

THE LEGAL AND ETHICAL ASPECTS OF  
HUMAN CLONING : A COMPARATIVE STUDY

BY

MAJDAH ZAWAH

INTERNATIONAL ISLAMIC UNIVERSITY  
MALAYSIA

APRIL 2000

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CHENNAI

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**BY**

**MAJDAH ZAWAWI**

**A DISSERTATION SUBMITTED IN PARTIAL  
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**KULLIYAH OF LAWS  
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TO BE GRANTED FOR THE DEGREE OF  
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## ABSTRACT

Cloning, if allowed to be applied to human subjects has indeed promised a multitude of possibilities. Many, especially scientists, are anxious to see it become a reality. Not only cloning promises medical and therapeutical benefits, but the most significant benefit is the promise of providing a cure for the age old problem of infertility.

With so many tempting benefits, such wonderous technology must indeed be welcomed by all. Alas, with equal if not more force, objections have also been made against the use of such a technology on human beings. Reasons for such objections range from the dangers of creating human mutants to scraping away the little faith left that is present amongst mankind to the existence of Providential power in the very creation of man and depositing it into the hands of scientists.

It is thus the aim of this research to provide an introduction to the mechanical workings of cloning technology. Only with sufficient knowledge can the moral and legal status of cloning be appreciated. An analysis of the different types of cloning procedures and how the differences in moral and ethical standards effect legislation regulating cloning research and procedures. The most important aspect of this research shall of course be to identify the Islamic legal position on human cloning. And as the title suggests, the position shall be compared and contrasted to other moral and ethical standings. Aside from that, the dissertation shall also look into the possibility of reaching a harmonisation of legislation through acceptance of Islamic law.

## الملخص

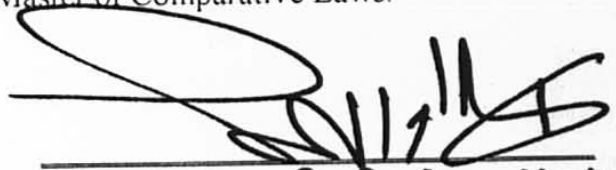
الاستنساخ في حالة إباحته قد يقدم الإمكانيات العديدة الواعدة حقا لما يرتبط بالإنسان. ويحرص كثير من الناس، وخاصة العلماء منهم، على أن ترينه لكي يصبح حقيقة ملموسة في عالم الواقع لأنه لا يعد فوائدا طبية وعلاجية فقط، وإنما يعد الفائدة الأكثر والأهم في حل المشكلة القديمة المتعلقة بمسألة عدم الخصوبة.

وهذا التكنولوجي العجيب وما يعد من الفوائد المغرية، ينبغي أن يرحب بحق من الكل. ولكن هناك جماعة من الناس يعترض اعتراضا قويا ضد تطبيق مثل هذا التكنولوجي على البشر. وتتمحور الأسباب الموحية لمثل هذه الاعتراضات على أساس إمكانية هذا التكنولوجيا لخلق الإنسان المشوه أو الخيبيث ومن ثم قد تؤدي إلى تضييف اعتقاد الإنسان عن قدرة الله في الخلق وخاصة الضعاف منهم إذ تحولوا إلى تعظيم وتجليل المفرط للعلماء.

وهذا البحث إذا سيبين ما يتعلق بتقنية الأعمال في هذا التكنولوجيا لأن المعرفة الكافية في هذه المسألة سيتم التقدير من النواحي الأخلاقية والقانونية. ومن هنا نرى أن التحليل في جوانب مختلفة في عملية الاستنساخ ومدى الخلافات في المقاييس الأخلاقية قد تؤثر في تقنين القانون الذي ينظم ويطور هذه عملية. ومن أهمية هذا البحث إنه ليبين الموقف القانون الإسلامي في عملية الاستنساخ البشري. ويهتم الموضوع كذلك بمقارنة موقف الإسلام مع التغيرات الأخلاقية عند غير المسلمين. علاوة على ذلك، وهذا البحث سينظر في إمكانية الوصول إلى التوافق التشريعي للموضوع من خلال استغلال القانون الإسلامي.


## APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Comparative Laws.



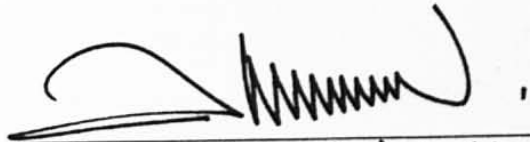
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Supervisor : Daud Bakar

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Comparative Laws.



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Kulliyah of Laws



## DECLARATION

I hereby declare that this dissertation is the result of my investigations, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references and a bibliography is appended.

Name: MAJDAH ZAWAWI

Signature:.....



Date: 18. 4. 2000.....

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*To A.I.*

*Whose strength, wisdom and determination is a constant source of inspiration*

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The Federal Constitution of Malaysia

The Helsinki Declaration of 1974 (as amended in 1975)

The Human Fertilisation and Embryology Act (UK) 1990

The Human Tissues Act (Malaysia) 1974

The Human Tissues Act (South Africa) 1991

UNESCO Universal Declaration on the Human Genome and Human Rights 1998

## TRANSLITERATION

The following table shows the system which has been followed in transliterating the letters of the Arabic alphabet:

<p>ا Alif = a = ā</p> <p>ب Ba' = b</p> <p>ت Ta' = t</p> <p>ث Tha' = th</p> <p>ج Jim = j</p> <p>ح Ha' = ḥ</p> <p>خ Kha' = kh</p> <p>د Dal = d</p> <p>ذ Dhal = dh</p> <p>ر Ra' = r</p> <p>ز Zay = z</p> <p>س Sin = s</p> <p>ش Shin = sh</p> <p>ص Sad = ṣ</p> <p>ض Dad = ḍ</p>	<p>ط Ta' = t</p> <p>ظ Za' = ḏ</p> <p>ع `Ayn = ` (inverted apostrophe)</p> <p>غ Ghayn = gh</p> <p>ف Fa' = f</p> <p>ق Qaf = q</p> <p>ك Kaf = k</p> <p>ل Lam = l</p> <p>م Mim = m</p> <p>ن Nun = n</p> <p>ه Ha' = h</p> <p>و Waw = w (consonantal) = ū (long vowel)</p> <p>ي Ya' = y (consonantal) = ī (long vowel)</p> <p>ء Hamzah = ' (apostrophe)</p>
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*Short vowels:*

◌َ (fathah)	= ā
◌ِ (dammah)	= ū
◌ِ (kasrah)	= ī

# INTRODUCTION

The area of biomedicine has made leaps and bounds by the end of the twentieth century. The dawn of the new millenium brings with it even more intriguing possibilities and the cloning of human beings may very well be at the top of the agenda for scientists. Since 1997, when the creation of Dolly was first announced, scientists have continued to develop nuclear transfer technology, the method that made Dolly possible, and they have successfully cloned not only sheep, cows or common livestock, but the technology has even been used to clone mice which were once thought to be impossible and the most recent success is the cloning of the rhesus monkey, the closest primate to mankind. Infinitely, scientist are getting closer to their target of cloning human beings faster than anyone anticipated.

Hailed to bring with it tremendous benefits, cloning has also been looked upon as a dubious scientific tool that could also bring with it evils that is even greater than that created by the atomic bomb. This is because cloning is said to not only to create havoc to the family ties but more seriously to pose a direct threat to the very definition and creation of human kind itself.

It is due to this tremendous controversy that this research was initiated i.e. to examine the position of human cloning from the religious, moral and legal perspectives. The dissertation is divided into five main chapters. Each chapter shall discuss specific sub-topics, beginning with Chapter One which provides a review of available materials on the subject. In brief, it mentions the areas which have been dealt with by various

authors and introduces the reader to the inner workings of cloning technology. The literature review also provides a useful compass to the area of research that would be discussed within the dissertation proper. Aside from that, Chapter One also acts as a guide to the whole dissertation whereby this is where the statement of the problem and the research methodology shall be mentioned and defined.

Chapter Two is necessarily the nucleus of the research, as it seeks to define cloning and explain the technical methods involved in cloning technology. An account of the history of cloning is also provided to enable readers to appreciate the fact that cloning in itself is not such a novel procedure. This chapter also alludes to the readers the veracity of the scientific research that has set out to prove that the impossible is certainly attainable with science. Cloning procedures not only provide infertile couples with the chance to have children through 'the old fashioned' way, but in fact offers a whole new dimension to assisted reproductive technology. For this, the two types of cloning procedures shall be discussed, namely, embryo cloning and cloning from adult somatic cells through the use of nuclear transfer technology.

Once the reader has been acquainted with the relevant scientific jargon, Chapter Three offers a look at the moral aspects of embryo cloning. From there, the legal position of embryo cloning and research shall also be examined to see how different moral approaches are taken by different countries in regulating human cloning legislations.

Included therein is an analysis of the Malaysian moral and legal position. Special reference shall be made to the United Kingdom's Human Fertilisation and

Embryology Act, 1990 due to Malaysia being a member of the Commonwealth country. However, due to the fact that the Malaysian Constitution has announced Islam as official religion of the federation, an inclusion of possible Islamic rulings on the issue is necessary to facilitate the applicability of any future federal legislation on the matter.

Chapter Four will focus mainly on the second type of cloning which is more specifically referred to as adult DNA cloning or cloning by somatic cell nuclear transfer technology. The chapter is preceded with an overview of the possible benefits that this type of cloning has in store for human kind and this is followed by the moral and ethical implications on the individual, family and society as a whole. Thereafter, a look into the legal position of the United States and United Kingdom on the matter shall be made as these two countries are seen to be the pioneers in this technology.

Finally, in the Fifth Chapter the Islamic position on somatic cell nuclear transfer technology shall be examined. A brief account of the differences in the moral and ethical standards as applied under Islamic law and under Western concepts shall also be made. This chapter will thus be concluded with relevant suggestions as well as other viable areas that remain open for future research . In the end, it is hoped that this dissertation shall generate further discussion on the topic, especially in Malaysia and will leave readers with much to ponder and act upon. *Insyā-Allāh.*

# CHAPTER ONE

## SCOPE OF RESEARCH

### LITERATURE REVIEW

Cloning, though thought to be the latest development in genetic technology of the late 1990's, has in fact been available since 1938 and the first cloning of frogs was reported to have been successful through a method known as 'nuclear transfer' in 1952<sup>1</sup>. Since then this technology has been in use widely in amphibians<sup>2</sup>. This technology was however not known to be possible in mammals until February 1997 when Dolly made her first shocking debut. She was the first mammal to have been cloned from an adult cell.<sup>3</sup> Such an unimaginable feat was achieved by a team of Scottish researchers, led by Dr. Ian Wilmut of the Roslin Institute.

Previously, cloning of mice from very early embryo was reported in 1977. However, this work was not repeatable and had been thought impossible on mice, until 1998 where mice were cloned using the same techniques but with slight modifications.<sup>4</sup>

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<sup>1</sup> The full meaning of this term shall be discussed in detail in Chapter Two. However, briefly stated this procedure involves the use of an unfertilised egg with its DNA (*Deoxyribonucleic Acid* which carries hereditary information in all living creatures) removed. The egg is then fused with a *diploid* cell containing a full set of paired chromosomes. These 'reconstructed eggs' are then implanted in a surrogate mother in order to bring to term. This is the main procedure that has made cloning Dolly the sheep possible. Author Unknown. (1997, 11 December) Cloning & Genetic Modification : A Brief History of Nuclear Transfer. [8 paragraphs] *Roslin Institute Online*. [Online Serial]. Available : <http://www2.ri.bbsrc.ac.uk/library/research/cloning/archive/history.html>. [9.12.1999] . For further reading on the techniques of nuclear transfer see Griffin, Harry. (1998, 25 October) Cloning & Nuclear Transfer - On Proposals To Clone Humans. [16 paragraphs] *Roslin Institute Online*. [Online Serial] Available : <http://www2.ri.bbsrc.ac.uk/library/research/cloning/nt-technology.html>. [9.12.1999]

<sup>2</sup> Cloning and Genetic Modification – A Brief History of Nuclear Transfer, *ibid*.

<sup>3</sup> Krauthammer, Charles. 1997. "Special Report on Cloning," *Time*, 10 March : 30.

<sup>4</sup> Lemonick, Michael D. 1998. "Dolly, You're History." *Time*. 3 August : 42.

The uniqueness of Dolly lies in the fact that she was not created from an embryo but from the cells taken from the udder of a six year old ewe through nuclear transfer technology, making her a “ living proof that an adult cell can revert to embryonic stage and produce a full new being”.<sup>5</sup> This had never been possible before and according to “traditional” biology, was not supposed to happen. Such advanced technologies provide scientists with the power to literally ‘create’ another being in a laboratory without any sexual acts and even without any need for a sperm or an (intact) egg.<sup>6</sup>

The main target of cloning had always been to continue producing disease resistant as well as a stable mixture of robustness and productivity in commercially important animal stock.<sup>7</sup> Other mammals that have managed to be cloned since then range from cows to monkeys. It is thus not surprising that the ultimate subject to be cloned would most definitely be humans. Important benefits in human cloning revolves around its possible contributions in the world of medicine.

Currently, no human has ever been cloned. However, scientists are working on using this technology to promote the production of human therapeutic proteins in transgenic animals such as sheep, goats and cattle where cloning would provide a more reliable

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<sup>5</sup> Krauthammer, Charles, “Special Report on Cloning.” p. 30.

<sup>6</sup> Kontrovich, E.V. (1998, 3 September) Asexual Revolution. [18 paragraphs] *National Review*. [Online Serial] 3 September 50 (4):30  
Available : <http://gw5.epnet.com/fulltext.asp?resu...eanTerm=cloning%20and%20lawandfuzzyTerm>. [3.12.1998]

<sup>7</sup> Beddington, Rosa. (NO DATE) Cloning - Mill Hill Essays 1997. [ 12 paragraphs] *National Institute for Medical Research* [ Online ] Available: <http://www.nimr.mrc.ac.uk/mhe97.cloning>. [ 13.11.1998].