

# Submission to the Legislation Review of Australia's Prohibition of Human Cloning Act 2002 and the Research Involving Human Embryos Act 2002

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## SUMMARY

The main points of this submission are summarised as follows:

- I address the Review's terms of reference with respect to community standards, particularly the ethics of human cloning but also research involving human embryos.
- I propose three principles that should be used in formulating policy on cloning and embryo research, that the same weight should be given to the interests of others as one gives to one's own interests, that genetic discrimination is unacceptable, and that scientifically, embryos are collections of cells, and not persons.
- I rebut all but the safety arguments against human cloning, and highlight policy inconsistencies that arise from the application of the PHC and RIHE Acts in their current form.
- Two scenarios show the flaws in the current Acts. If a woman pregnant with a cloned embryo were to immigrate to Australia, the PHC Act suggests the child would be unethical. According to the arguments against cloning, the child would have been created by a process contrary to human dignity, be confused about his or her familial relationships, be a means to an end and worried about his or her alter ego. These arguments underlying the PHC Act are invalid. The child should be loved and brought up as any other child. If treatments for diseases are developed overseas from human embryo research, are Australians prepared to forgo these treatments because the two Acts deem the research to be unethical?
- I contend that if my principles are applied, then there is no objective, non-discriminatory, non-safety reason against human reproductive and non-reproductive cloning, and that it should be permitted, provided it can be demonstrated as a safe technology. Research on all embryos should be permitted, with the usual conditions imposed on research projects. The PHC and RIHE Acts should be amended accordingly.

## 1. INTRODUCTION

1. This paper has been prepared as a submission to the Legislation Review of Australia's *Prohibition of Human Cloning Act 2002* (PHC Act) and the *Research Involving Human Embryos Act 2002* (RIHE Act). The Legislation Review Committee has been asked to review the scope and operation of the two Acts, taking into account some statutory requirements, including community standards, additional matters, and to consult and report appropriately, amongst other things.

2. This paper is a submission in my personal capacity. I previously made a submission in my personal capacity to the Inquiry into the Scientific, Ethical and Regulatory Aspects of Human Cloning by the House of Representatives Standing Committee on Legal and Constitutional Affairs (the report of which shall be referred to as the Andrews Report), which was asked to review the Report of the Australian Health Ethics Committee (AHEC) on 'Scientific, Ethical and Regulatory Considerations Relevant to Cloning of Human Beings'.

3. This paper is primarily concerned with addressing the Review's terms of reference with respect to community standards, particularly the ethics of human cloning (reproductive and non-reproductive), but also the ethics of the use of human embryos in research.

4. I appreciate that the Review's objective is not to reconsider the rationale for the legislation per se. I would assert that the community's understanding of human cloning issues and embryo research issues has evolved since 2002, and that many would now appreciate that the arguments

originally proposed against cloning and embryonic stem cell research are no longer appropriate in their application. As I note in Section 6, application of some community views (including those reflected in the current legislation) may result in significant policy inconsistencies, forgone opportunities to eliminate disease, and a situation that would label some children as unethical and deprive Australians of beneficial treatments for medical conditions and diseases.

5. I have written this submission to alert the Review to important reasons why there are problems with the PHC and RIHE Acts, and to inform the Review that although community standards are evolving, the community is still unaware of some issues, and that by being better informed the community is more likely to develop appropriate standards.

6. Sections 2 and 3 examine three principles that should be used in developing a framework for cloning policy (reproductive and non-reproductive) and research involving human embryos. Section 4 considers the arguments against reproductive cloning in the Andrews Report (which established the framework for the PHC and RIHE Acts), and rebuts them all except for the safety argument. Section 5 considers some arguments for human reproductive cloning. Section 6 considers some related arguments: the policy inconsistency that currently exists, the matters of prohibited practices under the PHC Act, and the consequences of bans on cloning and research involving human embryos.

7. I am available to expand on my analysis to the Review if required.

## **2. PRINCIPLES FOR A REGULATORY SCHEME**

8. I am addressing community standards for human cloning and research involving human embryos from an ethical perspective, that is what one ought to do given the possibility that cloning technology will develop. A visceral opposition to human cloning does not suffice for policy purposes, but it has nonetheless manifested itself in legislation (the PHC Act). Visceral opposition to women's suffrage in the 1850s, and visceral support of the White Australia policy before the 1950s, influenced government policy. Australians now reflect on these policies with a sense of incredulosity: how could Australians have implemented and supported such discriminatory policies?

9. It is important that a logical case be made if something that does not directly affect other people is to be prohibited. Australia rightly prohibits killing other people against their will because it does affect other people, however cloning a child does not directly affect other people any more than using in-vitro fertilisation (IVF) to produce a child.

10. I propose three principles that should be considered in assessing the merits of community arguments on human cloning and research involving human embryos.

- (a) Principle 1. That the same weight should be given to the interests of others as one gives to one's own interests.
- (b) Principle 2. Genetic discrimination is unacceptable. Discriminating against an individual on the basis of their genome is ethically wrong.
- (c) Principle 3. Scientifically, human embryos are collections of cells. They are not rational and self conscious beings, they have no brain, cannot feel pain, and they are not persons. Moreover, there is no scientific evidence for a 'soul' for any being or collection of cells (including a human embryo).

### **3. ANALYSIS OF PRINCIPLES**

11. Principle 1 is the golden rule of ethics. It is about not imposing one's views on others, respecting that others' views are just as valid as one's own. However, this important principle has not been applied to the extent it ought to have been in cloning debates to date. It is important to recognise that most of the arguments against cloning in the Andrews Report can be attributed to religious organisations and related groups and individuals. The PHC Act effectively forces these religious views on those who may wish clone a human. Principle 1 has been violated, as it would be if religious groups were prohibited from doing something they wished to do, such as worshiping their deity of choice. Reproductive cloning is a matter for prospective parents, and they would know their own reproductive needs better than religious groups or governments. This is consistent with Mills' libertarian view that 'over himself, over his own mind and body, the individual is sovereign'.

12. Principle 2 states that discrimination on the basis of one's genetic makeup (genome) is unethical and wrong. Invidious discrimination, the irrational social, racial, religious, sexual, ethnic and age-related discrimination of people is wrong, and similarly discrimination on the basis of one's mode of conception (sexual, IVF, cloning or other) or parentage is equally wrong. The community would now appreciate that the PHC Act's ban on cloning technologies is effectively discriminatory.

13. Principle 3 is a factual statement and includes a list definition of 'person'. That the human embryo is not a person is already recognised by society. The human embryo is not a legal entity; embryos are routinely destroyed when excess to IVF procedures or occasionally through use of an Intrauterine Device (IUD) or morning after pill. Many fetuses (much more developed cell collections than embryos) are aborted in Australia. It is illogical to permit the abortion of fetuses and yet prohibit the destruction of human embryos as if embryos had some property that fetuses do not, especially as a fetus has a greater chance of becoming a person. In vitro, embryos do not have any scientific attributes that should isolate them from research. Embryos can only grow into a child in the right biochemical environment, such as a uterus, and without such an environment they have no potential to ever become a person.

14. The permission of those who conceived the embryo would be required for research, and approved research plans would be required etc, but the potential benefits from medical research on embryonic stem cells are enormous, though they may take some time to be realised.

15. Principles 1 and 2 taken together imply that human cloning should be permitted, but only if, or when, the technology is accepted as safe, otherwise the life of a person (the clone once born) could be adversely affected. Principle 3 suggests that any research, that is justified and acceptable under usual research guidelines, should be permitted on human embryos.

### **4. A REBUTTAL OF SOME COMMON ARGUMENTS AGAINST HUMAN CLONING**

16. The arguments against human cloning, such as those presented in the Andrews Report, are weak, except for the safety issue. The arguments can either be applied with equal force to other ethical situations that are not prohibited, or are inconsistent with the three principles listed above. It is a simple matter to rebut these arguments, which seem to have influenced the clauses in the PHC Act.

17. The Andrews Report lists some arguments against human cloning.

(d) Cloning would be unsafe.

- (e) There is no medical need for cloning.
- (f) Cloning would constitute an infringement of human dignity, that is a cloned child could be a means to an end.
- (g) Cloning for reproductive purposes would have a negative effect on the family and personal relationships, that is it is inappropriate to bring a child into the world outside the usual social setting of a family involving a mother or father.
- (h) Cloning would undermine individuality and identity.
- (i) Cloning would potentially pose a threat to human diversity and cause a reduction in genetic diversity.

#### **4.1 Safety**

18. It is undisputed that cloning is currently an untested technology. Safety is the only valid argument against human cloning. If any technology is unsafe, it should not be permitted until the safety risks are managed. For reproductive cloning, this could mean being as safe as IVF technology for example. However, the question that ought to be asked is what the ethical status of human reproductive cloning should be if the technology were accepted to be as safe, for example, as IVF technology. If human cloning were accepted to be safe next year, why should it then not be permitted? What disasters will befall us?

#### **4.2 Medical need**

19. The Andrews Report refers to Professors Trounson and Williamson arguing that there is no medical reason for reproductive cloning. There are no medical reasons for eating chocolates, driving cars, using IVF technology or adopting children, but none of these are prohibited. There are biological and social reasons, other than medical reasons, for human cloning. Childless couples would be able to use cloning technology, and for many of them this may be preferable to IVF or surrogacy arrangements. IVF with sperm donors is not for everyone, but it is nonetheless permitted for those who want it. That there may not be any medical reasons for reproductive cloning is in essence irrelevant.

#### **4.3 Human dignity**

20. According to the Andrews Report, the ‘most common reason for regarding human cloning for reproductive purposes as unethical was that it would be “contrary to human dignity”’. As Professor Savulescu so neatly counters, ‘to say that creating a clone is an affront to human dignity is like saying that deliberately creating a black person, or a woman, affronts human dignity. The statement itself affronts the dignity of cloned people’.

21. Identical twins are natural clones. Identical twins have the same mitochondrial DNA, and thus will be more ‘identical’ than clones produced through cloning technology (with different mothers). Identical twins should be prohibited if this dignity argument has any merit, but there have been no moves in modern times to prohibit twins.

22. The human dignity argument seems to be premised on the concept of genetic determinism, that people are equated to their genes. However, genetic determinism is false, many factors combine to determine who a person is.

23. As a hypothetical situation, imagine a couple who had two embryos preserved after an IVF procedure. They had these embryos tested, and genomes checked. One embryo had an extremely

severe genetic defect and the other had the identical genome to an existing person (this is of course extremely improbable in reality). Would anybody actually propose that the genetically damaged embryo be grown to full term, rather than cloning the existing person? If cloning an existing person is acceptable here, this counterexample shows there is no valid dignity argument against cloning.

24. UNESCO produced a paper, 'Reproductive Human Cloning: Ethical Questions', that quoted the Pontifical Academy for Life, which stated in 1997 that 'At the level of human rights, the possibility of human cloning represents a violation of the two fundamental principles on which all human rights are based: the principle of equality among human beings and the principle of non-discrimination.' But clones would be people, and all people are equal (Principle 1 and 2). And clones should not be discriminated against (Principle 2). So there is no problem with human cloning, unless one has preconceived intentions to discriminate against it.

25. Some would argue that a cloned child is a means to an end. Everybody who intentionally conceives a child does so for a reason, whether it is to raise a child to love and nurture, propagate their genes, support themselves in their old age, bear a child on a significant date (for example 1 January 2000), conform to peer or parental pressure, or mistakenly help save a marriage. Two points should be made. It is biased to apply the 'means to an end' argument against human clones when it can be applied with equal force to other similar child-raising scenarios. When a child is born, the child is an end, not a means to an end. Every person is an autonomous being worthy of respect, and children do not exist for the benefit of parents.

#### **4.4 Negative effect on family and personal relationships**

26. That a human clone might distort some people's views of human relationships is a flawed argument, just as it was when arguments were first raised against IVF technology. A cloned child could actually enhance the family relationship for otherwise childless couples.

27. An adopted person, or one produced through IVF technology (if produced using donor sperm or eggs), or through a surrogacy agreement, is also not a biological descendent of its parents. But we do not prohibit children who are adopted or produced through IVF technology or consider them unethical.

28. It really is not difficult to understand how a clone fits into a family. There are many instances of unusual family relationships. As an example, consider if a widowed mother were to marry her late-husband's brother and have children with him. Stepsiblings would then also be cousins (the normal understanding of siblings has changed), but that this might be unusual and confound some people does not compel us to seek to prohibit such a scenario.

29. If this is all too confusing for some people, education rather than regulation is the appropriate response.

#### **4.5 Identity**

30. The identity argument contends that a clone would potentially have diminished individuality and identity problems as a consequence of having been cloned. It is well established that behavioural and phenotypic characteristics of clones are not identical to their alter ego, so this argument against human clones has no basis in science. It would be extremely unlikely that a clone of Beethoven could compose a tenth symphony. Identical twins, as natural clones, don't seem to have identity problems, and if they did, a ban on them is not the answer.

31. That a clone could be compared to its alter ego is not an argument against cloning. The argument suggests that unnecessary pressure might be placed, for example, on a clone of a

successful person to follow in the footsteps of that person. Expectations would be high, but misguided. Pressure might sometimes be placed on the sexual offspring of two people, who might be successful scientists, artists, sportspeople, actors, politicians, etc. The identity argument is not an argument against cloning; rather it is an argument against placing unnecessary and unwarranted pressure on an individual, regardless of how they were conceived.

#### **4.6 Cloning is a threat to human diversity**

32. Arguments against reproductive cloning on the basis that it reduces genetic diversity are flawed. Identical twins are more identical than clones, but we have not made efforts to reduce the incidence of identical twins as a result of this argument. Without delving into the mathematics of population diversity, if a couple were to clone a child, who would not otherwise have existed, and that child when mature reproduces sexually, there would be an increase in genetic diversity—another person with a unique genome would have been created. In general, notions that the cloning of individuals, possibly at the same rate as for IVF, would decrease genetic diversity in a global population of six billion people, is an exaggerated and spurious claim.

### **5. REASONS FOR HUMAN CLONING**

33. Arguments supporting human cloning should not ordinarily be required. If people intend to conceive a child through any means, and they intend to love the child and provide it with a good upbringing, society should not need to approve how they conceive the child. If cloning were safe, and permitted, it would not be cheap. Couples would not make a frivolous decision to clone a child, just as they do not make such decisions about undergoing IVF treatment. Indeed there are many situations where children are conceived sexually, accidentally, and without due consideration of the child's future development or well-being. Society should instead focus its efforts on these situations.

34. There are many arguments for human cloning, reproductive and non-reproductive. There is a strong case for reproductive cloning when it is accepted as safe. Gregory Pence's book, 'Who's afraid of human cloning?', makes a case for cloning technologies, when accepted as safe. Reproductive cloning provides options for people with mitochondrial disease and for couples where the male has no viable sperm to create a child genetically related to himself. Cloning could also be used by IVF couples to create more embryos for IVF procedures, and to create embryos, or help create a child, to be a donor of stem cells for a sick sibling or relative, and create children for homosexual couples that are genetically related to one or both of them (the latter situation would apply to female homosexuals). Cloning allows one to propagate one's genes, and Richard Dawkins would argue that we create a greater bond to those genetically related to us—in this way cloning may be preferred by some couples over adoption. Cloning should become just another reproductive technology when it is accepted as safe.

35. With regard to human tissue cloning, Gregory Stock, a US biophysicist, states 'what real-world dangers do we face that might warrant so premature a repudiation of the therapeutic possibilities inherent in these scientific breakthroughs?'. With regard to human reproductive cloning, what is so abhorrent about it that would be an imperative duty for a government to regulate against it?

36. Gregory Pence refers to the work of Harvard philosopher John Rawls. Rawls posits that the first principle of civilised life is the protection of our basic civil liberties. Rawls would claim that any attempt to impose a procreative program on us violates such liberties. When a government says we cannot reproduce in certain ways, these liberties are being violated.

## **6. RELATED MATTERS**

37. The discussion in Sections 4 and 5 has focussed on the arguments against and for human cloning. This section will consider the policy inconsistency that currently exists with respect to the destruction of human embryos, the limitations that exist as a result of some practices being prohibited, and scenarios that reveal the policy inconsistency and hypocrisy that would result if a clone were born or if research involving human embryos resulted in beneficial medical outcomes.

### **6.1 Policy inconsistency**

38. Many couples wish to have children, and if they are fortunate and the woman becomes pregnant, they would cherish the fetus that grows inside the woman. However, not all pregnancies are wanted. Abortions are permitted and fetuses are destroyed throughout Australia. As noted earlier, it is inconsistent to permit abortions (involving the killing of fetuses up to say 20 weeks, but sometimes older) and yet prohibit the destruction of embryos less than 14 days old.

39. It would be interesting to conjecture on the outcome of an abortion inquiry in Australia. The same arguments would continue to be made against abortion by the same groups who regularly speak out against human embryo research. However, while the anti-abortion arguments are dismissed, the arguments against human embryo research and cloning have manifested themselves as clauses in the PHC and RIHE Acts, revealing a policy inconsistency.

40. IUDs are contraceptive devices that seem to work mainly through preventing sperm interacting with the egg, but may also work like the morning after pill, which thickens the uterine lining to prevent embryo implantation. Excess IVF embryos are routinely destroyed. Given that so many embryos and fetuses are routinely destroyed, it is an anomaly why any restriction should be placed on the destruction of embryos for research, so long as conditions, such as obtaining parental consent, are met.

41. When IVF was first introduced in Australia, many of the arguments against that technology then were the same as those proffered against reproductive cloning now. While the community takes some time to be educated on the technologies, we should consider how we will be viewed in the future, say in 50 years. Will we be pilloried for genetic discrimination, just as we criticise those who advocated the White Australia policy or opposed women's suffrage?

### **6.2 Prohibited practices**

42. The PHC Act refers to a number of prohibited practices. Principle 3 applies here. Embryos are collections of cells, they are not persons, and should be able to be used for research. One could even make a case for establishing chimeric or hybrid embryos, for example, to study how stem cells behave and react in different biochemical environments. When embryos are not being grown beyond the 14 day limit (although that timeframe is somewhat arbitrary) there should be no restriction on what researchers can do in vitro except that they must make a case to the responsible research ethics committee, and be subject to stringent monitoring. This might include for example that their research is noble in intent, unforeseen consequences are managed, safety is paramount, knowledge is being advanced, the expected outcomes are beneficial in nature, and so on.

43. There are many inherited diseases that could be eradicated through cloning technology and gene therapy. Huntington's disease results from a single gene mutation. By using somatic cell nuclear transfer to clone the parent who does not have the Huntington's gene (and perhaps if



technically possible, using the sex chromosome from the other parent if a child of a different sex is desired), or using gene therapy to correct the defective gene, this terrible disease could be eradicated. Non-reproductive cloning could be used create stem cell lines with defective genes to assist in drug development. Australia's regulatory regime should be sufficiently flexible to permit research that eliminates disease, as this is ethically the most desirable outcome.

44. There are no valid reasons why genetic material from more than two people should not be used either to develop cells for research, or even to produce a person, if that produces beneficial outcomes, such as new treatments, or children who do not suffer from disease or illness. It would be unethical to ban research on human embryos where there are identifiable benefits to persons. The alternative is that people suffer unnecessarily, which doesn't benefit anyone.

### 6.3 Future scenarios

45. The destruction of somatic cells (such as white blood cells) has never been a contentious ethical issue. However, in the near future, it may be possible to dedifferentiate somatic cells until they become totipotent. These totipotent cells could then produce a viable human being if placed in the right biochemical environment. Those who oppose the destruction of human embryos would be left with the dilemma that all somatic cells could eventually become people (if placed in the right biochemical environment).

46. The implications of the cloning ban in the PHC Act have not been well considered. What would occur if a couple were to immigrate to Australia and bear a child who was a clone of one of them, assuming the cloned embryo was implanted in the woman's uterus before she arrived in Australia? How should this child then be treated? Logically, and sensibly, he or she should be loved and given as good an upbringing as possible, regardless of how he or she was conceived.

47. The PHC Act outlaws the practice that produced this child, for all the reasons given in the Andrews Report. The PHC Act suggests this child would realise that he or she is unethical; he or she was produced by a process contrary to human dignity; should be confounded by who his or her parents are and cannot comprehend his or her familial relationships; realises that he or she is not a descendent of his or her parents in the normal sense and is a means to an end; should worry about his or her alter ego; and consequently would have less worth as a human being.

48. I do not want to tell any child that it is so disadvantaged and the focus of such obvious community and government contempt, because I do not believe it is true. Yet the arguments against cloning propose that that is the situation. If this child is the equal of any other, then that buries many of the arguments against human cloning.

49. The Review's Issues Paper noted that other countries, including the UK, can undertake non-reproductive (therapeutic) cloning. The USA has no specific regulation against cloning, which allows the private sector to invest in embryo and cloning research. Why should Australia fail to reap the health and economic benefits from human embryo research and non-reproductive cloning?

50. Australians will surely wish to benefit from any technological advances resulting from cloning technology. If research involving human embryos undertaken overseas were to result in treatments for quadriplegia, diabetes, heart disease and cancer, Australians may wish to use these treatments. Would Australians really be prepared to forgo these treatments because some deem that the technology that created the treatments was unethical? If Australians do use treatments developed overseas, it would be hypocritical to claim that the research was unethical. This scenario should be considered now.

51. The RIHE and PHC Acts must be amended to allow beneficial research to proceed that could have real benefits for Australians.

## 7. CONCLUSIONS

52. Human reproductive cloning should be allowed once it is accepted to be safe, but that does not require a legislative ban. The usual conditions on a new technology would need to be applied, for example permission of the biological parents to be obtained for cloning and research purposes, ethics committees to be consulted for research purposes and so on.

53. I contend that the implications of the prohibitions on reproductive and non-reproductive human cloning have not been fully appreciated in the PHC Act. The Act is inconsistent with Principles 1, 2 and 3.

54. Stem cell research has potentially many benefits for Australians, and the destruction and research on human embryos (including cloned, chimeric and other embryos) should be permitted, especially when the destruction of embryos and fetuses routinely occurs during IVF procedures, IUD use and abortions.

55. I would conclude that there is no objective, non-discriminatory, non-safety reason to argue against human reproductive and non-reproductive cloning (based on Principles 1 and 2). In particular, human reproductive cloning should be permitted once shown to be safe. Non-reproductive cloning technology and research involving human embryos should be permitted in all its forms, subject to the conditions noted earlier. In vitro research on human embryos poses no ethical problems (based on Principle 3).

56. I propose that the PHC and RIHE Acts be amended to permit human cloning for non-reproductive and reproductive purposes and to permit in vitro research on human embryos.

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