A Constitutional Defence of the Federal Ban on Human Cloning for Research Purposes

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A Constitutional Defence of the Federal Ban on Human Cloning for Research Purposes

Jocelyn Downie,* Jennifer Llewellyn** and Françoise Baylis***

Parliament's prohibition on cloning in the Assisted Human Reproduction Act has led to divergent views on the validity of the legislation. This article responds to an article in volume 29, no. 2 of this journal by Barbara Billingsley and Timothy Caulfield, who suggested that the federal ban would likely not survive a Charter challenge. Billingsley and Caulfield argued that scientific experiments are expressive acts, deserving of protection under section 2(b) of the Charter, which guarantees freedom of expression. In their view, both the breadth of the legislative objective and the proportionality of the measure would preclude the courts from finding the ban to be saved under section 1.

Downie, Llewellyn, and Baylis challenge Billingsley and Caulfield's thesis on a number of grounds. The first is the classification of scientific experiments as expressive acts. Using the criteria for a section 2(b) challenge outlined in IrwinToy, the authors argue first that the act of experimentation is not an act of expression, and the fact that it produces potentially expressive results is not sufficient to bring it within the protection of the Charter.

The authors then argue that even if the ban is a violation of section 2(b) rights, it is demonstrably justified within the meaning of section 1 of the Charter. The objective of the ban—to protect the health and safety of the public and to prevent unethical activity—is pressing and substantial. There is a rational connection between the legislative objective and the ban, such that a ban is necessary to achieve that objective, and the ban impairs freedom of expression as little as is reasonably possible. Finally, the authors argue that the deleterious effects of the ban are balanced by its salutary effects.

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Introduction

In a provocative article published recently in the Queen’s Law Journal,1 Barbara Billingsley and Timothy Caulfield question whether the new federal ban on human cloning in the Assisted Human Reproduction Act2 unjustifiably violates freedom of expression as protected under section 2(b) of the Canadian Charter of Rights and Freedoms.3 This question is important not only for the constitutional validity of the new legislation, but more broadly, for the legitimacy of legislated limits on scientific research. In this paper, we answer the question posed by Billingsley and Caulfield in the negative. We defend the constitutional validity of the ban and, by implication, the

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2. Assisted Human Reproduction Act, S.C. 2004, c. 2, s. 5(1) [AHR Act]. The AHR Act governs assisted human reproduction technologies and related research. Among other things, it prohibits such activities as human cloning, commercial surrogacy, and creating in vitro embryos for other than a very limited number of purposes.
legitimacy of limits placed by the State, under certain circumstances, on scientific research.

First, though, a word about terminology. Useful debate and discussion on controversial policy issues requires the use of accurate and non-controversial terms. To date, there has been much terminological confusion and controversy in the public discussion on human cloning. The terms “reproductive cloning” and “therapeutic cloning” are currently in vogue. In simple terms, the stated goal of so-called “reproductive cloning” is to produce a child, whereas the stated goal of so-called “therapeutic cloning” is to develop therapies. Despite their currency, use of these terms has been widely criticized, most carefully by the United States President’s Council on Bioethics. That Council has argued that the problem with the first term is that all cloning is reproductive. The problem with the second term is that it suggests the availability of therapies involving cloning technologies that simply do not exist. There are no therapies, only basic research. The Council therefore introduced the terms “cloning-to-produce-children” and “cloning-for-biomedical-research.”

Billingsley and Caulfield sidestep this issue by using the parallel terms “reproductive human cloning” and “non-reproductive human cloning” [NRHC]. We applaud their attempt to move away from the misleading language of “therapeutic cloning,” but we question their choice of terms. In our view, the term “non-reproductive human cloning” does not clearly demarcate the activity of interest, namely cloning for research purposes. In this paper, we use the terms introduced by the President’s Council—cloning-to-produce-children and cloning-for-biomedical-research.

Now we proceed to the Charter analysis. The first step is to consider whether the Charter applies. It applies where there is government action. Since what is at issue here is a piece of federal legislation, there is clearly government action. The second step is to consider whether the action imposes a limit on a protected right or freedom (in this case, freedom of expression under section 2(b)). If it does, (or if, for the sake of argument, 4. U.S., The President’s Council on Bioethics, Human Cloning and Human Dignity: An Ethical Inquiry (Washington, D.C.: 2002) at 37-55.

5. As per s. 32 of the Charter. See also Retail, Wholesale and Department Store Union (R.W.D.S.U.) v. Dolphin Delivery Ltd., [1986] 2 S.C.R. 573 [Dolphin Delivery].

6. Dolphin Delivery, ibid.

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we assume that it does), the third step is to determine whether, under section 1, the limit is "demonstrably justified in a free and democratic society," and therefore constitutionally permissible. The onus rests with the party claiming the Charter violation to show the limitation of a protected right, whereupon the onus shifts to the government to justify that limitation. We will discuss each step of the Charter analysis below, and we will conclude that the ban on human cloning does not limit section 2(b) rights, as cloning-for-biomedical-research is not expressive activity. We will also conclude that if the ban is held to be a breach of section 2(b), it should be saved by section 1.

I. Is "Cloning-for-Biomedical-Research" Protected Under Section 2(b) of the Charter?

A. An Introduction to the Section 2(b) Analysis

Section 2(b) of the Charter establishes: "Everyone has the following fundamental freedoms: ... (b) freedom of thought, belief, opinion, and expression, including freedom of the press and other media of communication." In determining the meaning and the scope of Charter-protected rights and freedoms, the Supreme Court of Canada has found that a large and liberal approach to interpretation must be taken—one that is mindful of the purposes of the section at issue and the Charter as a whole. Thus, understanding the rationales or purposes underlying the Charter and the guarantee of freedom of expression is key to assessing potential violations of section 2(b). In general, the Charter is a rights-protecting document, and the Supreme Court of Canada has found that its rights-protecting sections ought to be interpreted liberally and that exceptions or limitations must be read narrowly. In Irwin Toy, the Court identified three principles behind the protection of freedom of expression:

7. Charter, supra note 3, s. 1.
8. Ibid., s. 2(b).
10. See e.g. ibid. at 156; R. v. Big M Drug Mart Ltd., [1985] 1 S.C.R. 295 at 344; Re B.C. Motor Vehicle Act, [1985] 2 S.C.R. 486 at 499. Some recent cases have seen a departure
seeking and attaining the truth is an inherently good activity; (2) participation in social and political decision-making is to be fostered and encouraged; and (3) the diversity in forms of individual self-fulfillment and human flourishing ought to be cultivated in an essentially tolerant, indeed welcoming, environment not only for the sake of those who convey a meaning, but also for the sake of those to whom it is conveyed. 11

These principles protect and promote the following values which are at the core of the guarantee of freedom of expression—the attainment of truth, democratic participation and self-fulfilment. The protection warranted will thus be shaped by the extent to which the expression at issue reflects these values.

B. An Overview of the Application of Section 2(b) to Cloning-for-Biomedical-Research

With this as a backdrop, the Supreme Court of Canada in Irwin Toy laid out a general approach to determine whether a violation of section 2(b) has occurred. An activity is only protected by section 2(b) if it is expressive, if the expression is not violent and if neither the purpose nor effect of the government action is to restrict freedom of expression. 12 We will apply this approach to the specific issue of the ban on human cloning-for-biomedical-research.

The threshold question, and the key question, is whether human cloning for research purposes constitutes expression as protected under section 2(b). The Supreme Court of Canada has, as Billingsley and Caulfield suggest, given a broad scope to the concept of expression in section 2(b). This has led some to assume that virtually all activity will constitute expression and attract the protection of section 2(b), thus from this general rule with respect to certain rights under the Charter. This approach has, however, been consistently approached in the context of section 2(b).

11. Irwin Toy v. Quebec, [1989] 1 S.C.R. 927 at 968-71 [Irwin Toy]. Also see generally Dolphin Delivery, supra note 5 at 583-86; and R. v. Keegstra, [1990] 3 S.C.R. 697 at 806, McLachlin J. (as she then was) in dissent but not on this issue [Keegstra]. McLachlin J. explained that no one justification for s. 2(b) is more significant than the others, but rather that different purposes will be of more importance depending on the circumstances of the case. All three rationales are, however, capable of providing guidance as to the meaning and the scope of the right.

12. Irwin Toy, ibid.
leaving the work of sorting out the limits of that protection to section 1. However, while the scope of the protection is wide, it is a mistake to see it as unlimited. Not all activity is protected. It must be expressive activity—that is, it must convey meaning. The almost tautological nature of the Court’s definition does not mean that it is limitless. All activity has the potential to convey meaning, but much activity is not undertaken for that reason. Our daily lives are full of activities which are not done to convey meaning to others but are simply part of living. Driving to work, sleeping, preparing dinner, and eating could certainly be used to convey meaning, but that is not why we do these things each day. Thus, they would not come within the protection of section 2. We contend that Billingsley and Caulfield’s arguments stretch the protection offered by section 2(b) beyond what it can bear.

The question of whether cloning-for-biomedical-research constitutes expressive activity within the meaning of section 2(b) is most central to the debate over whether banning such research will violate freedom of expression. If that question is answered affirmatively, the other two steps in the section 2(b) analysis are likely to be satisfied in the case of cloning-for-biomedical-research. We agree with Billingsley and Caulfield’s view that such research is non-violent. Pro-life advocates may take exception to this assumption, and may argue that the destruction of the embryo entailed in cloning-for-biomedical-research is indeed violent. However, this argument is unlikely to be persuasive given the failure of arguments before Canadian courts for the status of the fetus as a person. As to the remaining step in the section 2(b) analysis—whether the purpose or effect of the government action is to restrict freedom of expression—it seems likely that if cloning-for-

13. See e.g. Peter W. Hogg, Constitutional Law of Canada, looseleaf (Toronto: Carswell, 1997). "Is there any activity that is not expression under the court’s definition? The answer is not much. . . ." (Ibid., s. 40.5(a)).

14. Billingsley & Caulfield, supra note 1 at 668.

15. See e.g. R. v. Morgentaler, [1988] 1 S.C.R. 30; Borowski v. A.G. (Can.) (1987), 39 D.L.R. (4th) 731 (Sask. C.A.). In Borowski, the Court of Appeal determined that the fetus is not included within the term “everyone” in section 7, or within the meaning of “individual” in section 15 of the Charter. The case was appealed to the Supreme Court of Canada but the status of the fetus was not dealt with since it was determined that the issue had become moot (Borowski v. Canada (A.G.), [1989] 1 S.C.R. 342).
biomedical-research is found to be expressive activity (either itself or by virtue of its role in the production of information), restricting freedom of expression would certainly be found to be the effect, if not the purpose of the ban.\footnote{16}

\section*{C. A Detailed Analysis of Whether Cloning-for-Biomedical-Research is Expressive Activity}

The locus of our disagreement with Billingsley and Caulfield is therefore their assertion that cloning-for-biomedical-research is expressive activity within the meaning of section 2.

Billingsley and Caulfield argue that a researcher engaged in cloning-for-biomedical-research is engaged in an expressive act. They write:

\ldots in the context of scientific research, NRHC arguably conveys a message both in terms of the information produced from an NRHC experiment and as a means of communication. Such experimentation is inherently communicative and therefore is encompassed by section 2(b)'s protection.\footnote{17}

Billingsley and Caulfield appear to be making two different sorts of claims with respect to how cloning-for-biomedical-research is expressive

\footnote{16. The Supreme Court of Canada in \textit{Irwin Toy} set out the test for making this determination. The Court held that the government's purpose must be assessed from the standpoint of the guarantee in question, otherwise the government would generally be able to assert that its purpose was something other than limiting expression. The Supreme Court of Canada explained in \textit{Irwin Toy}, supra note 11 at para. 49:
If the government's purpose is to restrict the content of expression by singling out particular meanings that are not to be conveyed, it necessarily limits the guarantee of free expression. If the government's purpose is to restrict a form of expression in order to control access by others to the meaning being conveyed or to control the ability of the one conveying the meaning to do so, it also limits the guarantee. On the other hand, where the government aims to control only the physical consequences of certain human activity, regardless of the meaning being conveyed, its purpose is not to control expression.
Even if it were found that the \textit{purpose} of the ban was not to limit expression, the ban might still violate section 2(b) if it had the \textit{effect} of restricting the right. For the ban to have such an effect, it would have to be shown that the activity of cloning-for-biomedical-research promoted one of these objectives underlying the guarantee of freedom of expression, as quoted above (see text accompanying note 11). Arguably, this could be shown.
17. Billingsley \& Caulfield, \textit{supra} note 1 at 665-66.}
activity. First, they claim that it is expressive because it produces information in the form of research findings that convey meaning. Second, they argue that the research is itself an expressive act which conveys meaning quite apart from the information it produces. We argue below that the first of these claims is mistaken. As to the second claim, it has two possible versions: either that the research methods are so intertwined with the results they produce that they must be protected, or that the research itself conveys symbolic meaning. We argue that on the first version, Billingsley and Caulfield’s claim is wrong, and that on the second version it is significantly narrower than they suggest.

(i) Information Production as a Form of Expression

The first claim Billingsley and Caulfield make is that cloning-for-biomedical-research is expressive by virtue of the fact that it produces information, thereby conveying meaning in the form of research results. They write:

Thus, the question is not whether NRHC itself is communicative, but whether a scientist who carries out NRHC intends the experiment to convey information. A researcher does not undertake NRHC or any other experimental physical process merely to achieve a particular physical result devoid of meaning. By definition a scientist who carries out NRHC in the context of research is doing so for the purpose of obtaining information about the physical world—information on such matters as whether a predicted outcome is possible and on the effect, use and limitations of that outcome. The experiment or procedure is performed as part of the process of scientific inquiry, which involves formulating a hypothesis and then conducting experiments to determine the validity of the hypothesis. Within the scientific community, physical experiments and procedures are the premier method of communication, and are undertaken for the express purpose of conveying a message to the researcher and to others. So, while some activities may be done with no intention to convey meaning, genuine scientific experimentation necessarily conveys meaning.18

On this argument, cloning-for-biomedical-research (and indeed any research methodology) should be protected under freedom of expression because it leads to the production of information, and such information has meaning.

18. Ibid. at 663-64 [emphasis added].
We have no quarrel with the claim that research results convey meaning. Indeed, a ban on the publication of scientific research results would clearly violate freedom of expression. Furthermore, stating hypotheses or research questions is also expressive activity, and a ban on such activity would violate freedom of expression. However, this is not what is being prohibited through the ban on cloning-for-biomedical-research. Billingsley and Caulfield’s argument conflates research findings with research methods, and seeks to protect the methods by virtue of their association with the findings. This ignores the fact that inquiry is not itself communication. Inquiry is aimed at seeking information, not conveying meaning. Thus, Billingsley and Caulfield erroneously conflate two discrete steps in the process.

Research is an activity undertaken for the purpose of obtaining information that can then be communicated to others. Billingsley and Caulfield claim that banning a method or means of conducting research amounts to a ban on collecting information or acquiring knowledge, and thus to a ban on conveying meaning. The logic underlying this claim is that one ought to be entitled to protection for the methods or means through which one seeks to produce information that conveys meaning. Were this approach accepted, the scope of section 2(b) protection would be expanded to include all activities related or connected to the conveying of meaning, whether or not such activities are themselves expressive. This would certainly stretch the scope of section 2(b) beyond the lines currently drawn by the Supreme Court of Canada, which require that the activity itself be expressive in order to be protected. Further, it is unclear what the limits of such an approach would be. What manner of activities might claim protection by virtue of their connection to activities that convey meaning? For example, would a ban on parking in the area surrounding one’s laboratory constitute an infringement on the right to freedom of expression if one could show that the parking facilitated the research? Would a ban on importing research materials be a breach of section 2(b) if importation was the only way to gain access to them?

The argument Billingsley and Caulfield advance is similar to one rejected by the Supreme Court of Canada with respect to the meaning of freedom.

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19. Note that the Supreme Court of Canada in *Irwin Toy* used parking as a typical example of non-expressive activity, *supra* note 11 at 969.
of association under section 2(d) of the Charter. In Dunmore v. Ontario, it was argued that for the protection of freedom to associate to be meaningful, it must include the purposes for which individuals seek to associate. This argument was advanced in the labour relations context, where it was argued that the freedom to associate must include the freedom to bargain collectively and strike, since without such protection the freedom to associate would be meaningless. The Supreme Court of Canada rejected this argument as extending the scope of the freedom of association beyond its bounds. In doing so, it affirmed Justice McIntyre's reasoning in an earlier case:

People, by merely combining together, cannot create an entity which has greater constitutional rights and freedoms than they, as individuals, possess. Freedom of association cannot therefore vest independent rights in the group. . . . If the right asserted is not found in the Charter for the individual, it cannot be implied for the group merely by the fact of association. It follows as well that the rights of the individual members of the group cannot be enlarged merely by the fact of association.

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20. Section 2(d) of the Charter, supra note 3, establishes: “Everyone has the following fundamental freedoms: . . . (d) freedom of association.”
22. Most recently in Dunmore, ibid. In rejecting this argument, the Supreme Court of Canada in Dunmore did recognize an obligation to ensure that basic rights to association are protected for vulnerable groups. This obligation might require for the most vulnerable workers the right to form a union to be able to make collective representations to their employer. The exception does not, however, alter the basic principle that acts do not attract protection by virtue of their relationship to the purposes of an association.
23. Reference Re Public Service Employee Relations Act (Alberta), [1987] 1 S.C.R. 313 at 398-99 [emphasis added]. The Supreme Court of Canada in Dunmore clarified that protection under section 2(d) does not require that one show an individual analogue for the right in question. Indeed, the Court recognized that there are some activities which are inherently collective in nature and cannot be understood in individualistic terms. The prohibition of such activities will be held to violate section 2(d) without the need to show a corresponding constitutional right for individuals. Associations may thus be qualitatively and not merely quantitatively distinct from an individual. This development in the law does not, however, take away from the point we are making: namely, that the aims of an association are not protected simply by virtue of there being an association. The Supreme Court of Canada is very clear that “[t]his is not to say that all such activities are protected by s. 2(d), nor that all collectivities are worthy of constitutional
On this reasoning, groups cannot, as a part of their right to associate, claim protection for the purposes for which they decided to join together. There is a clear analogy here to the argument Billingsley and Caulfield advance with respect to section 2(b). They seek protection for the methods of research by virtue of the relationship between those methods and the resulting information. For the same reasons one cannot use the right to associate to ground a right to carry out the purposes or goals of the association, one cannot use the fact that research findings convey meaning to ground a right to pursue whatever processes produce these results. Such processes would have to find their own independent source of protection. In other words, they would themselves have to be found to constitute expressive activity, completely apart from their role in the production of information.

Billingsley and Caulfield make a further claim in response to potential concerns with their position that research methods ought to be protected because of their instrumental relationship to the production of information. They suggest that research methods are not only connected to the production of knowledge, but that the connection is so intimate that it is impossible to separate methods from findings (i.e. results). The Supreme Court of Canada has found that such a relationship can exist between means of expression and the conveyance of meaning in the context of language:

Language is so intimately related to the form and content of expression that there cannot be true freedom of expression by means of language if one is prohibited from using the language of one's choice. Language is not merely a means or medium of expression; it colours the content and meaning of expression.

Thus, it is possible that the means of expression might be so tied to the content as to warrant protection under section 2(b). However, this does little to help Billingsley and Caulfield's cause. Language has an entirely different connection to conveying meaning than research methods do. Language gives form to expression. As the medium of expression, it does more than simply generate substance—it is key to the expression of that protection. . . . In sum, a purposive approach to s. 2(d) demands that we 'distinguish between the associational aspects of the activity and the activity itself. . . . " Ibid. at 1042.

24. Billingsley & Caulfield, supra note 1 at 665.
substance to others. In contrast, a research methodology generates information that one can then convey apart from that methodology. Research methods do not stand in relation to research results as language does to ideas and so cannot seek protection by virtue of that connection.

Thus, the first argument advanced by Billingsley and Caulfield as to why the ban on cloning-for-biomedical-research constitutes a violation of freedom of expression is unsuccessful insofar as it relies on the connection between research methods and research findings.

(ii) Research as a Form of Expression in Itself

The second argument advanced by Billingsley and Caulfield seeks to protect research methods as a form of expression in and of themselves, quite apart from the role they play in producing information. Billingsley and Caulfield offer two related versions of this argument. The first claims that the research process itself conveys meaning to the researcher. The second rests on the potential for research as an activity to convey a symbolic message. We will deal with each of these claims in turn.

(a) Expression to the Researcher

The first claim in support of cloning-for-biomedical-research as expressive activity in and of itself points to the meaning that the activity of research conveys to the researcher. Billingsley and Caulfield explain:

... that physical processes can convey information, and indeed may be undertaken for that express purpose. Thus, the physical technique of NRHC arguably has a communicative element separate from the recording or dissemination of the results of the experiment. The experiment itself, by its very nature, communicates a message to the person conducting it.26

We have no quarrel with the claim that an experiment communicates a message to the person conducting the experiment. However, we hasten to point out that this claim fails to support the contention that the researcher is engaged in an expressive act, as the research and the researcher are not

26. Billingsley & Caulfield, supra note 1 at 663.
one and the same. If the experiment is communicating facts about the world to the researcher, it follows that what is at stake is not the researcher's expression but rather that of the research, which of course has no Charter rights. 27

If this is not the claim that Billingsley and Caulfield are making here, then they are making an argument little different than one considered earlier—namely, that the research process produces information. Thus, in conducting research, the researcher is obtaining content for future communication, but he or she is not yet communicating. Insofar as this is the heart of Billingsley and Caulfield's claim, it fails for the reasons discussed earlier.

(b) Research as Self-Expression by the Researcher

Implicit in Billingsley and Caulfield's discussion of the researcher's relationship with the research is another argument for research methods as expressive activities—that is, that the research process might serve as a form of self-expression for the researcher. The physical process of research and the particular methods selected might be a means of individual self-expression, in the way that an artist's painting is a form of self-expression. If this is their claim, it is the same as the second version of their argument that research is itself expressive—that is, that in selecting research topics and conducting research in certain ways, the researcher may be conveying a message about his or her beliefs, convictions or political views. Billingsley and Caulfield maintain, then, that an experiment itself can be "a means of communication." Here, they turn to analogy to explain their point:

If a research scientist intends to convey meaning through a particular physical process or experiment, it follows that the scientist's selection of a given experiment also conveys a meaning, much as the language chosen by a speaker, the type of dance selected by a dancer, or the art form selected by an artist. As Cantrell suggests, "[r]esearch becomes a type of

27. This is not to suggest that freedom of expression offers no protection for the listener/recipient but rather that this interest is not the source of the right; it is instead premised on the speaker/expressor being able to attract section 2(b) protection. The Supreme Court of Canada in Ford recognizes the importance of protecting commercial expression for the sake of the listener and the speaker. Supra note 25 at 767.
'symbolic speech' much like students wearing black armbands and antiwar activists burning their draft cards." A scientist engaging in NRHC, for example, may be sending a message that in his or her view, it is the key to curing particular medical ailments such as diabetes or paralysis. The scientist chooses to spend his or her time on NRHC, because of a belief that it is the most promising way to cure particular ailments.\(^{28}\)

We have already addressed the Supreme Court of Canada's consideration of language and the ways in which it is distinct from research methods. If the claim is no more than that research methods are intimately linked with the content of expression, it will fail for the reasons discussed earlier. However, Billingsley and Caulfield seem to mix their arguments here. Language is not protected because it is symbolic speech. The argument for symbolic speech recognizes that actions can convey meaning. The concept of symbolic speech was developed in the context of American First Amendment jurisprudence, where it was necessary because the wording of the protection is the much narrower "free speech," not the more encompassing "freedom of expression" in the Canadian Charter. The Supreme Court of Canada has, however, addressed the underlying idea that Billingsley and Caulfield rely on, namely, that physical acts which might generally be seen as pure action (i.e. devoid of meaning) could in certain circumstances be used to convey meaning, and thus be deserving of protection under section 2(b). The Supreme Court of Canada explained in Irwin Toy:

Of course, while most human activity combines expressive and physical elements, some human activity is purely physical and does not convey or attempt to convey meaning. It might be difficult to characterize certain day-to-day tasks, like parking a car, as having expressive content. To bring such activity within the protected sphere, the plaintiff would have to show that it was performed to convey a meaning. For example, an unmarried person might, as part of a public protest, park in a zone reserved for spouses of government employees in order to express dissatisfaction or outrage at the chosen method of allocating a limited resource. If that person could demonstrate that his activity did in fact have expressive content, he would, at this stage, be within the protected sphere and the s. 2(b) challenge would proceed.\(^{29}\)

\(^{28}\) Billingsley & Caulfield, \textit{supra} note 1 at 665.

\(^{29}\) 

\textit{Irwin Toy}, \textit{supra} note 11 at 969.
We suggest that while the conduct of research could have expressive content apart from the information it generates, this is not automatically so. The researcher would have to demonstrate that the act was undertaken to express meaning rather than to produce meaningful information. Just as parking could have expressive content, so too could a research method. One cannot, however, assume that this is the case, and conclude that research methods are protected. Just as many people park illegally without attempting to convey any meaning, so too many researchers conduct research without intending to convey meaning through the act itself. Illegal parking is often simply a means to an end (for example, to getting somewhere—perhaps to give a lecture, or for some other end with expressive content). So too can research be merely instrumental in the production of meaning, which can then be conveyed. Indeed, in the case at hand, the purpose of cloning is reflected in the label itself—cloning-for-biomedical-research. It is cloning not to make a political statement, or cloning as artistic expression, but rather cloning to conduct biomedical research and produce information. This is not to say that cloning could not be done in order to convey meaning, but the fact that it could be done to convey meaning would not alone be sufficient reason to protect all cloning as expressive activity.

Furthermore, the Supreme Court of Canada's comments in Irwin Toy suggest that the message or meaning which one seeks to convey must be more than an announcement that one is undertaking an activity. Thus, parking illegally does not have meaning simply because it communicates that one is parked in a certain spot. Similarly, a research method will not be expressive merely because it asserts: “This is the way I am conducting research.” That assertion does nothing more than recognize that a physical act is occurring. One must, rather, intend to send a message through the physical act.

It is then possible (although not necessarily the case) that the activity of cloning could be undertaken by the researcher, as Billingsley and Caulfield seem to contemplate, to convey his or her view that “this research is the key to curing particular medical ailments.” However, this argument for research as expression conflates expressing a view and acting in furtherance of that view. Freedom of expression does not encompass the freedom to act

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30. Billingsley & Caulfield, supra note 1 at 665.
on views in the name of expressing them. Even if an argument of this sort could be mounted, the onus would rest with the researcher to show that the research was undertaken for this expressive purpose. Thus, this possibility does not support Billingsley and Caulfield’s claim that cloning-for-biomedical-research would always attract the protection of section 2(b). Furthermore, as we shall discuss in more detail, if the protection exists only in these limited circumstances, the implications for the prospects of justifying the infringement under section 1 of the Charter are significant. If cloning is protected as a means of expressing the researcher’s beliefs, it is clear that a ban on cloning will not be a complete ban on expression, since the researcher has other means of expressing these beliefs, including direct speech.

Before moving on, we note that at the root of Billingsley and Caulfield’s argument may be the concern that the failure to protect research methods will in some circumstances mean that information cannot be obtained or verified. This may be unfortunate and undesirable, but it is not proper grounds for finding a violation of the Charter’s guarantee of freedom of expression.

We now consider whether, even if this limit on expression is found to be a violation of section 2(b) of the Charter, it could be saved under section 1.

II. Can the Ban on Cloning-for-Biomedical-Research Be Saved Under Section 1 of the Charter?

A. Introduction

Once an infringement of a Charter-protected right or freedom is established, the onus shifts to the government to show that the limitation can be justified.

Section 1 of the Charter reads: “The Canadian Charter of Rights and Freedoms guarantees the rights and freedoms set out in it subject only to

31. However, this does depend on whether there is some other means of obtaining or producing such information. It is worth noting that it has not yet been shown that cloning-for-biomedical-research is necessary for the production of information that is otherwise inaccessible.
such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society."32

The test for applying section 1 can be found in the wording of the section itself—the government must show that the limitation is reasonable and prescribed by law and that it is justifiable in a free and democratic society.33 The Supreme Court of Canada in R. v. Oakes provided a framework or guidelines for a section 1 analysis,34 but the Court has consistently warned against being too formalistic.35 The analysis under section 1 must be flexible and mindful of context, since at its core, the section seeks to balance individual rights against the interests of the community.36 This contextual approach entails greater flexibility with respect to laws that seek to balance competing rights than with respect to those that limit individual rights, as in the criminal context.37 This is significant for our purposes, since the ban on cloning-for-biomedical-research is clearly legislation of the former type, and thus warrants a more deferential approach under section 1.

The first requirement of section 1 is that any limit be prescribed by law. This has been interpreted to mean that "(1) the law must be adequately accessible to the public, and (2) the law must be formulated with sufficient precision to enable people to regulate their conduct by it, and to provide guidance to those who apply the law."38 This requirement is clearly met with respect to the ban on cloning-for-biomedical-research as it is prescribed by section 5(1) of the AHR Act.39

32. Charter, supra note 3, s. 1.
33. RJR-MacDonald Inc. v. Canada (Attorney General), [1995] 3 S.C.R. 199, La Forest J., dissenting but not on this issue [RJR-MacDonald].
38. Hogg, supra note 13, s. 35.7(a).
39. AHR Act, supra note 2. While Billingsley and Caulfield make some claims as to vagueness at the "prescribed by law" stage of the analysis, any support they offer for those claims goes to assessing the objective of the legislation and not to assessing what the legislation provides.
The framework for determining whether a limit is demonstrably justified under section 1 requires that two criteria be met. First, the objective of the legislation must be "of sufficient importance," that is, it must relate to concerns which are "pressing and substantial in a free and democratic society." Once a pressing and substantial objective is found, the government must show that the means chosen are proportionate to that objective. The Supreme Court of Canada has identified three important components of the proportionality test. First, the means chosen must be rationally connected to the objective (that is, "the measures adopted must be carefully designed to achieve the objective in question. They must not be arbitrary, unfair or based on irrational considerations." Second, the means chosen should limit the rights or freedoms "as little as reasonably possible." Third, there must be proportionality between the effects of the measures and the objective, as well as "between the deleterious and salutary effects of the measures."

Billingsley and Caulfield argue that justifying a ban on cloning-for-biomedical-research under the section 1 test "would be extraordinarily difficult, because the objectives commonly associated with the ban are extremely vague, and it would arguably amount to a complete denial of scientific expression." We disagree with both of these assertions. First, we take issue with both their approach to the section 1 test and their characterization of the objectives underlying the legislation. Second, we disagree with their characterization of the limitation on freedom of expression caused by the legislation. We argue that, properly understood, the ban does not constitute a complete limit on expression and is thus not as difficult to justify as they suggest.

40. Oakes, supra note 34 at 138-39.
41. Ibid. at 139.
42. Ibid.
45. Billingsley & Caulfield, supra note 1 at 668-69.


B. Pressing and Substantial Objective

Billingsley and Caulfield claim that the objectives of the ban are “extremely vague”\(^46\) and “remarkably broad and equivocal.”\(^47\) They characterize the goals of the legislation as “the promotion and protection of human health, safety and dignity, and the prevention of commodification of the embryo (presumably also for the underlying purpose of protecting and preserving human health, safety and dignity).”\(^48\) They argue that if the objectives are the promotion and protection of human health, safety and dignity, then the objectives are so vague that it is difficult to determine whether they are pressing and substantial.

First, it is important to note that only in rare cases will the courts not defer to the legislature’s determination that the objective of a law is pressing and substantial enough to warrant a limitation on rights.\(^49\) In determining the objectives of legislation, courts are not limited to the statements in the legislature concerning the objective, nor is the lack of such statements problematic. While courts will certainly attend to the stated objectives, as well as to legislative history or other expressions of legislative intent, the courts will also pay close attention to the statute itself in ascertaining its objectives. Furthermore, objectives can be expressed at various levels of generality. Typically, the more generally the objective is expressed, the easier it is to show it to be pressing and substantial. However, one ought to be cautious of expressing objectives too generally. The more general they are, the more difficult it may be to show that the means chosen impair the rights at issue as little as possible, as there will often be multiple ways to achieve a general objective.\(^50\)

Ascertaining the objectives of legislation is ultimately a matter of interpretation, and courts will look to a number of sources to inform their interpretation. Thus, it is perplexing that Billingsley and Caulfield take such a narrow approach to determining the objectives of the AHR Act. They fail to look to the specific statutory provision, to the statute

\(^{46}\) Ibid. at 669.
\(^{47}\) Ibid.
\(^{48}\) Ibid.
\(^{49}\) Hogg, supra note 13, s. 35.8(b).
\(^{50}\) For further discussion, see ibid., s. 35.9(a).
more broadly, or to the legislative history. Instead, they focus on the statement of values in the legislation which they concede was not an express statement of legislative purpose.\textsuperscript{51} It is perhaps not surprising that a section expressing “values” underlying the legislation would be framed at a high level of generality. Given that the legislature did not clearly express the objectives of the legislation, it will be for the courts to determine these objectives. There is no basis to argue that the courts will find the objectives to be at such a level of generality that they will be open to Billingsley and Caulfield’s critique. Before turning to a consideration of the possible objectives of the \textit{AHR Act}, we will make a few further comments about the approach that Billingsley and Caulfield take to this step in the section 1 analysis.

Billingsley and Caulfield’s discussion of the vagueness of the legislative objectives seems to confuse the issue of whether the law is sufficiently precise so as to count as “prescribed by law” with the issue of the level of generality at which the objectives are expressed. The mere fact that objectives are expressed at a high level of generality does not render them vague. Billingsley and Caulfield point to the recent judgment of the Supreme Court of Canada in \textit{R. v. Sauvé}, in which a narrow majority of the Court found the objectives of the legislation denying voting rights to prisoners serving sentences of two years or longer to be “problematically vague.”\textsuperscript{52} Chief Justice McLachlin, writing for the majority, held that the reasons offered by the government to justify the legislation were symbolic, abstract and rhetorical. Nevertheless, she found that they were “capable in principle of justifying limitations on \textit{Charter} rights.”\textsuperscript{53} It is also important to note that her inquiry into the objectives of the legislation was not limited to the assertions in the statute itself, as Billingsley and Caulfield’s inquiry was.\textsuperscript{54} Further, we would argue that the objectives of the \textit{AHR Act} are not vague, symbolic, abstract or rhetorical.

\textsuperscript{51} Billingsley & Caulfield, \textit{supra} note 1 at 669-70.
\textsuperscript{52} \textit{R v. Sauvé}, [2002] 3 S.C.R. 519 at 538 [\textit{Sauvé}].
\textsuperscript{53} \textit{Ibid.} at 542. McLachlin C.J.C. also determined that “despite the abstract nature of the government’s objective and the rather thin basis upon which they rest, prudence suggests that we proceed to the proportionality analysis, rather than dismissing the government’s objectives outright.” (\textit{Ibid.})
\textsuperscript{54} Billingsley & Caulfield, \textit{supra} note 1 at 669-76.
The Supreme Court of Canada has held that legislative history may be useful in the section 1 inquiry,55 and ample support for our view can be found in the legislative history of the *AHR Act*. Hogg points out that while "legislative history" has not been defined with any precision, the term can be used broadly to refer to the "documentary evidence of the events that occurred during the drafting and enactment of a statute."56 Hogg identifies a number of sources one might look to as part of the legislative history of an act—commission or parliamentary committee reports, government policy papers, reports relied on by the government at the time of enactment, earlier versions of the statute, expert testimony before a parliamentary committee and speeches by Ministers or other legislators.57

On the basis of a review of such sources, we argue that Billingsley and Caulfield mischaracterize the law’s objective, and that the objective of banning cloning-for-biomedical-research is much more specific than they suggest. That objective is to prevent an activity thought to pose health and safety concerns—an activity considered by most Canadians to be ethically unacceptable, and one for which there was thought to be alternatives. This can be gleaned both from the statute itself and from its legislative history, as illustrated by reference to a considerable number of sources of the sort referred to by Hogg.58 According to the legislation itself, "[t]his enactment prohibits assisted reproduction procedures that are considered to be ethically unacceptable."59

In a 2001 report entitled *Assisted Human Reproduction: Building Families*, the House of Commons Standing Committee on Health said:

(i) Cloning for Reproductive and "Therapeutic" Purposes
The Committee feels strongly that the potential adverse effects, whether physical, psychological or social, for the resulting children are sufficient reason to prohibit

55. *Edwards Books*, supra note 43 at 745-49, 769-72, 796-800; *Irwin Toy*, supra note 11 at 983-84; and *Keegstra*, supra note 11 at 745.
56. Hogg, supra note 13, s. 57.1(a).
57. Ibid.
58. Ibid., s. 57.1(b).
reproductive cloning. In addition, "therapeutic cloning" should be banned as it is unsafe and commodifies the embryo.

(iii) Embryo Research: Our Views

We heard that while embryonic stem cell research presents some possibilities, other sources such as umbilical cord blood and adult source stem cells are more available, more easily obtainable, and less ethically contentious. Some witnesses argued that research on stem cells using sources other than embryos might be sufficient to attain the stem cell potential. Others pointed out that, although use of adult stem cells is the preference for most researchers, the use of embryonic stem cells at this time might provide the information needed to properly manipulate adult stem cells.

The Committee was struck by testimony that, in the past year, there have been tremendous gains in adult stem research in humans. We also heard that, after many years of embryo stem cell research with animal models, the results have not provided the expected advances. Therefore, we want to encourage research funding the area of adult stem cells.

We are concerned that embryonic stem cell research commodifies the embryo. It involves research that uses embryos to obtain further research material.  

Earlier, in a 1996 White Paper on New Reproductive Technologies, Health Canada stated:

The major objectives of the new legislation are the following: first, to protect the health and safety of Canadians in the use of human reproductive materials for assisted reproduction, other medical procedures and medical research; second, to ensure the appropriate treatment of human reproductive materials outside the body; and third, to protect the dignity and security of all persons, especially women and children.  

Still earlier, in the 1993 Royal Commission on New Reproductive Technologies, the objectives are spelled out:


We have judged that certain activities conflict so sharply with the values espoused by Canadians and by this Commission, and are so potentially harmful to the interests of individuals and of society, that they must be prohibited by the federal government under threat of criminal sanction. These actions include human zygote/embryo research related to ectogenesis, cloning, animal/human hybrids, the transfer of zygotes to another species, or the maturation and fertilization of eggs from human fetuses.62

These objectives are echoed in other Health Canada documents, in the legislation itself, and in many of the explanatory documents released by Health Canada when the legislation was introduced in the House.63

We therefore argue that the objectives of the ban are not unduly broad, equivocal or vague, but rather reflect pressing and substantial concerns. Parliament clearly intended the legislation to prohibit an unsafe, unproven activity that most Canadians find to be ethically unacceptable, and instead to focus resources on available alternatives. The ban would, in our view, pass the first part of the Supreme Court of Canada’s section 1 test.

C. Proportionate Means

We must now consider the proportionality of the statutory limitation on the section 2(b) right.

(i) Rational Connection

First, we must ask whether there is a rational connection between the objective and the legislated ban. We argue there is quite clearly such a connection. If the objective is to prevent the occurrence of an activity considered to be risky and ethically unacceptable, then a legislated ban on the activity is rationally connected to the objective. In other words, as

the Supreme Court of Canada's test requires, the ban is not "arbitrary, unfair or based on irrational considerations." 64

(ii) As Little As Reasonably Possible

We must next ask whether the legislated ban limits freedom of expression as little as is reasonably possible. Originally this element of the section 1 analysis required that the constitutional right be impaired "as little as possible." 65 The Supreme Court of Canada quickly realized that it would be unreasonable to hold legislatures to that standard. An element of deference to the legislature was introduced, and the Court now looks to ensure that the limit is "one that was reasonable for the legislature to impose." 66

If the objective of a law is to prevent an activity from happening, a complete ban on the activity is the only way to attain that objective. If the risks that the legislature wants to avoid are inherent in the activity itself (i.e. if they cannot be prevented by shaping how the activity is conducted) and if the legislature considers the activity itself to be ethically unacceptable, then no form of restriction short of a complete prohibition can be effective.

With respect to this step of the section 1 test, the Supreme Court of Canada has said:

[I]t will be more difficult to justify a complete ban on a form of expression than a partial ban... A full prohibition will only be constitutionally acceptable under the minimal impairment stage of the analysis where the government can show that only a full prohibition will enable it to achieve its objective. 67

Thus, an outright ban will be more difficult to justify when it entails a complete infringement of the right at stake. Where a complete ban results in a total denial of the freedom of expression, it is more difficult to convince the Court that the right was infringed a little as is reasonably possible. 68

64. Oakes, supra note 34 at para. 74. It is worthy of note that very few cases fail at this stage of the section 1 analysis. For general discussion, see Hogg, supra note 13, s. 35.10(a).
65. Oakes, ibid. at para. 70.
66. Edwards Books, supra note 43 at 772, Dickson C.J.C.
67. RJR-MacDonald, supra note 33 at para. 163, McLachlin J.
68. Ibid.
However, given our conclusion on the limited nature of the infringement on the freedom of expression affected by the law, a total ban on cloning-for-biomedical-research would be less difficult to justify because, contrary to Billingsley and Caulfield's claim, it does not constitute a total limitation on free expression. While the ban potentially applies to one form of the researcher's expression of his or her beliefs, the researcher is still free to convey the same meaning through direct speech.

Even if the protection of freedom of expression is extended to research required to produce information, Billingsley and Caulfield themselves acknowledge,

if, . . . techniques other than NRHC exist or can be developed as alternative avenues of research leading to the same results, the NRHC ban may be seen as prohibiting only one of many possible avenues of research or scientific expression. From this perspective, it may not completely deny scientific expression and may therefore pass the minimal impairment criterion [the "as little as reasonably possible" test].

Indeed, there are other avenues open to researchers who wish to realize the potential therapeutic benefits of stem cell research. Research using stem cells derived from adults is possible, as is research involving embryos originally created for reproductive purposes using in vitro fertilization (IVF) but no longer wanted for this treatment. It may even be that these "alternative avenues of research" could lead to equal or better therapeutic results than research using stem cells derived from cloned embryos.

It has been argued that stem cells from cloned embryos are a better source of transplant tissue than stem cells from adult organs and tissues, because of the pluripotent nature of embryonic stem cells. Pluripotent cells are single cells that can develop into many different cell types of the body. Until recently, it was widely believed that adult stem cells were not pluripotent and that they could only become different cell types of

69. Billingsley & Caulfield, supra note 1 at 678.
their tissue of origin. On this view, adult blood stem cells could become different kinds of blood cells (e.g. red blood cells and platelets) but could not, for example, become nerve cells or muscle cells. Recent research, however, has shown that adult stem cells may be able to make cell types from another tissue.\textsuperscript{72} Indeed, it is now suggested that some types of adult stem cells are pluripotent,\textsuperscript{73} and further research may yet show that adult stem cells have considerably greater plasticity than is currently thought. This clearly establishes adult stem cell research as a legitimate “alternative avenue of research.”

It has also been argued that stem cells from cloned embryos are a better source of transplant tissue than stem cells from IVF embryos because patients can receive a transplant of their own cells instead of cells from a stranger.\textsuperscript{74} In this way, they can avoid the potential problem of immune rejection and the possible need for immunosuppressive drugs.\textsuperscript{75} The problem with this argument in support of cloning-for-biomedical-research is that there is no evidence to date of an immune rejection problem with stem cells from IVF embryos. To the contrary, there is some evidence suggesting the opposite—namely, that there is no immune response with embryonic stem cell transplantation from one organism to another. A recent study that directly evaluates the immune response of human embryonic stem cells indicates that the injection of these cells into immune competent mice does not induce a detectable immune response. As well, when such cells were exposed to human blood containing immune cells (e.g. T-cells), they did not elicit an immune reaction (\textit{i.e.} proliferation of the T-cells).\textsuperscript{76}

With time and more research, we will know whether there is a risk of immune rejection with non-autologous stem cell transplantation. In the meantime, even if we assume for the sake of argument that there will be

\begin{itemize}
\item \textsuperscript{72} Diane S. Krause \textit{et al.}, “Multi-organ, multi-lineage engraftment by a single bone marrow-derived stem cell” (2001) 105 Cell 365; Yuhui Jiang \textit{et al.}, “Pluripotency of mesenchymal stem cells derived from adult bone marrow” (2000) 418 Nature 41.
\item \textsuperscript{73} Jiang \textit{et al.}, \textit{ibid.}
\item \textsuperscript{74} Woo Suk Hwang \textit{et al.}, “Patient specific embryonic stem cells derived from human SCNT blastocysts” (2005) 308 Science 1777 [Hwang \textit{et al.}, “SCNT blastocysts”].
\item \textsuperscript{75} \textit{Ibid.}
\item \textsuperscript{76} Li Li \textit{et al.}, “Human Embryonic Stem Cells Possess Immune-Privileged Properties. Stem Cells” (2004) 22 Stem Cells 448.
\end{itemize}
such a problem, it does not follow that cloning-for-biomedical-research is the only solution. Alternatively, it may be possible to establish an extensive bank of human embryonic stem cell lines and give patients immunologically compatible cell lines. Or it may be possible to genetically modify human stem cell lines by using gene therapy or other techniques to create “universal” cells that are histocompatible with all patients. Either of these strategies, neither of which is ethically controversial and neither of which is banned, could reasonably be used to address any possible immune rejection problem. Moreover, it is worth noting here that the immune rejection problem can also be avoided with the use of adult stem cells when autologous transplantation is an option. Thus, again, it can be concluded that there are “alternative avenues of research” and so, even on Billingsley and Caulfield’s own terms, the ban on cloning-for-biomedical-research can meet the “as little as reasonably possible” requirement.

It must also be emphasized here that, as noted earlier, the legislature turned its mind to the issue of alternative avenues, and that the Supreme Court of Canada will not lightly substitute its assessment for that of the government. The Court has indicated that some deference will be given to the government at this stage of the analysis, particularly where the law: a) is intended to protect a vulnerable group; b) relies on complex social science evidence; c) must reconcile interests of competing groups in society; and d) involves judgment on the allocation of scarce resources. All of these factors are relevant to the AHR Act, which is at least in part concerned with protecting those vulnerable to abuse if the commodification of human cells results from cloning-for-biomedical-research. The AHR Act relies on complex social science data about the effect or dangers of cloning. It clearly seeks to reconcile the competing interests of science, and those who might benefit from the results of

78. U.S., Stem Cell Research: Special Hearing before the Committee on Appropriations, United States Senate, Subcommittee of the Committee on Appropriations (12 February 1998) (Gearhart, Thomson, & Varmus).
79. See Sauvé, supra note 52 at 542 and Edwards Books, supra note 43 at 772.
80. Irwin Toy, supra note 11 at 993-94. Also see discussion by Hogg, supra note 13, s. 35.11(b).
cloning-for-biomedical-research, with the interests of those who might be harmed.

In sum, the legislature expressly turned its mind to alternatives when weighing the potential benefits and harms of the ban, and concluded that “at this time, the emphasis should be on a better understanding of stem cells taken from existing human embryos.” What matters is not whether we (or the legislature) are right that there are alternative avenues of research, but whether it was reasonable for the legislature to ban cloning-for-biomedical-research while allowing other forms of stem cell research. Given the nature of the balancing required by the legislation, some deference is owed to the legislature for the means it has chosen to achieve its objective.

Furthermore, the legislation contains a built-in revisitation clause which offers more support for our position that it impairs the right as little as is reasonably possible. The legislation does not say “you can never do this,” but rather, “you cannot do it at this time, given the current state of knowledge and the values of Canadians.” It expressly contemplates changing understandings and developments in science, and it provides for a means to revisit the ban. Therefore, we conclude that the ban would pass the minimal impairment branch of the section 1 test.

(iii) Balance Deleterious and Salutary Effects

The third and final step in the test asks whether the legislation strikes an appropriate balance with respect to its effects. This stage of the analysis essentially asks whether attaining the objective comes at too high a cost. Is the limitation on the right too great a sacrifice in relation to the objectives of the ban?

Here again, the characterization of the expression at stake becomes critical. It should be recalled that for the ban to be found to be a limit of section 2(b), it must be found to limit the use of a research method as a means of conveying the researcher’s belief that, for example, “this research is the most promising way to cure particular medical ailments.” The ban does not restrict the conveying of the results of the research.

81. Health Canada, Executive Summary, supra note 63.
82. AHR Act, supra note 2, ss. 10-12.
Thus, the ban does not effect a complete limit on the researcher’s freedom of expression, as the researcher has other means of expressing his or her beliefs.

The deleterious effects of restricting this limited form and content of expression must be balanced against the salutary effects of preventing the harms sought to be avoided through the ban on cloning-for-biomedical-research. It is here that we offer different descriptions of the possible salutary and deleterious effects of the legislation than those provided by Billingsley and Caulfield. The salutary effects to be considered in this case are potentially significant. The ban can help to prevent several types of potential harms.83

First, cloning-for-biomedical-research will provide assistance to those who want to clone-to-produce-children, effectively rendering unenforceable the ban on cloning-to-produce-children. The technology used for cloning-to-produce-children is identical to the technology used for cloning-for-biomedical-research. To advance the technological capacity to perform the latter is to advance the technological capacity to perform the former.

Second, there are risks of physical and psychological harm to egg providers, as well as twin risks of coercion and exploitation. Cloning technology involves the insertion of DNA into enucleated eggs (eggs that have had their own nucleus removed). It is understood that cloning-for-biomedical research (and possible future cloning for personalized stem cell therapies) will require significant numbers of eggs, ideally from young, healthy women. The first stem cell line from a cloned embryo was derived in February 2004. This technical feat involved the research use of 242 eggs from 16 women.84 More recently, in May 2005, the same research team successfully derived 11 embryonic stem cell lines from 185 fresh eggs from 18 women (an average of 17 eggs per stem cell line).85 With time and further research, the ratio of eggs to cloned embryonic stem cell lines no doubt will continue to improve. However, the total number of eggs needed will never be small, as the research goal is to

83. These potential harms are also discussed in Baylis & Downie, supra note 70.
85. Hwang et al., “SCNT blastocysts”, supra note 74.

J. Downie, J. Llewellyn & F. Baylis
develop personalized stem cell therapies. This means that even if the
derivation of cloned embryos becomes maximally efficient—one cloned
stem cell line from one egg—there will still need to be one egg per
patient requiring stem cell treatment. As the number of maladies
amenable to stem cell treatment continues to expand along with the
number of patients afflicted with these maladies, so will the need for
eggs for cloning. The physical and psychological harms associated with
egg retrieval are significant. They range from minor harms such as
vomiting and mood swings to significant harms, including future
infertility and even death from severe ovarian hyper-stimulation. As
well, with the current purchase price for eggs for research use set at
approximately $4,000 US per cycle, the potential for coercion is
significant. Even if there is no payment, the potential for coercion and
exploitation remains, as women undergoing infertility treatment may be
forced or enticed to give some of their eggs for research in order to have
access to IVF treatment at all, or at reduced or no cost.

Third, there will be opportunity costs if funding is diverted away from
other areas of research. Funds spent on cloning-for-biomedical-research
are not available for other research. Where researchers spend their time
and intellectual energies (and the time and energies of their staff, and the
resources of their labs) on cloning-for-biomedical-research, this time and
energy and these resources are not available for other research. These are
real opportunity costs.

86. “Risks and side effects of drug treatment and surgery associated with assisted
reproductive technology (ART)” (17 September 2001), online: Pregnancy MD
<http://www.pregnancymd.org/risks-and-side-effects-of-drugs-surgery-art-
reproductive.htm>; American Society for Reproductive Medicine, “Patient’s Fact Sheet: Side
Effects of Gonadotropins” (1999) online: <http://www.asrm.org/Patients/FactSheets/
Gonadotrophins-Fact.pdf>; American Society for Reproductive Medicine, “Ovulation Drugs: A
Guide for Patients. American Society of Reproductive Medicine” (2000), online:
<www.asrm.org/Patients/patientbooklets/ ovulation drugs.pdf>.
87. Ronald Green & Gwen Ifill, “Discussion: Cloning Human Cells” The NewsHour
with Jim Lehrer (26 Nov 2001), online: PBS Online <http://www.pbs.org/newshour/bb/
health/july-dec01/cloning_11-26.html>.
88. Ethics Committee of the American Society of Reproductive Medicine, “Financial
incentives in recruitment of oocyte donors” (2000) 74 Fertility and Sterility 216, online:
<http://www.asrm.org/Media/Ethics/financial_incentives.pdf>; Martin Johnson, “The
culture of unpaid and voluntary egg donation should be strengthened” (1997) 314 B.M.J. 1401.
Finally, the sustainability of the health care system may be threatened. Personalized cell-based regenerative medicine using cloned embryonic stem cell lines will be very expensive. Each patient needing treatment would have to have his or her own personalized stem cell line. This could either bankrupt the Canadian health care system or force the introduction of a parallel private system, with such therapies being available only to those who can afford them. As one of us has argued elsewhere:

Consider, for example, cystic fibrosis, a genetic disease that leads to life-threatening lung infections and which affects some 3,400 Canadians. Consider Parkinson’s disease, a neurodegenerative disease that affects about 100,000 people in Canada. Next, consider Alzheimer’s disease. Close to 280,000 Canadians suffer from this form of dementia. These three illnesses alone represent a demand for nearly 400,000 personalized stem cell lines. If we assume 100% success in deriving stem cell lines from eggs, this represents a demand for 400,000 eggs. Now imagine that every Canadian (about 32 million people), at least once in his or her lifetime, will have an illness that could be treated with a personalized stem cell line. This would represent a demand for 32 million eggs. For economic and ethical reasons, this is a practical impossibility.

When the benefits of avoiding these specific harms are stacked up against the potential harm of preventing researchers from symbolically communicating their view that cloning-for-biomedical-research is key to curing particular medical ailments, the balance seems to weigh clearly in favour of finding the ban proportionate. Even if the limits on expression were more significant (i.e., if they were linked to the research results), the balance between the salutary and deleterious effects would still be such that the courts would be unlikely to overrule the legislature under this part of the section 1 analysis, given the potential for using other research methods to achieve those results.

We conclude, therefore, that the government could justify any limitation on freedom of expression resulting from the statutory ban on cloning-for-biomedical-research.

89. Baylis, supra note 77 at 16.
Conclusion

Like Billingsley and Caulfield, we cannot be certain that the Supreme Court of Canada would or would not find a ban on cloning-for-biomedical-research to be a breach of section 2(b) of the *Charter*. However, on the basis of the arguments we have made above, we conclude that if the Court did find that the *AHR Act* restricted the freedom of expression of researchers, it would likely hold such a restriction to be very limited in scope and to be reasonable and justified in a free and democratic society. It is therefore our contention that a *Charter* challenge to the ban on cloning-for-biomedical-research on the basis of freedom of expression would fail.