

Stem Cells, Politics and the Progress Paradigm

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The analysis of Parliamentary debates provides the opportunity to assess the political context of Canadian legislation, particularly in controversial areas such as stem cell research. Parliamentary debates surrounding the recent *Assisted Human Reproduction Act*,¹ which lasted nearly a decade, were dominated by religious conservatives. At the forefront of the debate were issues such as the moral status of the embryo and the regulation of somatic cell nuclear transfer (SCNT). The resulting restrictive statutory provisions that ban SCNT ultimately arose from a convergence of rhetoric on dignity and the moral status of the embryo, and the resultant promotion of adult stem cell research.

Approach

We qualitatively analyzed the Canadian Hansard debates concerning stem cell policy from 1994 to 2004 by assigning codes to full text databases.² While the majority of the debates related to ethical issues, we focused on descriptions of scientific research by politicians, references to scientific progress, both proven and speculative, economic arguments, references to media coverage and direct quotes from scientific and other experts because the media and experts are major sources of information for politicians.

The Parliamentary Debates

Descriptions of Scientific Research

We found Canadian politicians lack an understanding of scientific research, resulting in inflammatory statements on both costs and benefits of embryonic human stem cell

research. Politicians generally misunderstood the process of obtaining embryonic stem cells and SCNT, a methodology used in both therapeutic and reproductive cloning. Both therapeutic and reproductive (human) cloning commence with the use of SCNT. However, reproductive cloning and therapeutic cloning for research purposes are used for different reasons with significantly different endpoints. Politicians generally conflate the two procedures. For instance, building upon the public's distaste for reproductive cloning, one member described the research of the Raelians, a Canadian research group who claim to have successfully cloned a human being,³ in conjunction with therapeutic cloning. The member stated that "if we took one of [the Speaker's] cells, extracted the nucleus and put it into an ovum, one could stimulate it electrically and allow it to grow. The so-called therapeutic clone would be to take the immature model of Mr. Speaker and extract an organ, if he needed one, killing the clone in the process. That is so-called somatic nuclear cell transfer or therapeutic cloning."⁴ Another member stated, "I would suggest that most members of the House do not understand the difference between therapeutic and reproductive cloning. Certainly most people in Canada do not totally understand the difference between the two. In reality, there is not any difference. It is the same process."⁵ Such statements demonstrate the lack of understanding of scientific research by politicians, and underscore the need for further education of all policy makers on issues relating to stem cell research prior to the creation of ideologically driven legislation. Alternatively, and of greater concern, these statements may also indicate a willingness of politicians to mislead the House and the public on controversial scientific research on the basis of ideology.



Statements on Stem Cell Research

The debates on both adult and embryonic stem cell research were dominated by the opposition parties, primarily the Canadian Alliance, which later merged with the Progressive Conservatives to become the Conservative Party, without any significant response from the governing party. It could be implied that the majority's silence demonstrated its unwillingness to assume the political risk of associating itself with the support of controversial research. Whatever the reason, however, the result was a debate largely centered on the moral status of the embryo and based upon the ideologies of the religious right and the "god squad" of the Liberal party. Members often described the embryo as a legal rights-carrying entity that should not be used for research purposes. One member suggested "[the embryo] is ..., biologically speaking, human and it is a being. It has its own independent momentum. It has its own independent genetic code. It has its own identity. It is a separate, living, organic human being."⁶ Another member stated "the first thing to recognize in the legislation and in all of our conversations is that embryos are human beings. That is an uncontested biological fact. They are a member of the human species."⁷ As a result of these beliefs and the paucity of contrasting viewpoints, questions about how to avoid the ethical issues of embryonic research were answered by statements supporting the cessation of embryonic stem cell research and the continuation of adult stem cell research. For instance, John Cummins of the Canadian Alliance stated that "the scientific, ethical, moral and, some would say, political advantages of using adult stem cells instead of embryonic ones are significant. ... Therapeutic use of adult stem cells raises very few ethical and moral issues."⁸ Another member stated, "there is no ethical dilemma in [adult stem cell] research any more than there is an ethical dilemma in cutting our hair or trimming our nails."⁹ These statements emphasize the requirement for informed political debate in order to prevent the enactment of unnecessarily stringent legislative policy.

Support for the continuation of adult stem cell research was bolstered by numerous statements overemphasizing the absolute benefits of such research, whereas known risks were rarely mentioned or significantly minimized. Mr. Leon Benoit stated that:

[s]o far there have not been exciting results from embryonic stem cell research. In fact, we have seen some huge problems with embryonic stem cell research. It has been found that embryonic stem cells are too unpredictable and during

experimentation brain tumours have been produced in mice. There is just too much instability in this. I do not think we would want to try such uncertain cures on humans until such a time that they are well proven. In the meantime, with all the exciting results coming from adult stem cell research we should go full bore with that.¹⁰

Thus, when compared to adult stem cell research, the risks of embryonic stem cell research were often overstated and even false. Members often misquoted the scientific research or exaggerated the risks of embryonic stem cell research. For instance, Mr. David Anderson stated:

we often hear of people pushing for the use of embryonic stem cells. They want them to be used and developed, but there are some real problems with using embryonic stem cells. One problem is that embryonic stem cells often appear to be subject to completely random and unacceptable growth. In certain situations they have been implanted in people and all of a sudden there has been the growth of a tumour that doctors cannot explain. The embryonic stem cells have mushroomed and ballooned and have caused the condition to get worse rather than better. ... Another real problem with embryonic stem cells is that they have been found to often grow into the wrong type of cells. Scientists have not been able to direct them in the way they would like to and in some cases they have found things like hair and teeth cells growing in the brain of patients who have received treatment of embryonic stem cells.¹¹

By conflating the issues surrounding embryonic stem cell research, and by consistently raising such research in conjunction with reproductive cloning, members were able to successfully argue that all SCNT should be banned in Canada. Politicians argued that because adult stem cells have proven benefits and eliminate moral and ethical issues raised by embryonic stem cell research, Canadian researchers should focus on pursuing therapies arising from adult stem cell research and abandon embryonic stem cell research altogether. This "all or none" attitude of politicians fails to consider the notion of parallel tracks of research into adult and embryonic stem cells that many Canadian scientists favour.



Conclusion

In conclusion, politicians fail to comprehend the scientific issues surrounding human stem cell research, resulting in ideologically driven policy. This lack of understanding, and the restrictive policy prohibiting SCNT, underscores the need for a flexible and competent agency that understands the issues to regulate research in new and controversial areas of scientific discovery. More importantly, these debates emphasize the need for a unified voice from the scientific community not only to inform policy makers and the public about treatment benefits and risks arising from all stem cell research, but also to prevent belief-based legislation that could ultimately harm Canada's role in the international research setting. When no strong advocacy exists, the door is left open to political actions such as statutory prohibitions with severe penalties on research.

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1. *The Assisted Human Reproduction Act*, 2004, c.2.
2. For a full description of the codes and methodological approach, see Timothy Caulfield & Tania Bubela "When Human Dignity is Not Enough: Embryonic Stem Cell Research and Human Cloning in Canada" in Edna F. Einsiedel, ed. *Emerging Technologies: Hindsight and foresight* (Vancouver, BC.: UBC Press) in press.
3. The Raelian's claims have been dismissed as a hoax by the wider scientific, medical and religious communities, due to its failure to produce DNA proof of the babies. Sandra Contenta "Doctor Claims Human Clone" (18 January 2004), A04.
4. *House of Commons Debates*, 069 (27 February 2003) at 1215 (Mr. James Lunney).
5. *House of Commons Debates*, 069 (27 February 2003) at 1135 (Mr. Rob Merrifield).
6. *House of Commons Debates*, 088 (10 April 2003) at 1230 (Mr. Jason Kenney).
7. House of Commons, Standing Committee on Health, "Evidence – Bill C-47" (26 November 2001) at 1040, 1045 (His Excellency Archbishop Terence Prendergast & Father Ron Mercier), online: Parliament <www.parl.gc.ca/InfoComDoc/37/1/HEAL/Meetings/Evidence/healev44-e.htm>.
8. *House of Commons Debates*, 088 (10 April 2003) at 1210 (Mr. John Cummins).
9. *House of Commons Debates*, 189 (22 May 2002) at 1650 (Mr. Jason Kenney)
10. *House of Commons Debates*, 053 (5 February 2003) at 1635 (Mr. Leon Benoit).
11. *House of Commons Debates*, 069 (27 February 2003) at 1340-1345 (Mr. David Anderson) (To date human embryonic stem cells have not been implanted into human beings. Thus statements suggesting abnormal tumour growth due to embryonic stem cells in "patients" are misleading).

