The Formation of Customary International Law

Article 38 of the Statute of the International Court of Justice lists the sources of international law that are to be relied upon by the Court in matters of dispute. Art.38 (1) (b) states that the court shall apply 'international custom, as evidence of a general practice accepted as law' in resolving disputes. According to Mark Villiger, 'analysis of customary international law will need to concentrate on two main elements: material practice and *opinio juris*, i.e. the acceptance of the practice as law'<sup>95</sup>. Material practice, in other words, state practice, according to Villiger is the raw material of customary law. He defines state practice

86. The Biodiplomacy Initiative is highlighting the fact that the GA debates scarcely address the issue of customary law.

87. Mark E Villiger, Customary International Law and Treaties, Martinus Nijhoff Publishers, 1985 Dordrecht, page 3,4

88. Richard K. Gardiner, International Law, Pearson Education Limited, Essex, 2003 page 103

as ‘including any act, articulation, or other behaviour of a state, as long as the behaviour in question discloses the state’s conscious attitude with respect to its recognition of a customary rule’. The understanding of this ‘element of custom’ is that there must be shown to be sustained and consistent practice such as will establish a clear case that a particular mode of behaviour has become the norm<sup>96</sup>. In 1950, the International Law Commission listed national legislation, diplomatic correspondence, opinions of national legal advisers and practice of international organisations among the evidences of customary international law. This is however not exhaustive and the decisions of national tribunals and the work of the ILC, among other things have been considered to be evidences of customary law. *Opinio juris sive necessitates* is the second element of international custom. In short, *opinio juris* is the opinion regarding the law. Contradictory as it might sound, it is still considered to be an essential element of custom formation. Only those actions of states which they believe to be somehow ‘legal’ or ‘necessitated by law’ can form part of the evidence of state practice. Not all state practice will qualify as evidence of customary law.

A quick word here, about the role of General Assembly resolutions in the formation of customary international law, is warranted. GA resolutions are considered to be ‘soft law’ and can be considered as starting points for the formation of customary law. It can also be used as evidence of strengthening of a practice. Various GA resolutions relating to the outer space and the deep seabed are examples of how resolutions emanating from the UN play a role in Customary International Law and later find their way into treaties.

### **Reproductive Cloning and Customary International Law**

In examining the emergence of an international custom, only one of the categories of evidence of state practice is examined here, namely national legislation. Although numerous other evidences can be presented, it is not possible to consider all that within this short section on customary international law, whose main aim is to indicate that there is an emerging international custom relating to reproductive cloning.

An analysis of existing municipal legislation on cloning indicates strong evidence of state practice and *opinio*

*juris* supporting the prohibition of reproductive cloning. The practice of states and an accompanying sense of legal obligation are the two important criteria for the formation of customary international law. In the case of reproductive cloning, over 50 countries<sup>97</sup> have legislated to ban reproductive cloning and there is no country that legislated to allow the practice. Most countries have spoken out against the practice at both the national and international level and there is an apparent universal consensus on the need for reproductive cloning to be banned. While some states had already legislated on the subject, The Universal Declaration on the Human Genome and Human Rights, 1997, which has been endorsed by the General Assembly, served as the catalyst for promoting national legalisation banning reproductive cloning in many countries.

The state practice on prohibiting reproductive cloning is uniform, extensive and is accompanied by *opinio juris*, which can be understood as ‘a sense of legal duty’<sup>98</sup>. Tomuschat clarifies this obvious dichotomy between the sense of legal duty and the lack of any law to inspire such a sense of duty as being an imaginative device to establish congruence between the ‘is and the ought’.<sup>99</sup>

Most states which have taken measures have resorted to legislative instruments to impose the ban on reproductive cloning. Some scholars might argue about the short period of time over which this custom has emerged. But the ICJ’s decision in the North Sea Continental<sup>100</sup> case, where it declared that ‘there is no specific time requirement needed for the formation of a custom’ would apply to the issue at hand. Akehurst<sup>101</sup> is of the opinion that a small amount of practice is sufficient to create a customary rule, even though the practice involves only a small number of states and has lasted only for a short time. The theory of the continental shelf and sovereignty over air space became a custom in extraordinarily short lengths of time. Since then the time factor required for a custom to establish itself is ever shrinking.

While some states have adopted legislation over 100 states still do not have any legislation on reproductive cloning or any other evidence of state practice. Under the doctrine of acquiescence, it is assumed that in the absence of any statement to the contrary, the acquiescing state considers the behaviour of the other states to be legitimate<sup>102</sup>. However, this doctrine cannot be directly applied to the case at hand without further analysis into why these states haven’t legislated on this issue.

89. Mark E Villiger, Customary International Law and Treaties, Martinus Nijhoff Publishers, 1985 Dordrecht, page 3,4

90. Richard K. Gardiner, International Law, Pearson Education Limited, Essex, 2003 page 103

91. UNESCO national legislations document - A Summary of National Legislations prepared by UNESCO is available on <http://unesdoc.unesco.org/images/0013/001342/134277e.pdf>

92. North sea continental shelf case ICJ Rep.1969 at 44

93. C.Tomuschat, International Law: Ensuring the survival of mankind on the eve of a new century

94. Ibid at 4

95. Malanczuk, P., Akehurst’s Modern Introduction to International Law, 7th rev. ed., 1997, Routledge, London at 42

96. Grand-duchy of Luxembourg v Cie. Luxembourgeoise de Telediffusion, 91 ILR, at 281, 286

A number of soft law instruments have emerged to support the arguments for the emergence of a customary principle banning reproductive cloning. As early as 1986<sup>103</sup>, the Council of Europe recommended member countries 'to forbid anything that could be considered as undesirable use or deviation of these techniques, including the creation of identical human beings by cloning or any other method, whether for race selection purposes or not'. Since then UNESCO, the UN General Assembly, The UN Commission on Human Rights, The World Health Organisation, the European Union, the Council of Europe, the Organisation of African Unity, the Group of Eight have all passed resolutions and statements supporting a ban on human cloning.

The UN Commission on Human Rights has passed five resolutions on Human Rights and Bioethics<sup>104</sup> since 1993. The World Health Organisation passed Resolution 51.10 on Cloning in Human Reproduction in 1998 recalling its earlier resolution of 1997 and reaffirming that the use of cloning for replication of human individuals is ethically unacceptable and contrary to human dignity and morality. The reasons it cited were that the available information on animal studies showed that this was an unsafe procedure for reproductive purposes in the human and that it raised serious matters of concern in terms of safety of the individual and subsequent generations of human beings. The resolution, in the second preambular paragraph noted that there was general consensus at the national and international levels on reproductive cloning since the fiftieth World Health Assembly.

The European Union and the Council of Europe have been very active in regional law making. The Additional Protocol to the Biomedicine Convention in Europe is a categorical statement against reproductive cloning.<sup>105</sup> The Council of the European Union declared a ban on human cloning in 1997. The European Parliament has passed numerous resolutions since 1993<sup>106</sup> stating that 'there is a consensus within the Community that interventions in the human germ line and the cloning of human beings offends against *ordre public* and morality'. The resolutions 'reiterated that every individual has the right to his

own genetic identity and that human cloning must be prohibited'. The Organisation of African Unity passed a resolution on bioethics at the 32<sup>nd</sup> Assembly of the OAU Heads of State and Government in 1996. The Group of Eight in their communiqué dated 22<sup>nd</sup> June 1997 supported a prohibition on reproductive cloning stressing the need for close international co-operation to prohibit the use of somatic cell nuclear transfer to create a child.

### **State Practice Relating to Reproductive Cloning**

Enactments of legislative organs are commonly considered to constitute evidence of state practice. In fact, most 'acts of a regulatory disposition by a public authority'<sup>107</sup> can be counted towards state practice. The following are some of the national legislations and rules relating to reproductive cloning. Some of them are still in the process of becoming law and are being considered by the legislative bodies.<sup>108</sup>

The United Kingdom has the most comprehensive legislation relating to embryo research and it has been constantly updated in response to emerging new technologies. The Human Embryology and Fertilisation Act was passed in 1990. This Act read in conjunction with the Human Reproductive Cloning Act 2001 prohibits reproductive cloning. The purpose of the 2001 Act is to prevent human reproductive cloning taking place in the United Kingdom by rendering it a criminal offence to place in the womb of a woman a human embryo that has been created other than by fertilisation.<sup>109</sup>

In Canada, the Parliament enacted a law in 2004 prohibiting human reproductive cloning. The Law entitled 'Assisted Human Reproduction Act' does not allow research on the embryo, except if they are embryos left over from in vitro fertilisation procedures. Article 5 of the Act, which lists prohibited activities under the Act states in sub section 1 (a) ' No person shall knowingly create a human clone by using any technique, or transplant a human clone into a human being or into any non-human life form or artificial device'. Under Article 60 of the same law, any person found to be in contravention of Article 5 is liable to be imprisoned for 4- 10 years or incur a fine from

97. Parliamentary Assembly of the Council of Europe, Recommendation 1046 - *On the use of human embryos and fetuses for diagnostic, therapeutic, scientific, industrial and commercial purposes* <http://assembly.coe.int/Main.asp?link=http%3A//assembly.coe.int/Documents/AdoptedText/ta86/EREC1046.htm>

98. Resolutions 2001/71, 1999/63, 1997/71, 1995/82, 1993/91

99. 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, 12 January 1998.

100. Resolution on human cloning, 7th September 2000, 15 January 1998; Resolution on cloning, 12 March 1997; Resolution on the cloning of the human embryo, 22 November 1993.

101. International Law Commission, 1950. Yearbook of the International Law Commission, Volume II, Page 370.

102. A Summary of National Legislations prepared by UNESCO is available on <http://unesdoc.unesco.org/images/0013/001342/134277e.pdf>

103. Explanatory Notes to Human Reproductive Cloning Act 2001 Chapter 23, <http://www.hms0.gov.uk/acts/en2001/2001en23.htm> accessed on 16th December 2004

\$250,000 to \$500,000 or both.

In China, the 'Rules on Assisted Reproductive Technologies for Human Beings' came into force in October 2003. It forbids 'cytoplasmic transfer and germinal vesicle transfer for infertility treatment' thus ruling out reproductive cloning. The guidelines allow cloning research for therapeutic purposes.

In July 2004, a new law prohibiting reproductive cloning was passed by France. Under this new law, human reproductive cloning is considered to be a crime against the human species. The law also bans research cloning and establishes a new agency for monitoring developments in therapeutic cloning other parts of the world and assess whether it would be beneficial to human health. A hefty prison sentence of thirty years and a fine of 7.5 million euros await any person or entity attempting to conduct human reproductive cloning experiments. An earlier law, Law 94-653 of 1994, implicitly prohibited reproductive cloning.

Germany has the most interesting dichotomies in its law. It is reputed to have the strictest of embryo research laws in Europe. The Embryo Protection Act 1990 prohibits reproductive cloning on the pain of imprisonment for 5 years or a fine. Under Sec.6 (3) of the Act, any attempt is also punishable. The law also prohibits the creation and utilisation of embryos for any other purpose other than reproduction. However, the Stammzellgesetz 2002 does not prohibit the import of embryonic stem cells produced from supernumerary embryos that date before 1 January 2002. There is a no ban on stem cell research conducted on embryos imported into the country from elsewhere.

In Italy, both human reproductive cloning and therapeutic cloning are prohibited. Italy banned reproductive cloning in 1997 by passing an Ordinance. In February 2004, The Italian Parliament enacted Law 40/2004 which currently regulates medically assisted reproduction in Italy. Under Art.10, sec.7 of Law 40/2004, cloning by transferring the nucleus and performing experiments on embryos is prohibited. Failure to comply with the law could lead up to 20 years imprisonment.

In Japan, Art.3 of the law concerning regulation relating to human cloning techniques and other similar techniques prohibits 'the transfer of a human/animal somatic clone embryo into the uterus of a human or an animal'. Japanese law allows research cloning and the creation of embryos for research purposes.

Korea prohibits reproductive cloning and allows limited research on somatic cell nuclear transfer on supernumerary

embryos.

Singapore prohibits reproductive cloning and passed a law to allow research cloning in 2002. The conditions attached to the conduct of research cloning was that it would be allowed only 1) where there is strong scientific merit in, and potential medical benefit from such research 2) no acceptable alternative exists 3) and on a highly selective case-by-case basis.

In November 2004, Sweden passed a law prohibiting reproductive cloning and enabling the conduct of research cloning. The 2004 legislation which came into force in 2005 allows research on stem cells extracted from embryos.

Switzerland does not allow reproductive and research cloning.

In the United States of America, a bill was passed in late February 2003, which seeks to prohibit both reproductive and research cloning. A vote on this legislation has been put off. In June 2007 another bill was vetoed by President Bush that would have allowed federal funding for research to create ES cells. Many states in the US have passed legislation to ban reproductive cloning. Arkansas, California, Connecticut, Indiana, Iowa, Maryland, Massachusetts, Michigan, New Jersey, North Dakota, South Dakota, Rhode Island and Virginia have enacted laws prohibiting reproductive cloning. The law in Missouri and Arizona forbids the use of public monies for the purpose of any reproductive cloning experiments. The states extend varying support to therapeutic cloning. In 1999, the National Bioethics Advisory Commission recommended that Federal Regulations should permit research into embryonic stem cells obtained from supernumerary embryos. In August 2000, the National Institutes of Health issued guidelines on the circumstances in which federally supported scientists might engage in such research. One of the conditions to be met, similar to the position in Germany's laws, was that no scientist might destroy an embryo to derive cells: this will have to be done by privately-funded scientists, who will then pass the cells on to their publicly-funded colleagues.

It is clear from state legislation that most countries unconditionally support a ban on reproductive cloning. It can be observed that state practice on prohibiting reproductive cloning is uniform and fairly extensive.

## ***The Problems and Advantages of Customary International Law***

Customary international law enjoys varied support among international lawyers and jurists. Some think that it is a redundant source of law<sup>110</sup> while others are of the opinion that customary law is positive law as much as conventional law<sup>117</sup>. Concepts like instant custom<sup>111</sup> have tarnished the image of this traditional source of law<sup>112</sup>. The ambiguity of the term *opinion juris* has long been the bone of contention amongst international lawyers and jurists. However, the international court still interprets and relies on this source and it is unlikely to go out of fashion even if it falls into the category of 'the walking wounded'<sup>113</sup>. Despite these problems surrounding customary law, the argument for an emerging custom against reproductive cloning, we believe, would be met with great interest, even by (Customary International Law) CIL sceptics.

One of the major criticisms levied against modern customary law formation is the lack of actual state practice to support the formation of custom. Described as a slippery concept<sup>114</sup>, custom can sometimes be presumed on very flimsy evidence of state practice if it is solely built on policy statements and what the state purports to do rather than what it actually does. Although the International Law Association report on customary law sees no difference between verbal and physical acts<sup>115</sup> and argues that there is no inherent reason why verbal acts should not count as practice, numerous jurists find it a problem to base state practice only on verbal acts. In the case of state practice on reproductive cloning, the laws in different states have effectively prevented certain actions, contrary to dignity, from being committed. Therefore the laws have actually prevented some illegal physical activities from being carried out. They can be tantamount to 'physical acts' themselves and hence can be considered as the actual practice of states.

The other problem that lies at the heart of custom is how to distinguish between conduct performed for the discharge of an international commitment and conduct which a state considers as being based on a free political decision.<sup>116</sup> Against reproductive cloning, most states have acknowledged the normative attitude towards a ban by employing their legislative bodies to proclaim their oppositions and by using criminal law, in some cases to impose penal liabilities. The Parliamentary debates of some countries bear testimony to this.

However, one of the main advantages of custom is that once it is determined, it is very powerful. While treaty law is in principle binding only on the parties to the treaty, customary international law is binding on all members of the international community.<sup>118</sup> It is very difficult to overturn it and in the case of a new treaty formed later, enough evidence has to be put forward to override the custom. A custom could also rise to the status of *ius cogens*, which is essentially a very powerful custom with very little chances of being overturned at all for a very long time.

## ***Research Cloning and International Law***

The more controversial of the two types of cloning is research cloning. As shown by the survey of national legislation, it has mixed support in the community of nations. In most countries there is no specific law relating to research cloning. Other types of verbal or physical acts that could contribute to state practice on research cloning are also contradictory if at all available. The debate is deeply entrenched in politics, and even where it is possible to infer the legitimacy of research cloning from existing embryo research laws, states seem to want to make an exception for research cloning and to find means to exclude the applicability of embryo research laws to research cloning.<sup>119</sup>

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104. Kelly, P.J., *The Twilight of Customary International Law*, *Virginia Journal of International Law*, Winter 2000. N.C.H. Dunbar, *The Myth of Customary International Law*, 1983 AUSTRALIAN Y.B. INT'L L. 1

105. Rosenne at 57; Brigitte Stern, *Custom at the Heart of International Law*, 11 DUKE J. COMP. & INT'L L. 89 (2001)

106. See Bin Cheng, *United Nations Resolutions on Outer Space: "Instant" International Customary Law*, 5 INDIAN J. INT'L L. 23, 35-40, 45-48 (1965)

107. Other distinctions made are between modern and traditional custom. Roberts, A.E., *Traditional and Modern Approaches to Customary International Law: A Reconciliation*, 95 AM. J. INT'L L. 757, 769 (2001); Jack L. Goldsmith & Eric A. Posner, *Understanding the Resemblance Between Modern and Traditional Customary International Law*, 40 VA. J. INT'L L. 639 (2000)

108. Swaine E.T., *Rational Custom*

109. Benesch S. et al, *International Customary Law and Antipersonnel Landmines: Emergence of a New Customary Norm*, *Landmine Monitor Report* 1999, 1020-21.

110. Sources of state practice such as policy papers, press reports, official manuals (e.g. on military law), instructions to armed forces, comments by governments on draft treaties, legislation, decisions of national courts and executive authorities, pleadings before international tribunals, statements in international organisations are classified as verbal acts and such acts arresting individuals or ships or seizing property are classified as physical acts.

111. See Fidler D.P., *Challenging the Classical concept of Custom: Perspectives on the future of customary international law*, 39 *German Yearbook of International Law* (1996), 198-248 at 204-208

112. Rosenne at 53

Resort to human rights jurisprudence does not provide much assistance since it is unclear as to whether the embryo would fall within the scope of human rights legislation.<sup>120</sup> As mentioned earlier, the debates in the General Assembly indicate at least two well-formed divergent views. Even where state practice seems consistent, e.g. in the case of Germany, which has strict embryo laws and does not allow research cloning; there exists a certain reluctance to seek a comprehensive cloning ban in the GA, even though it would be consistent with its legislation. There are fluctuations in the *opinio juris* about research cloning. Many countries are still in the process of making laws. Some countries<sup>121</sup> have rather unhelpfully opted for a moratorium, although such a course of action is justifiable. Others, like France have granted exclusive research rights to 'government researchers'.

To start looking for the origins of state practice on research cloning a clear understanding of what is involved in research cloning is necessary. In research cloning, the nucleus of the embryo is replaced by the nucleus from a somatic cell but an implantation does not occur. Instead stem cells are harvested from the cloned embryo, thereby destroying it. The controversy about research cloning arises from the fact the embryo is destroyed. Therefore an analysis into the state practice and *opinio juris* into the question of the status of the embryo will contribute to throwing light on the issue of state practice and *opinio juris* on research cloning.

Those who view the embryo as a human life are opposed to research cloning. While not all those who do not accord full status to an embryo support research cloning. The issue about whether the embryo is equivalent to a human being has been raised for millennia and still continues to be debated in relation to abortion and embryo research. Embryo research which results in the destruction of the embryo, has been granted legal sanction in some countries since the 1980s. Certain practices in medically- assisted reproduction like embryo reduction, which is basically the destruction of an embryo and the destruction of cryopreserved embryos, for example, is regularly practiced in many countries. While there are many religious and ethical views about the status of an embryo, it has been argued that most legal systems accord the embryo special

status that falls short of conferring the full recognition of human rights and privileges.<sup>122</sup> As municipal law in many countries facilitates or condones the conduct of research on the human embryos, there is support for the proposition that a custom of granting partial status to the embryo in international law is either emerging or already exists. However, there is a need for caution here as many countries seem to be using the opportunity of the cloning debate to rethink their embryo research laws. With the reopening of the debate on the status of the human embryo it is still too soon to define the status of *opinio juris* in this issue. In a recent debate in UNESCO, on the Draft Universal Declaration on Bioethics, for instance, efforts were made to introduce the concept of "respect for life" an issue which was seen by some delegations as an attempt to bring issues such as stem cell research and the status of the embryo into that debate. Delegates pointed to the treatment of the issue of human dignity etc. within the Declaration on the human genome and advised against reopening this debate, calling for respect for the diversity of positions of different states, a diversity which was reflected in the wording selected in the Universal Declaration on the Human Genome and Human Rights.

To determine the status of the embryo in international law, it is useful to look into national legislation, again to identify customary law, since there is no international convention or binding agreement on the status of the human embryo.

Prior to examining a number of specific examples of national law and policy in this area it is necessary to highlight an important inconsistency in the debate regarding stem cell research, the legal status of the embryo and the issue of research cloning. Analysis shows that the legal status of the embryo is not always commensurate with the policy of countries on the issue of stem cell research. And it is important to note that opposition to cloning does not always imply an opposition to stem cell research.

Arguments regarding the instrumentalisation of life may be applied to all stem cell research. If embryos are to have a full moral status as a human being then, arguably, stem cell research should not be allowed at all. If on the other

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113. Brumby, Margaret & Kasimba, Pascal (1987) "When is Cloning Lawful?" *Journal of In Vitro Fertilization & Embryo Transfer* 4: 198-204.

114. See generally Rosenne S., *The perplexities of modern international law*, Recueil de cours 2001, Also – in print, The Hague Academy of International Law, Monographs, 2, 2004 ISBN 90 04 13692 4

115. Israel, Russian Federation

116. *Davis v Davis*, 842 S.W.2d 588 (Tenn. 1992) - The Court began by noting that the embryos in question should not be regarded legally as property or people, but rather as occupying an interim category of "special respect." Laurie, G., *Patenting stem cells of human origin*, E.I.P.R. 2004, 26(2), 59-66. He states that 'while some consider it to be a human being from conception and deserving of full respect, most people do not see it this way, and most legal systems accord the embryo a special status which falls short of conferring the protection of full legal human rights and privileges. A lack of consensus concerning the status of the embryo, reflected by the different national legal definitions given to this entity. ESHRE Task force on Ethics and Law, the moral status of the pre-implantation embryo, Human Reproduction Vol.16, No.5 pp. 1046-1048, 2001

hand stem cell research is to be allowed then, it is argued, allowing stem cell research on embryos produced by the cloning method somatic cell nuclear transfer (SCNR) should not raise any more ethical issues, than the use of supernumerary IVF embryos. Such a distinction it has been claimed is purely arbitrary<sup>123</sup>.

From the point of view of the ethics of healing, which is about providing the best possible treatment and care for the sick and disease, it is considered by some to be unethical to disallow research cloning. The representative of Thailand put it before the General Assembly that 'the [Thai] medical council, believed, in principle, that therapeutic cloning could be important in the treatment of diseases'.<sup>124</sup> Echoing similar views was the British representative who 'believe[d] that it would be indefensible to stop such research and deny millions of people -and their families -the chance of new treatments that could save their lives. He stated that more than 60 of the world's leading scientific academies, including the United States National Academy of Sciences, published a joint statement in September 2003 calling on the United Nations to ban reproductive cloning - but to permit therapeutic cloning research'.<sup>125</sup>

Under such a view stem cell research involving SCNR should be allowed as it is much more beneficial to the sick and diseased than research using stem cells from Supernumerary IUV embryos, as it presents major possibilities for autologous transplantation, in which the problem of rejection is largely overcome. A very significant argument to sustain a prohibition of SCNR stem cell research while allowing non SCNR research relates to what is considered the 'slippery slope' of SCNR research which would make it easier to clone a human being as only extra step would be required i.e. implant the cloned embryo into a womb and bring it to term. Therefore the reasoning is that our laws should not allow us to get that close to a risk.

There is also significant opposition for political reasons; the term cloning is a highly loaded term and has political ramifications both at the national and international level. In the imagination of the public, reproductive cloning is the symbol for all types of cloning and therefore taboo. The argument is that governments would like to be seen as doing the right thing by banning research cloning along with reproductive cloning.

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117. See Pitrolo, E. A., *The Birds, Bees and the Deep Freeze: Is there International Consensus in the debate over Assisted Reproductive Technologies?* 19 *Hous. J. Int'l L.* 147, 196 (1996)

118. A/C.6/57/SR.17 at para. 10

119. A/58/PV.72 Agenda Item 158 (Sir Emyr Jones Parry, United Kingdom)

## Section IV – Future Options for International Governance of Cloning

The General Assembly resolution A/RES/59/280 marks the first phase of UN involvement in the issue of reproductive cloning. For the time being, the UN has ceased to be concerned with the matter. However, the grave concerns regarding the possibility of a cloned human being coming into existence in parts of the world where this is not a prohibited procedure still exists. Therefore it is fair to assume that the Declaration on human cloning is not the final word on the subject. International regulation is a necessity in this area, and we see states continue to issue laws regulating cloning. We can also expect a renewed consideration in the UN system when claims of the birth of human clones are confirmed.

It is clear from the March 2005 Declaration that efforts to separate reproductive and research cloning have not succeeded. The title 'Declaration on Human Cloning' makes the point quite clearly. A number of countries (84 countries including the US, Germany, Italy, Switzerland, Saudi Arabia etc) support such a move. The main governance options are:

1. UNESCO IBC takes up the issue of reproductive and research cloning, in the context of resolution A/RES/59/280 and also in the context of the Universal Declaration on Bioethics and Human Rights, which was adopted by the General Conference of UNESCO on the 19<sup>th</sup> of October 2005.
2. GA Sixth committee takes up the issue of customary international law on cloning.
3. Dissemination, discussion and debate on cloning issues at the international level, such that all countries including the developing and least developed countries can participate and put forward their concerns regarding this new technology.

There is a trend towards allowing human stem cell research, with some countries allowing use of human embryos for creation of new embryonic stem (ES) cell lines.<sup>120</sup> No country has made a law that permits human reproductive cloning. To ban all types of human cloning will slow down scientific research. Similar technology is applicable for both reproductive and therapeutic cloning, therefore banning only reproductive cloning cannot exclude progress in research on the other, and that research could lead to better understanding of the issues that would need to be overcome for scientific success in reproductive cloning. This leads to concern that when capacity to successfully carry out reproductive cloning is achieved, it will become less possible to secure agreement on a global ban of such activities.

At present, there is no case in international law for banning all types of cloning. However, there is a strong case of the obligation on the international community to develop measures to create an effective prohibition to reproductive cloning in order to consolidate an emerging principle of customary international law in this area. State practice on research cloning is still nascent and there is insufficient '*opinio juris*' to support a case in international law to prohibit research cloning, not leading to reproduction per se. In this context, it is relevant to note that national law on the legal status of the embryo appears in many cases to grant only partial status to the embryo and even in states where recognition of the embryo is given in full, efforts have sometimes been made to provide exceptions to enable stem cell research to go ahead. However, there is a noticeable trend amongst some states to rethink their embryo research laws in the context of the present debate and it is unlikely that state practice in this area will lead to the development of clear customary principles in the short term.

Exploring governance options at the international level brings with it unique challenges and difficulties. Any amount of ethical or legal debate or even a thoroughly developed moral position on either or both of the uses of human cloning still leaves open the question of what public policy would be appropriate, prudent, and effective.<sup>133</sup> It is important to accommodate the interests of all members of the international community and search for acceptable compromises in the process of doing so. The interests of trade, peace and security, sustainability, health and human rights play contesting roles in human cloning. Ethics and law, though necessary, are not sufficient for deliberating on what to do about human cloning. Prudence and pragmatism are essential components of ethics and law.

There are a variety of arguments for control by society that are part of social ethics. Many countries have argued that there should be an authorized body to meticulously guard and control these procedures and avoid both direct harm to humans and a sense of human degradation. As social ethics do change, there have been examples of legislation against cloning with so-called "sunset" clauses. Expiry dates can give time for society to respond to new trends, either for a law to expire or for revision after a set number of years. We have to note that sunset clauses in some bioethics laws that require revision have not worked as intended, like French bioethics laws, because agreed revisions were not possible at the set times. However, temporary moratoriums give time for a search for a global solution that draws on the intellectual resources of all humankind, though banning research would stop use of resources for scientific exploration.

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120. For a detailed version of different mandates at municipal level, see report of the President's Council on Bioethics in the US which recommended the following 7 public policy options: self-regulation, ban plus silence, ban plus regulation, regulation of both, ban on both, ban plus moratorium, moratorium on both. The President's Council on Bioethics, *Human Cloning and Human Dignity: An Ethical Inquiry*, Washington, D.C., July 2002 [www.bioethics.gov](http://www.bioethics.gov)

121. Chapter seven, *Human Cloning and Human Dignity: An Ethical Inquiry*

There have been a variety of arguments against control, and these apply more to the greater diversity in the governance of existing medicine and science by global society compared to national policies. Overall a question is raised whether advanced technologies are really posing new ethical dilemmas or are these are similar to existing moral questions. We can question whether there is any need to treat new technology specially. However because clones will cross national boundaries we could consider international governance is needed in the same way as germ-line gene therapy.<sup>134</sup>

It is worth considering whether any new declaration on cloning has the possibility to add more to this specific issue than the current Declaration on Human Cloning. The current Declaration of the UN GA and the 1997 Universal Declaration of the Human genome and Human Rights already state that research should not be conducted if contrary to human dignity. Some reflection of the extensive process conducted within UNESCO to develop the Universal Declaration on Bioethics and Human Rights through multiple drafts. During the discussion of the fourth draft in Paris in January 2005, efforts were also made to include reference to “respect for human life” which was finally agreed as “respect for the life of human beings”, which uses the term human being which legally means from the time of birth. A cursory debate of the issue of what is “human life” by the joint meeting of the IGBC and IBC in Paris demonstrated the distance which exists within delegations over this issue, and thus we would not expect the GA to overcome the differences between delegations.

States will now need to consider whether in fact there is any benefit to developing a further declaration on cloning if the price of doing so is to adopt a vacuous instrument which does little to change the status quo regarding the issue of human reproductive cloning research.

In the debate on human cloning, various positions and interests have emerged and a reconciliation of these interests is paramount to a successful culmination of the debate. One of the main features of the debate is the urgency to outlaw human reproductive cloning. The draft resolutions brought before the GA on the 29<sup>th</sup> of September, and 6<sup>th</sup> and 7<sup>th</sup> of October 2004 bear testimony to this. The other feature is the overwhelming need felt by the international community to regulate this issue at the international level. The GA has been called upon to take the lead in international regulation on the issue of cloning. The opportunity to respond in a timely manner and strengthen the role of the United Nations should not be lost.<sup>135</sup>

In determining a strategy for governing the issue of cloning the UN was faced with a number of potential options, which ranged from adoption of a legally binding instrument to ban all research cloning to adoption of a non-legally binding instrument to provide some guidance to states on national cloning law and policy development, and in order to bolster customary international law. In the long run the UN has taken the latter course. The decision to develop a non-legally binding instrument is a compromise position adopted with the intention of getting around the firm positions on both sides of the debate not to accept a convention which did not support their particular standpoint. It is hoped that the compromise proposal will allow for a more rapid response by the UN to this controversial issue.

However, the decision to develop a non-binding Declaration does not in fact obviate the need for debate and compromise on a number of key issues and the options for regulation remain largely the same. The following section reviews in brief the issues which need to be considered in the development in either a binding or non-binding instrument and discusses the consequence of failing to adopt legally binding measures.

Amongst the options available for regulation of cloning, are:

- a) Total Ban on All Cloning Research
- b) Ban on Reproductive Cloning
- c) Ban on Reproductive Cloning and Allow Research Cloning
- d) Ban Reproductive Cloning, Allow Research Cloning for 10 Years
- e) Place a moratorium on all cloning research.

#### **a) A Total Ban on All Cloning Research**

A total ban, which involves prohibitions on both research and reproductive cloning, would bring to standstill all research activity in this area. On the one hand it would put an end to the destruction of human embryos for the purpose of this type of research and would preserve life and respect for life (for those who conceive of life as beginning from day one of conception). On the other hand the promise for new therapies and improvement in human health, the freedom of research and according to some views, future choices for reproduction that is part of human dignity, will go unexplored.

States that have legislation allowing research cloning are unlikely to become signatories to any instrument that advocates a complete ban of cloning research, thereby undermining the goal of developing a broadly supported international position on cloning.

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122. Macer, Darryl (1994) “Universal bioethics and the human germ-line”, *Politics & Life Sciences* 14, 27-29.

123. See Special Committee on the Charter of the United Nations and on the strengthening of the role of the Organisation. <http://www.un.org/law/chartercomm/index.html>

## **b) Ban on Reproductive Cloning**

A Ban on reproductive cloning would implement the provisions of Art. 11 of the 1997 Universal Declaration on the Human Genome and Human Rights giving it treaty status and making it binding on states that become parties to the treaty.

Article 11 of the 1997 Declaration prohibits reproductive cloning, as it is contrary to human dignity. The extensive support for such a ban is indicative of the consensus in the international community on banning reproductive cloning. Such a ban will be in conformity with national legislation of many countries. The opinion of the scientific community is that the safety risks involved in reproductive cloning make it an unviable procedure. The other important consideration is the issue of social justice at the global level. Since cloning is part of the health agenda, its effectiveness to reduce the disease burden of the world has to be scrutinised. A ban on reproductive cloning is seen as appropriate since precious resources that would otherwise be used for reproductive cloning can be allotted to achieving the millennium development goals. However, no studies have been conducted as to whether this would indeed be the case, and there are numerous other areas of government expenditure that could be diverted to areas that would promote achieving the MDGs.

A complete ban on reproductive cloning is likely to receive wide support from states, however, as research advances in this area, and the possibilities of successful cloning of humans increases the potential to secure global support for such a ban may begin to wane.

## **c) Ban Reproductive Cloning and Allow Research Cloning**

Freedom of research is one of the catalysts for progress in science and technology, and humanity has benefited very much from it. The twenty-first century has been dubbed as the century of biology, and thus freedom of research for scientists involved in cutting edge science like stem cell therapy, genetic engineering, genomics and proteomics is viewed as essential to improve our times. The mandate of UNESCO is to promote science and technology. Research cloning holds much promise for treating regenerative diseases and in organ transplantation. Freedom of research in this important area can be expected to have positive health outcomes. Even though the major global disease burden will not be directly addressed, the promise for human health may be seen as reason enough not to encumber the freedom of research to a great extent.

An instrument providing for a ban on reproductive cloning but allowing states a measure of freedom with regard to the issue of research cloning is perhaps the most viable compromise available to the international community.

Inclusion of strict measures to control the extent of research cloning to prevent the uncontrolled production and destruction of embryos, as well as to prevent the progression towards full reproductive cloning will likely ensure wider support to any instrument.

## **d) Ban Reproductive Cloning, allow Research Cloning for 10 years**

Social Justice is at the core of the agenda of member states that hold the view that resources spent on reproductive cloning can be better used to address pressing global issues. In the same vein the promise of research cloning for the betterment of health has to be tested and evaluated. The funding priorities for research cloning have to be designed to steer the research towards benefiting global health. A ten-year period would then provide an idea of how research cloning can help towards reducing the major disease burden of the world and bring about equity in health. A ten-year period starting from 2005 would coincide with the MDG target year of 2015.

A critical appraisal at the end of the ten-year period would be valuable to decide on the future of the technology and its promise for human health.

In the light of the unsure nature of the research and of the potential benefits and impacts of cloning research any instrument should be made the subject of periodic review, and a requirement for fixed review at five year intervals should be built into any Declaration.

## **e) Moratorium on Reproductive and Research Cloning**

A moratorium on reproductive and/or research cloning is too late, and thus it would leave a very uncertain international regulatory environment. It would however allow for development of greater awareness of the relevant issues at the national and international level and provide opportunities for further debate and discussion on the ethics of cloning without the pressure of imminent production of a human clone.

## Conclusions

At present, there is no case in international law for banning all types of cloning. However, there is a strong case and urgency to prohibit reproductive cloning since a ban on the procedure is emerging as a customary international norm. The challenge for the international community in choosing the appropriate option(s) is to find a compromise position that allows for adoption of a respected and effective mechanism to govern human cloning.

Public policy demands that the international community show itself as capable of espousing an effective and pragmatic approach with respect to both reproductive and research cloning as a matter of urgency before the birth of a human being from a cloned embryo. This would have a deterrent effect on the publicised efforts of several groups to produce a cloned human being. On the other hand the delay in arriving at a consensus at the international level may encourage forum shopping by determined proponents of reproductive cloning. Since cloning and the human embryo is a new area for international law, this is a test case for the GA to adapt to the changing face of international law and participate in its progressive development.

Civil society concerned about the ethics of human cloning deserves more than an attempt to paper over the chasm between states on this issue. The credibility of the UN institution itself and its capacity to respond to society's need for competent leadership demands a solid response, and strong commitment to ensuring that the separation of states and religion at the national level in most countries is reflected at the global level. To date the system has failed to overcome differences in ethical perspectives with regard to research cloning, which have prevented the adoption of any international convention banning reproductive cloning over which there is a consensus. The issues to be considered by international negotiators in the search for a non-legally binding instrument have not, however, changed. It may be hoped that any further negotiations on future legal instruments will learn lessons on how to achieve global consensus which requires greater willingness to seek compromise. For such compromise to arise there will be a need for increased respect for ethical diversity. Respect for ethical diversity is a critical part of reflections on human dignity itself, perhaps the critical lesson of the years of dialogue already spent on governance of human cloning.





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United Nations University  
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6F International Organizations Center  
Pacifico-Yokohama  
1-1-1 Minato Mirai, Nishi-ku  
Yokohama 220-8502  
Japan

Tel: +81 45 221 2300

Fax: +81 45 221 2302

Email: [unuias@ias.unu.edu](mailto:unuias@ias.unu.edu)

Website: [www.ias.unu.edu](http://www.ias.unu.edu)