1. Summary of Proposed Research

The key objective of this research is to contribute to the knowledge and practice of controversy management in the sector of biotechnology. Promising on matters as important as the improvement of human health, the provision of effective cures to terrible diseases, or the reduction of hunger, biotechnologies also raise environmental, humanistic and ethical concerns. To illustrate, stem cell research generates substantial hopes for victims of neuromuscular diseases and simultaneously invite vociferous criticisms among citizens worried about the instrumentalisation of human life. Intractable biotechnology controversies such as this one have not only disturbed regular policy and administrative processes; they have arguably reduced the capacity of societies to refuse or accept other biotechnologies and therefore avoid their risks or capture their potential. How have public officials managed biotechnology controversies so far? What can they do to increase the legitimacy of biotechnology policy and administrative decisions? This program will seek answers to these questions. Specifically, this research will test two learning theories suggesting how policy-makers can increase the legitimacy of their decisions in controversial policy sectors: 1) policy transfer theory; 2) and deliberative theory. Briefly, policy transfer theory presents a top-down perspective suggesting that legitimacy can be enhanced by drawing on international experiences where contestation has been less sustained. The international norms emerging from these experiences may in fact convince actors to adjust their beliefs in a manner that reduces controversy. In contrast, deliberative theory provides a bottom-up perspective prescribing the establishment of deliberative devices whereby ordinary citizens are encouraged to listen and learn about contrasted policy positions. Intentionally distinct from the distrusted institutions of representative government, deliberative devices should create a normative appeal around solutions to policy problems agreed upon by ordinary citizens, thereby contributing positively to legitimacy. Proposing different and perhaps complementary solutions, each of these two theories suggest public officials can reduce controversy in intractable sectors to a manageable level. These solutions, however, have never been compared nor been systematically examined in scholarly research.

The two theories used to shed light on the management of controversy will be empirically tested in a study of human genetics and agri-food biotechnology in Canada, France and the United Kingdom. The variance in legitimacy, transfer and deliberative devices provided by this issue and country comparison will enable the construction of solid tests for the hypotheses derived from transfer and deliberative theories. An internet panel survey of 600 actors involved in human genetics and agri-food biotechnology and a series of semi-directed interviews will constitute the main methodological instruments of this research. While the internet panel survey should be particularly efficient at tracking the evolution of legitimacy, controversy and actors' beliefs, the semi-directed interviews will be useful to obtain specific information on transfer, deliberative processes and the history of controversies. Crossing information from the internet panel survey and the semi-directed interviews should ascertain the validity of this research's conclusions. These conclusions will be published in scholarly journals, but will also be made available in a format useful to the community of practitioners. With the adoption of several acts and policies related to human genetics and agri-food biotechnology in recent years, the management of several biotechnology controversies was delegated to public administrators. A key objective of this research is to provide public administrators guidance on how to approach this challenging new task.

2. Detailed Description

Objectives

In certain new policy areas, public officials across the world have great difficulty making decisions that are not highly contested long after they have been made. Despite high potential in the emerging knowledge economy and in the provision of health care, biotechnology is one such policy area in which decisions often lack legitimacy. In addition to engendering delays in scientific advances, biotechnology controversies cause serious emotional stress to both proponents and opponents of biotechnology. This research program's overall objective is to study policy controversies in agri-food biotechnology and human genetics in Canada, France and the United Kingdom. Drawing from the varied experiences of these three countries, this research will seek answers to the question of *how policymakers can enhance the legitimacy of their decisions to the point where controversy and vigorous challenges to decisions are reduced.* Given that several countries have adopted new biotechnology legislation in the past few years, the focus of the research will be on administrative decisions. This study's objective is not only to contribute to comparative theory on policy-making and public administration in controversial sectors, but also to participate in the search for solutions to intractable problems in the specific area of biotechnology policy.

Context

Before turning to the academic literature related to the research question, it will be useful to use an example to illustrate the difficulties facing public officials in a sector as controversial as biotechnology. After more than ten years of debates on assisted reproduction, the Canadian Parliament finally adopted *An Act Respecting Assisted Human Reproduction and Related Research* in March 2004. Unfortunately, passage of the act has not ended all controversies. Certainly, ongoing debates related to the use of human embryos in stem cell research are well known. Despite significant efforts to formulate an acceptable policy, concerned civil society actors remain sharply divided between those who believe in the medical potential of human embryo research and those who are worried about its social and ethical consequences. To a large extent, the act delegates the management of this controversy to an autonomous agency, the Assisted Human Reproduction Agency of Canada, because it empowers the agency to decide whether emerging reproductive technologies and research projects resorting to them are sufficiently safe and ethically acceptable to be carried out in Canada. In making these decisions, the agency will be faced with controversies that more than ten years of legislative debates failed to cool down. How will the agency manage these controversies? How will it proceed to confer legitimacy upon its regulatory decisions in this controversial context? How will it manage to avoid serious challenges to its decisions? Agency officials currently struggle with these questions, as do numerous public officials in similar positions across the world.

Relevant Literature: As Schön and Rein (1994) argue, policy-makers have a difficult job because policy controversies can rarely be settled through the rational decision-making processes often outlined in standard administrative and policy decision theories. In several sectors, the interpretation and relevance of basic facts, even when they are presented by methodical scholars, are subject to vigorous challenge, feeding back into intractable policy controversies instead of contributing to their resolution. Surely enough, evidence about the safety and the medical potential of reproductive technologies and related research tends to be viewed as beside the point by those who oppose them on ethical and social grounds. Although most welfare state policies could be designed either by experts or by negotiation among actors with distinctive interests, biotechnology policy calls for new decision processes that take into systematic account the widely diverging beliefs of participants. It is in this vein that several policy analysts have suggested the necessity to develop policy processes or administrative practices that 'transform' the 'frames' through which actors view a sector and its issues (Schön and Rein, 1994; Woolpert et al. 1998).

Often anchored in different ontological and epistemological perspectives than classical decision-making theories, those stressing the importance of transforming actors' views directly or indirectly embrace the idea that policy processes and administrative practices should encourage learning. In policy analysis, learning first acquired importance with a book by Hugh Heclo (1974) suggesting that politics is more than a process of deciding who will win and who will lose. For Heclo (1974: 305), policy-making can also be a process of 'collective puzzlement' in which actors are less concerned with their own interests than with finding workable solutions to collective problems. In other words, Heclo insists on the importance of instrumental learning taking place within policy and administrative processes. The necessity to move beyond instrumental learning to study learning processes capable of changing the beliefs of actors has been advocated powerfully by Paul Sabatier and Hank Jenkins-Smith since 1993. As the above example illustrates, conflicting beliefs is precisely the Achille's heel of biotechnology controversy management. Therefore, in order to manage controversy and thereby to increase legitimacy in biotechnology, conditions should be created that encourage a form of learning capable of transforming the beliefs that inform actors' policy preferences. With such changes in beliefs, decisions should also take new forms. In other words, any improvement in the management of controversial sectors requires investigation of how learning processes relevant to beliefs can be built into decision-making processes.

The two key theories that inspire this research, policy transfer theory and deliberative theory, provide such understandings of learning processes relevant to beliefs. I should underline here that what I call a theory is a collection of ideas, which may not acknowledge each other nor agree on everything, but which adhere to a similar logic when it comes to learning about relevant beliefs. These two theories, which should not *a priori* be treated as competing theories, were selected to provide a relatively comprehensive overview of the logics whereby learning about beliefs can occur.

The policy transfer theory presents a top-down perspective on policy learning. Notably inspired by the work of Richard Rose (1991) on lesson-drawing, Dolowitz and Marsh (2000: 5) define transfer as a "process by which knowledge about policies, administrative arrangements, institutions and ideas in one political system (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political system." In their article, Dolowitz and Marsh (2000: 13) encourage analysts to distinguish between coercive transfers resulting from external imposition and voluntary transfers, which can be viewed as learning from others. Radaelli (2000: 27) illustrates clearly the relevance of the concept of voluntary transfer for this research when he writes that it "is not a process driven by efficiency considerations, but a way of securing legitimacy in political life." For Radaelli (2000: 28), when no acceptable solution is readily available, public officials often mimic the solutions adopted in other countries, a strategy "extremely effective in generating legitimacy." However, mimicking, just like coercive transfer, is unlikely to generate changes in beliefs. Therefore, it is also likely to fail as a strategy to manage intractable controversies: mimicking alone will not convince actors to change deeply entrenched perspectives. Stone (2004) insists on a second type of voluntary transfer which accords a greater role to international actors in processes whereby domestic actors reflect and learn about policy beliefs. This form of transfer, notably inspired by constructivist perspectives in international relations (Haas, 2004; Checkel, 1998), clearly is a top-down or translational perspective on learning. Specifically, it suggests that several international organisations and meetings have emerged in recent years as sites of communicative action for the construction of common identities or beliefs (Risse, 2001). When emerging from processes of 'arguing' carried out at these international sites, beliefs exercise a strong normative appeal or pressure on contending domestic actors exposed to judgement by the rest of the world (Risse, 2000).

Transfers of this latter type have the potential of making a contribution to the resolution of biotechnology controversies (Tiberghien and Starrs, 2004). In the area of assisted conception and related research, several international meetings were organised in recent years under the auspices of UNESCO and of the World Health Organisation. These meetings sought to discuss and construct common norms

to inform the development of policy related to human genetics around the world. Moreover, Canadian officials have been key participants in these meetings. To my knowledge, the effect of these meetings on domestic biotechnology policy-making has not been studied. Rather, research on biotechnology policy has largely focused on the pressure exercised by the international economy (Bernauer and Meins, 2003).

In contrast to transfer theory, deliberative theory offers a bottom up perspective on policy learning. As Bohman and Rehg (1997: ix) contend, deliberation theorists tend to assume that "legitimate government should embody the 'will of the people'". In other words, while transfer theory suggests a process whereby beliefs are constructed in international forums, deliberative theory tends to accord greater value to beliefs emerging from the grassroots of ordinary citizens. Several deliberation theorists, however, do not take citizenship and beliefs as a given, recognising rather that citizenship and policy beliefs get constantly redefined through deliberation (Hajer and Wagenaar, 2000). Deliberative processes provide opportunities to learn about an expending range of identities and accompanying policy beliefs. Deliberation widens the horizon of policy possibilities (Callon et al. 2001: 189). Similar to policy transfer, deliberation is not about efficiency, it is about legitimacy. Dryzek (2000) even argues that deliberation, when it enables the recognition of new identities and provides venues for marginal discourses, can in itself be a sufficient source of legitimacy, irrespective of the substance of ensuing decisions. Deliberation, however, can contribute to the management of controversial sectors first and foremost when it seeks to find the parameters around which decisions acceptable to as wide a range of actors as possible can be made.

It is precisely to assist public officials facing controversial decisions that scholars have suggested deliberative instruments such as consensus conferences, citizen's juries and public dialogues (Joss, 1999; Ableson et al. 2003; Leroux et al. 1998). While procedurally distinct, these instruments share the goal of including ordinary citizens in administrative and policy processes. Sheila Jasanoff (2003) argues that they constitute promising instruments to manage biotechnological controversies given their trans-scientific nature. If ordinary citizens can agree on a set of basic beliefs to inform biotechnology policy decisions, contending interested actors are likely to feel a significant normative appeal or pressure to question and eventually adjust their own beliefs (Levidow and Murphy, 2002). In several countries, including Canada, France and the United Kingdom, deliberative devices have been experimented with in the area of biotechnology, but have not yet been the object of a systematic study. I elaborate further in the methodology section on some hypotheses that transfer and deliberative theories will enable me to formulate about biotechnology policy controversy.

Relationship with Ongoing Research: This research program builds on my empirical knowledge of biotechnology policy. Thanks to a SSHRC grant, my research activities of the last three years were essentially devoted to an investigation of biotechnology policy in North America and Europe. Throughout this research, I familiarized myself with the scientific and organisational aspects of the complex issues of genetically engineered agri-food products and human genetics. Given the time and resources that I have invested in this endeavour, it is worthwhile building on this knowledge of biotechnology policy for this new program. In addition, the comparative research I have conducted on biotechnology policy has enabled me to develop fruitful collaboration with international scholars. Several of my recent publications result from it (e.g. Montpetit et al. *forthcoming*), and this program will enable me to pursue these collaborations. Although rarely addressing transfer and deliberative theories specifically, my previous research was broadly concerned with the legitimacy of policy choices. In 2000, I published an article in the *Journal of European Public Policy* on europeanization, a theme related to transfer. In collaboration with colleagues, I also wrote an article forthcoming in *Policy Sciences* on deliberative practices during policy formulation. In 2003, I published a book at UBC Press, *Misplaced Distrust*, which deals with legitimacy from a result-oriented perspective on policy-making processes. In short, legitimacy has been a recurring theme of my past research and with this program I stay on course. As underlined immediately below, this program's focus is on administrative decisions. I should therefore

underline that in the past two years I have participated in a research group on administrative reforms and a book on this matter will appear in the coming weeks at the Presses de l'Université Laval.

Originality: Part of the originality of this research program stems from recent developments in biotechnology policy. In recent months, several countries have adopted policy related to both, human genetics and agri-food biotechnology. As indicated above, Canada adopted a law on assisted conception last spring. France also did so after revising its laws on bioethics. The European Union has recently lifted its moratorium on genetically engineered organisms after adopting traceability and labelling regulations. This change empowers the United Kingdom and France to resume the approval of genetically engineered cultivars for commercialisation. This possibility should be interesting as both countries reformed their approval processes during the moratorium. In short, with these acts and policies begins a new phase in the biotechnology policy cycle, namely an implementation and administrative phase. While the previous phase of policy formulation involved legislative actors and the higher levels of governments' executive, this new phase will primarily concern public managers. Their task will be to manage the continuing controversy surrounding several specific agri-food and human biotechnologies. To my knowledge, public administration scholars have not paid attention to this task, at least from a comparative perspective.

As noted above, the adoption of these acts and policies amounts to delegating the management of controversies to public managers. Indeed, most acts and policies create autonomous public agencies to make regulatory decisions on biotechnology. As underlined above, Canada created the Assisted Human Reproduction Agency of Canada and had previously created Canadian Food Inspection Agency to deal with genetically engineered cultivars. Dealing either with human genetics or agri-food biotechnologies in France and the UK are also the Agence de biomédecine (2004), the Commission du génie biomoléculaire (reformed in 1998), the Agence française de sécurité sanitaire des aliments (1999), the Human Fertilisation and Embryology Authority (1991), the Advisory Committee on Releases to the Environment (reformed in 1999), and the Food Standards Agency (2000). The autonomous status of all these agencies was often granted under the auspices of managerialism. Proponents of this managerial philosophy stress the limits of centralised process-based systems of bureaucratic control and insist on results- or efficiency-based direct accountability to customers of public services, hence their advocacy of autonomous agencies (Pollitt, 2003). Public managers nowadays are highly influenced by this philosophy, despite its obvious limitations, notably when controversy characterises a sector. Managerialism is known for its instrumental nature, notably in its approach to organisational learning (see: Senge, 1990). In contrast, transfer and deliberative theories, which acknowledge belief plurality and the humanist nature of learning, can make an original contribution to public management philosophies. Again, a key objective of this research is to contribute to practical knowledge on the management of controversy in biotechnology.

Theoretical Framework: A vast majority of my publications explicitly adopt a policy network theoretical framework (see Montpetit, 2002 and 2003). I have devoted significant effort trying to improve this theoretical framework and I certainly intend to continue to do so with this new program. The key distinction between the network approach and individualist frameworks popular among economists is the refusal to treat actors and their policy preferences as given. From a network perspective, actors define their beliefs, preferences and discourses in relation to an exclusive set of other actors. Who these actors are and the structure of the relationship that they sustain become essential to any understanding of prevailing preferences, beliefs, discourses and eventually policy decisions. Popularized in Canada by Coleman and Skogstad (1990), this framework has been extensively used in recent years to study biotechnology policy (see Toke, 2004). As transfers and deliberation can be viewed as changes in policy networks, the approach is undoubtedly well-suited to examine these theories. Indeed, while Stone (2004) adopts the view that transfers currently occurs in a context of emerging transnational policy networks, Hajer and Wagenaar (2003) insist on the importance of deliberation in the network society.

Methodology

Strategy: Studying legitimacy poses difficulty as the concept cannot be easily specified for empirical research, especially sector specific comparative studies. I will resolve this difficulty by using belief convergence as a proxy for legitimacy. This methodological decision is supported by the following reasoning: belief convergence can be defined as a change in the policy beliefs of actors that reduces differences in policy beliefs. When such convergence takes place, there should be a reduction in controversy. If this convergence and reduction in controversy can be related to policy transfer and deliberation, then these processes can be said to increase the legitimacy of decisions. In other words, belief convergence, under transfer and deliberative conditions, automatically translates into legitimacy. An excellent proxy for legitimacy, belief convergence will be the dependent variable of this research.

The two theories presented above suggest belief convergence can occur from the top through transfers or from the bottom through deliberative devices. How can these hypotheses be studied? I use issue and country comparisons because it provides greater variance in variables (see Sheingate, 2004). For example, the United Kingdom created the Human Fertilisation and Embryology Authority in 1991, before any significant international activities had occurred on norms on human genetics. The early decisions of this authority were therefore made in the absence of normative appeal or pressure from international forums on the beliefs of domestic actors. This situation, transfer theorists would hypothesize, should be favourable to sustained controversy or resistance to belief change. Now that international activities on human genetics have intensified, it will be interesting to compare those decisions with the early decisions of the Human Reproduction Agency of Canada and the French Agence de biomédecine. Operating in a context of emerging international norms, these agencies should have greater capacity to promote belief change to reduce controversies.

Deliberative practices have been more frequently experimented with agri-food biotechnology than with human genetics. In fact, no deliberative device has been crafted to deal with human genetics in any of the three countries. Meanwhile on agri-food biotechnology, France experimented with a citizen's conferences, the United Kingdom with a public debate and Canada with a national conversation. Such a variance between countries and issues about deliberation should enable me not only to verify whether deliberative devices matter for belief change (Akkerman et al., 2004), but also test hypotheses on the type of deliberative device that matters most.

Instruments: How can belief convergence be measured? Longitudinal surveys appear as the best instrument. Existing surveys dealing with scientific beliefs will be examined (e.g. the World Values Surveys and the Eurobarometers). To collect information relevant to specific biotechnologies in an economical manner, an internet panel survey of actors in the three countries will be conducted. The reliability of internet surveys is increasingly recognized among scholars (DeLeon, 1997). The internet panel survey will seek to collect information on the current beliefs of as many individuals as possible involved in a large number of organisations concerned with biotechnology policy. From my past research, I believe it to be realistic to identify one hundred potential participants per country and per issue, for a panel of 600 individuals. These 600 individuals will be surveyed via the internet every three months during the three years of the program. As explained at length bellow, the survey will be managed by a graduate student. Two questionnaires will be necessary, one for agri-food biotechnology and one for human genetics. Both, however, will feature a number of common questions as well as questions constructed similarly on distinctive biotechnologies. The questions will be formulated in a format similar to that relied upon by Paul Sabatier who conduct surveys on the beliefs of actors in a specific sector since the early 1990s (see Weible and Sabatier, 2004). The questionnaire relevant to actors in the area of human genetics will include questions such as 'are you inclined to think advances in biotechnology represent a progress for society?'; 'do you believe genetic testing for humans represents a significant scientific advance?'; 'Which ethical concerns related to genetic testing for humans do you

consider relevant?'. While primarily designed to measure belief convergence, the questionnaire will also include questions on transfers and deliberation to enable multivariate statistical analysis.

If useful to gather evidence on the evolution of current beliefs, such a survey can provide only limited information on transfer and deliberative processes as well as on the historical evolution of beliefs. Therefore, I intend to conduct a series of semi-directed interviews with key actors in biotechnology in Canada, France and the United Kingdom. Thanks to my previous SSHRC grant, I was able to conduct 53 interviews in Europe and North America with key informants on biotechnology policy. These interviews were transcribed and codified to track information on biotechnology policy content and policy networks. This codification was realised with MAXQDA, a software for qualitative analysis. The software allows me to generate comprehensive lists of quotes on specific topics. While these quotes could be analysed quantitatively, I prefer reproducing as many of them as possible directly in articles to illustrate theoretical points (see appended article). The internet panel survey should help ascertain that the selected quotes from the semi-directed interviews reflect a perception shared by several actors in the sector. For example, any suggestion from the internet panel survey of a convergence in beliefs following a period of intensive international activities can be complemented with quotes from the semi-directed interviews illustrating the process whereby a transfer might have occurred.

These 53 interviews conducted over the past three years represent an important source of information on biotechnology policy and my goal is to continue improve this data set. I will do so by adding another 50 interviews with carefully selected informants to the data set over the next three years and by coding the existing 53 interviews for information on belief change, transfer and deliberation. The new interviews will feature questions on actors' beliefs and convergence over time; their awareness of other actors' beliefs and their perception of change; their awareness of international activities and ensuing norms; their potential participation in international activities or exchange with international actors; their potential participation in deliberation; their perception of deliberative devices, etc. When I conduct interviews, I am not so much preoccupied with consistently following a single questionnaire as I am always careful to make sure interviewees speak of concrete events, in a chronological manner, to which they were a party, officially or not. The chronology will be of particular importance to cross the information obtained through semi-directed interviews with that collected through the internet panel survey. Gathering several accounts of specific events from participants is the best method to understand the specifics of transfer and deliberative processes.

Naturally, the internet panel survey and the semi-directed interviews will be subjected to a close examination by the ethics committee of the Université de Montréal. The internet panel survey will be put in place in the summer and early fall of 2005 and will be run over the three years of the program. Each year of the program, semi-directed interviews will be conducted in the three countries.

Communication of Results

I have participated in the various conferences of the European Consortium for Political Research, the European Group for Organisational Studies, the American Political Science Association, the International Political Science Association and the Canadian Political Science Association. These conferences are very effective means not only to diffuse the results of research, but also to obtain comments to improve papers to be submitted to scholarly journals. This strategy has worked well for me in the past and I intend pursuing it in the future. So far, most of my scholarly publications were in public policy journals. With this program, I should increasingly target public administration journals, notably *Public Administration Review*, *Public Administration, Organization Studies, Administration & Society* and *Canadian Public Administration*. I will begin early diffusion of some research results to the community of practitioners as I intend to send regular summaries of the internet panel survey, at least to all those who will accept taking part in it (summaries will be worded to avoid biasing participants). I plan also to publish a book for public managers at the end of this program. This book, I hope, should provide me additional opportunities to discuss my research results with the community of practitioners.

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5. Role of Students

During the three years of this program, I plan to hire two students, preferably Ph.D. students, ten hours a week, forty-five weeks a year. One additional student, preferably an M.A. student, will be hired ten hours a week during the three summers of the program. These jobs will provide graduate students with excellent training and steady financial support.

The first student will manage the internet surveys. His or her tasks will involve preparing an exhaustive list of individuals (600) who belong to organisations concerned with biotechnology; conducting documentary research relevant to the construction of the questionnaire; sending a questionnaire to the list of individuals every three months via the internet; compiling the data; preparing summaries to be sent to participants to encourage them to continue participating. These tasks will be excellent training in survey-type empirical research. The student will be given the possibility to use the data for his or her dissertation and will co-author articles reporting the results of this research. Lastly, several employers of graduating students highly prize such an experience.

The second student will assist me with the preparation, conduct and analysis of the semi-directed interviews. His or her task will involve researching official documents to prepare a questionnaire based on some initial empirical material; identifying interviews and finding their contact information; preparing a calendar for the interviews; making contact with the interviewees; accompanying me for the interviews, when reasonable in terms of cost; coding the transcribed interviews with MAXQDA, a software for qualitative analysis. These tasks will be excellent training to any student interested in in-depth qualitative research. Part of the training will naturally include participation in co-authored publications. In short, not only are the skills to be developed valued by employers, they should be useful for the preparation of a Ph.D. dissertation and a career in research.

During intensive periods of interviews, mostly during the summer, I will need another student to help in the coding of the new interviews or to help in the preparation of the summaries of the results of the panel survey. I hope these results can be presented in a useful and appealing format to the community of practitioners, while avoiding biasing future responses. The help of a student to accomplish this demanding task will be essential. Naturally, the task will constitute excellent training for an M.A. student intending to join the community of practitioners in the near future. I should also

underline that the three students will work as a team to favour the crossing of information between the internet panel survey and the semi-directed interviews. Needless to insist, experience in team work is important to several employers.

With my past SSHRC grant I was able to hire two Ph.D. students and three M.A. students. Thanks to the training and financial support made possible by this grant, the two Ph.D. students have made considerable progress: both have successfully defended their thesis proposals last spring and are roughly within a year of finishing. In addition, we have co-authored publications planed or in preparation. The three M.A. students have graduated.

6. Previous and Ongoing Research Results by Grants

a) SSHRC410-2001-0338: Le développement de politiques, les avancées scientifiques et les inquiétudes du public

This project was about biotechnology policy formulation in Canada, France, the United Kingdom and the United States. The objective was to better understand the interaction between scientists and representatives of NGOs in policy networks during the preparation of each country's major biotechnology legislations. During this project, I have shown that good will on the part of policy-makers to draw on both scientific and lay input for the development of biotechnology policy does not suffice to overcome the difficulties posed by the interaction between scientists and representatives of NGOs. In fact, I documented several examples when attempts to strike a compromise between scientists and representatives of NGOs led to delays, policy failures and delegation of controversy to administrative agencies (see appended article). Thanks to this research, I published articles in reputed public policy journals and books: *Policy Sciences; Swiss Political Science Review; Canadian Journal of Political Science; European Journal of Political Research; Comparative Political Studies; Canadian Public Policy; Comparative Biomedical Policy*. I am currently working on a book with two European colleagues: five of the chapters of this book present the results and the conclusions of this research project.

The ideas for the current research program are related to this past project. First, the focus on the management of controversies was inspired by the conclusion that the formulated policies simply delegate the management of biotechnology controversies to public administrators. Second, the conclusion that the difficult interaction between scientists and NGOs caused delays and failures motivated the selection of transfer and deliberative theories, which both suggest that learning about beliefs can help in avoiding delays and failures. Third, the history of biotechnology policy-making can be divided into two phases: formulation and implementation. My past SSHRC was about the first phase and the current research program will be on the second. In other words, the current program picks up where my previous program ended.

b) FQRSC 2002-NC-72634: Le développement de politiques, les avancées scientifiques et les inquiétudes du public

The project behind this grant is identical to the previous one. SSHRC funded 50% of it, FQRSC the other 50%.

c) FQRSC 2004-AI-93880: La modernisation de la gestion publique en tant qu'exercice de redéfinition du modèle québécois : vers une théorie critique de la gouvernance

This team-based research began in the spring of 2003 under the leadership of Christian Rouillard. I am currently the main investigator because Christian Rouillard moved to a university outside Quebec last spring. The project examines administrative reforms inspired by managerialism, a particular managerial philosophy discussed in the detailed presentation of the current program. Specifically, it seeks to analyse the effect of administrative reforms, notably the transformation of ministries into

autonomous agencies, on policy capacities. The empirical focus is Quebec. In a book to be published in the coming weeks by the Presses de l'Université Laval, my colleagues and I argue that the administrative reforms initiated by the government of the Parti québécois in 2000 and intensified by the Parti libéral since its electoral victory in 2003 undermine the capacity of public officials to make political decisions. Deprived of such a capacity, the Quebec state risks surrendering to clientelism in its relation with social groups.

So far, this project has sharpened my understanding of managerial reforms undertaken in several countries since the 1980s. Because biotechnology controversies are increasingly managed by autonomous administrative agencies created under the auspices of managerialism, understanding this administrative philosophy and ensuing reforms is essential for the current research proposal. In addition, this team-based research has awakened me to the possibility that managerialism is an inadequate philosophy for agencies responsible for sectors as controversial as biotechnology. This possibility has encouraged me to look elsewhere for ideas on how controversy can be managed, hence my interest for transfer and deliberative theories.

d) FQRSC 2005-SE-96167: Politiques publiques et enjeux du développement social

Obtained under the leadership of Alain Noël, this grant is to fund infrastructures for a group of researchers. It will enable me to have office space and computer equipment for the three students I plan to hire under the current research program. Internet (Web) facilities will be particularly useful for the internet panel survey.

7. Budget Justification

Student Salaries and Benefits/Stipends

Doctorate: Two (2) students, $16.64/hour, 10 hours a week for 45 weeks for the three years of the program.
Duties: Conduct an internet panel survey; assist in the preparation and code the semi-directed interviews.
Remuneration: Salary: 2*$7488; Fringe Benefits (11%): 2*$823.68; Total (rounded): $17 000 per year.

Masters: One (1) student, $15.00/hour, 10 hours a week for 15 weeks for the three years of the program.
Duties: Help with the coding of interviews and the preparation of summaries of the results of the internet panel survey.
Remuneration: Salary: 1*$2250; Fringe Benefits (11%): 1*$247.50; Total (rounded): $2500 per year.

Travel and Subsistence Costs

Applicant
Travel to Canada: Five (5) days in Ottawa each year of the program.
Purpose: Conduct semi-directed interviews.
Cost: Transportation: $100; Hotel: 5*$120; Meals: 5*$45; Total (rounded): $925 per year.
Note: transportation between Ottawa and Montreal will be by car.

Travel to Europe: Ten (10) days in Paris and London each year of the program.
Purpose: Conduct semi-directed interviews.
Cost: Transportation: $1500; Hotel: 10*150; Meals: 10*$45; Total (rounded): $3500 per year.
Note: For October 2004, Air Canada lists tickets between Paris and Montreal at $1169.17. During this period, a return ticket from Easy Jet between Paris and London is 127.38 Euro or $199.42.

Travel to academic conferences: two (2) each year of the program, one in North America and one in Europe.
Purpose: diffuse results and obtain comments on papers at the meetings of the European Consortium of Political Research, the European Group for Organizational Studies, the American Political Science Association, the Canadian Political Science Association.
Cost: Transportation: 2*$500; Hotel: 2*(3days*$120); Meals: 2*(3days*$45); Registration: 2*$300; Total (rounded): $2600 per year.
Note: the cost of travel to conferences includes economies realised when taking advantage of the travels for the semi-directed interviews. Registration fees exclude membership fees to professional associations.

Student (1)
Travel to Canada: Five (5) days in Ottawa each year of the program.
Purpose: Participate in semi-directed interviews.
Cost: Transportation: $0; Hotel: 5*$120; Meals: 5*$45; Total (rounded): $825 per year.
Note: transportation is by car with the applicant.

Other Expenses

Transcription of interviews: 50 transcripts * $100 = $5000 or $1700 (rounded) per year.

Telephone, fax and photocopies; telephone and fax expenses will be incurred during the planning of the semi-directed interviews: $300 per year.

Research Time Stipend

Purpose: the RTP is for the applicant the first year of the program only. It will provide sufficient time to launch the program, notably the internet panel survey. The questionnaires will have to be prepared rapidly and the 600 potential participants will have to be contacted and convinced to participate in the survey early on. These crucial tasks will prove to be time consuming for the applicant during the summer and fall of 2005. A reduced teaching load in the fall should allow the applicant to devote sufficient time to these tasks.

Cost: $4000 the first year only

Total Funds Requested From SSHRC

Year 1: $33 350
Year 2: $29 350
Year 3: $29 350

The total for the three years is $92 050. 66.24% of this amount will be spent on students.