Governance Through Social Learning

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Published by University of Ottawa Press


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CHAPTER 8

LIBERAL EDUCATION AS SYNECDOCHE*

The conference "Who's Afraid of Liberal Education?"** was inspired by a wave of concern in Canada and the United States about the decay of cultural literacy, the suggestion that a change in postsecondary curricula might be the answer, and some recognition that the postsecondary enterprise was not doing much to address the problem. It was natural, under the circumstances, to inquire about the occult forces that might stand in the way of the implementation of a curative program; for there is some agreement on the seriousness of the concern, even though there is no agreement about the sort of liberal education curriculum, if any, capable of dealing with the problem.

There is a danger that the current crusade for a new classicism, if defined too narrowly, might lead well-intentioned higher education reformers in the wrong direction, and allow the real challenges facing higher education to be occluded. There is undoubtedly a case for curriculum reform, but it must be approached from a broader and more global perspective than it has been by some defenders of the new classicism.

A FEW SIGNPOSTS

The Saskatoon Forum

In October 1987, the National Forum on Post Secondary Education staged true états-généraux on higher education in Canada. One would have expected from these a comprehensive cahier de doléances. It did not materialize. A careful reading of the Forum Papers (NFPE 1987a), the Proceedings (NFPE 1987b), the workshop reports, and the final recommendations reveals that the sensitivities


** Organized by the Social Science Federation of Canada in Ottawa, 30 September to 1 October 1988.
of all parties in this first national chautauqua on higher education have stood in the way of fruitful discussion. Debates were rendered aseptic by an excessive civility in the dialogue between lay persons and academics, and by the chronic Canadian obsession with federal-provincial sensitivities.

An unfortunate consequence has been the level of generality of the discussions and the weasel nature of the consensus arrived at. It was hoped that *l'esprit de Saskatoon* would guide educational reforms in Canada, but it was too feeble-hearted to do the job: it could not march on, it had to tiptoe all the time.

As a result, most of the contentious issues: the crisis of confidence in higher education, the management of postsecondary, the inadequacy of the curricula, and the need for a national strategy — all issues that had been well documented in the *Proceedings of the Standing Senate Committee on National Finance* (Leblanc 1987) — were carefully avoided. On the other hand, noncontentious issues, like promoting accessibility for marginal groups and providing additional public financial resources to the postsecondary enterprise, became the foci of discussion.

The very generality of the discussions and recommendations allowed observers to use them as a Rorschach test, and to extract for special attention idiosyncratic themes — however fleetingly recurring. At the midpoint of the National Forum, Lise Bissonnette (1987: 81–82) took advantage of her breakfast address to underline what she saw as “a renaissance of the concept of general education... a yearning for a new kind of classicism.” This perception caught on. Given the fact that there was little of real substance on which the participants had developed a consensual view; that Bloom’s (1987) *The Closing of the American Mind* was a best-seller at the time (as was Hirsch’s [1987] *Cultural Literacy*), liberal education became a safe discussion item because it allowed everyone to address a truly academic issue, without the need for close scrutiny of the performance of the higher education enterprise.

It is important to note that this “yearning” did not find a place in the concluding remarks of the chairperson of the National Forum. Flexibility, adaptability, accessibility, federal-provincial cooperation, a better statistical database, and a call for leadership were *les cris de ralliement* supposed to give a momentum to these *etats généraux* and ensure that *l’esprit de Saskatoon* would live on. For obvious reasons, it did not.

**Le Non-dit à Saskatoon et à Ottawa**

The most surprising feature of the Saskatoon meeting was the implicit agreement of participants to exclude a variety of central institutional issues already well documented in an extensive literature on the crisis in Canadian higher education: excessive provincialization, the rigidity and protected nature of higher education institutions, and the poverty of their management had been singled out repeatedly. Epistemological entrapments that stood in the way of reform were also ignored: the so-called (and so mistakenly labeled)
Rousseau–Dewey type of perception of education as content-free; the disciplinarization of knowledge production that triggered the emergence of methodism; a naïve characterization of the way in which knowledge is acquired; the dominion of technical rationality, etc. (Emery 1980; Schon 1983; Neilson and Gaffield 1986; Hirsch 1987; Paquet and von Zur-Muehlen 1987; Watson 1987; Laplante 1988).

These issues might have been raised in the follow-up that many anticipated after the National Forum, but that now seems unlikely. They were also excluded from the subsequent Ottawa conference, and this was especially true for the epistemological issues. Yet the epistemological questions are the truly revolutionary ones, because they are about fundamental aspects of knowledge acquisition and can threaten existing arrangements more dramatically than mere institutional tinkering. It is understandable, therefore, that the vested interests in the postsecondary enterprise have ensured that they would not be raised in an open forum.

Liberal education is such an epistemological issue: it has to do with the sort of knowledge that needs to be acquired, given certain educational goals, and how it should be acquired. It represents a stratagem recommended by some educational reformers to accomplish objectives they regard as fundamental, yet the desirability of such a strategy can only be gauged by showing how it would make the postsecondary system more effective. This in turn requires that the whole process of education and education policy be clearly understood. This nexus of issues was hardly discussed.

Entrapments Highlighted

Lise Bissonnette (1989) indicates clearly that she is very pessimistic about the implementation of this "new classicism" curriculum for which there was supposedly such a "yearning" in Saskatoon. She ascribes this phenomenon to institutional obstacles standing in the way of the new curriculum (organizational sclerosis, pedagogical incapabilities, diversity of the clienteles, demands from the marketplace, and strong differences of opinion about the content of this new classicism).

Howard Clark (1989) of Dalhousie University appears to support Bissonnette's diagnosis: there is at present both a phenomenal pressure to promote specialization at the postsecondary level, and an equally phenomenal incapacity in the universities to do more than just cope. For Clark, the debate on curriculum is a symptom of the fundamental problems that postsecondary education institutions face.

Among other things, Grant's (1989) puzzling testimony in response to Bissonnette's paper urges postsecondary institutions to resist private-sector pressures to educate for utilitarian ends. But, more important, he reveals the basic puzzlement of the business community when dealing with the higher education issue. As George Bernard Shaw diagnosed a long time ago, "every profession is a conspiracy against the laity"; so it is hardly surprising that lay
people find it so difficult to come to terms with the crisis facing universities. In this case, both institutional and epistemological entrapments are ignored and simplistic suggestions ensue.

Karelis’s (1989) analysis of the American scene helps to put things in perspective. The central question, he states, is “about the ends of general education and about the kind and type of general education that will best serve those ends.” Karelis refers to studies identifying many different purposes for education, all equally valid. From there, one may derive a wide range of recipes to reach these different sets of objectives, yet none of these broad goals commands a core curriculum as a sine qua non. Indeed, experiments at Harvard and Miami show a high degree of dissonance about these issues in the higher education system. Some have even argued that an enlightened education in a small number of typical concrete instances might provide an opportunity for a wide-ranging appreciation of historical, technological, and social concerns.

What is striking in Karelis’s paper is evidence that the “public” and the “academy” appear to be at odds. Some parents in the United States want their children to be taught the traditional content or knowledge base they themselves were exposed to in their youth, while the academy would appear willing to supply only what its professoriate knows, i.e., disciplinary knowledge. The romantically nostalgic public or the self-interested professoriate: who should decide what is needed?

Experiments: A Very Small Sample

Canadians have performed only a few experiments in search of a third way with the result that the variety of available programs is much narrower in Canada than in the United States. One such experiment sketches a strategy that is both timid and successful: the Arts One curriculum of the University of British Columbia — 60% of the freshman year is especially designed. It has worked well for over 20 years for a very small cadre of students.

The second strategy is broader in scope: the liberal arts program proposed by the University of Toronto. This Unity of Knowledge program is intriguing; perhaps for that reason, it has not yet been implemented.

The third summarizes a more ambitious strategy. It does not deal with liberal education directly; rather, it is an attempt to break down the monolithic structure of the university and to create a quasi-market within the university: a separate entity — le module — (including professors, students, and socioeconomic agents) responsible for assessing the demand for courses making up programs and another — la famille — (made up of the professoriate) responsible for supplying the courses. This is the system in place at the Université du Québec.

The first two strategies address the narrow question of what a liberal education curriculum might look like; the third is a strategy designed to shake loose the producer-dominated structure of universities, a factor that many
observers believe is responsible for the rigidity and inadequacy of university programs.

Although other examples exist, by and large, epistemological issues are not high on the agenda, and the range of institutional variables remains relatively narrow. This stems from two sets of implicit premises:

- **The equation between cultural literacy as needed currency and liberal education as the only way to provide it.** In fact, one might defend the importance of cultural literacy without any commitment to core curriculum or other paraphernalia of liberal education as a strategy (Hirsch 1987).

- **The presumed existence of a strong demand for liberal education.** In fact, evidence for such a demand is difficult to gauge and largely anecdotal. On the other hand, there is strong evidence of a growing demand for training and personal development activities, and massive sums of money have been spent on such activities by the public and private sectors. In Canada, we spend some $9 billion dollars for postsecondary education through our universities and colleges, but at least another $3 billion is spent by business, trade associations, and public and private agencies to produce postsecondary education privately. Indeed, some have argued, on the basis of extensive interviews with firms and public agencies, that a much higher proportion of postsecondary education is produced by this shadow higher education system. To a certain extent, these activities are complementary to the postsecondary education publicly produced, but much of it is a substitute — a focused, practical, vocationally-oriented substitute for what the public regards as unsatisfactory output by postsecondary educational institutions (Paquet 1988c). This sort of massive investment raises questions about the view that postsecondary education should drift toward a new classicism.

**EDUCATION POLICY: A WICKED PROBLEM**

Education has always had a variety of functions in society: to produce literate, responsible citizens; to acculturate a heterogeneous citizenry; to develop the human capital necessary for the maintenance and improvement of economic growth, competitiveness, and living standards; to allow individuals to develop character, self-awareness, interpersonal communication capabilities, and competence; to develop mind and ability to reason (Peterfreund 1976). This is a complex task, and over time a variety of groups have crafted different strategies to realize diverse parts of this ambitious agenda.

Yet there is no indisputable notion of what the goals should be in a pluralistic society. Education policy poses an ill-structured problem to policy analysts, what Rittel and Webber have labeled a *wicked problem* (Rittel and Webber 1973). As we saw in Chapter 2, such problems have two characteristics: the goals are not known or are very ambiguous and the means–ends relationships are highly uncertain and poorly understood. Rittel and Webber (1973)
have spelled out some basic characteristics of wicked problems: they lack definitive formulation and a stopping rule as in a chess problem. In addition, solutions are not true-or-false but good-or-bad; every attempt at solving the problem counts significantly; and the planner has no right to be wrong.

**Problématique**

Educators, trainers, and developers defend different approaches. For *educators*, operating in the mislabeled "Rousseau-Dewey tradition," the shaping of the mind and the ability to reason is somewhat content-neutral and focused on general principles, on general knowledge; this is the way to learn how to think critically. For *trainers*, knowledge is skill and skill is knowledge, and there is no way to develop general transferable abilities without focusing on procedural and substantive schemata that are highly specific to the task at hand. For *developers*, the cornerstone might be loosely called an anthropological theory of education: knowledge and skills can be developed only on the basis of a capacity to grow as a human being within a human community to which one is acculturated (Hirsch 1987).

These three notions are ideals in most discussions. In fact, much of what is done under any of these labels turns out to have educational, training, and developmental components. Any curriculum, course, or seminar may be represented as existing somewhere within a triangle of human capital formation (Figure 6), where each apex is an ideal representation of each of these valuable types of human capital formation (Paquet 1988c).

The centre of gravity of the traditional Canadian postsecondary enterprise (PSE) — and of any other national system for that matter — should be mappable as a point or as a zone within this triangle. It is the result of a variety of private and public initiatives and policies that have favoured one or another component. Moreover, all such systems have evolved through time, and their drift should be traceable within the triangle. Indeed, ideally any PSE should, through a diversity of institutions, cater to the diversity of private demands and public needs, for there are important differences in the strategies pro-

![Figure 6. The Human Capital Formation Triangle.](image-url)
posed by educators, trainers, and developers: educators bet on C as the baseline, trainers on B, and developers on A.

In the 19th and early 20th centuries in Canada, the mix of education, training, and development in traditional postsecondary education was probably more balanced than it is now. Much importance was given to each component of human capital formation, through a diversity of institutions and arrangements. During the first half of the 20th century, however, a formal philosophy of education, mistakenly ascribed to Jean-Jacques Rousseau and John Dewey, came to be in good currency. This so-called Rousseau–Dewey tradition emphasized education as a formal process, shaping mind and reason, that could be effected through content-neutral curricula. Education, as apex C, became the linchpin of the PSE. Segments of the PSE became more specialized, and a division of labour crystallized more sharply between the different institutions — universities, colleges, technical schools, etc. — with a higher or lower status depending on the mix of components they provided. Personal development ceased to be a central variable in the PSE.

Technical schools, colleges, and polytechnics developed a different brand of curriculum (more practical and more training intensive) but the social status of these programs remained relatively low, and the training they purported to give became more and more “tainted” by the ruling educational philosophy. Within universities, training-intensive activities have also been given lower status and are starved for resources. A recent report by the Canadian Chamber of Commerce was quite harsh in evaluating these institutions: the students are being trained on outdated equipment, and the quality of instruction is so low that "students graduate without sufficient skills or ability to pursue their chosen careers effectively" (Basken et al. 1988). Frank Stronach of Magna Corporation (in a personal interview) offered this very rationale for setting up his own training school.

Goals Not Known or Ambiguous

This problématique does not suggest that postsecondary education should adopt a particular contour or should emphasize, as a matter of course, one of the three components. The education system must fit within the broader appreciative system that a society elects. Particular societies with quite different appreciative systems and norms may select quite different patterns of educational institutions located in different portions of the triangle of human capital formation. Identifying the underlying norms and specifying the required directions for curriculum reform are very difficult tasks, for the basic goals are not agreed on or even unambiguous in a pluralistic society.

For instance, the directions of curriculum policy will be quite different if postsecondary education is considered as closed (i.e., independent of its social context) as opposed to seeing its survival as dependent on its capacity to adapt. In the same way, policy directions will be quite different if the postsecondary
institution perceives its main goal as training individuals as opposed to educating them or to developing them into better human beings.

This leads to six quite different philosophies of postsecondary education as can be seen in Table 2 (Paquet and von Zur-Muehlen 1987: Chapter VI).

Table 2. Six Philosophies of Postsecondary Education.

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<th>CLOSED SYSTEMS</th>
<th>OPEN SYSTEMS</th>
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<tr>
<td>Training</td>
<td>A science</td>
<td>B technology</td>
</tr>
<tr>
<td>Education</td>
<td>C tradition</td>
<td>D culture</td>
</tr>
<tr>
<td>Developing</td>
<td>E perception</td>
<td>F creativity</td>
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Institutions in position A wish to train people in the scientific method. Position C corresponds to institutions whose vocation is to train students to act in life in the light of a tradition used as an instrument to decode and make sense of the world. Position E institutions start from the individual and provide opportunities for fulfillment and self-improvement through improved perception. Those in position B train individuals in a way best suited to economic development. In this case science is no longer sufficient; the institution must also take into account the technical needs of society, and the institution becomes a location for the development of highly skilled manpower. Position D corresponds to a situation where it is felt that specialized and technical training does not suffice to ensure that individuals adapt well to an ever-changing scene: the institution then attempts to be the locus for the production of culture in the sense of Clifford Geertz (1965) — a set of control mechanisms, of approaches and ways of defining problems, of "programs" in the sense that the computer scientist uses the term. Position F institutions emphasize creativity and the development of innovative power as a way to cope with a changing environment.

This is only a preliminary and somewhat simplistic stylization of possible goals and environmental conditions, but it illustrates how the general strategy of postsecondary institutions depends fundamentally on the definition of such parameters.

Institutional Entrapments

The history of educational reform is replete with failed attempts to direct the education system in different directions by means of institutional repairs. Traditional educational practice has accommodated these innovations easily, particularly in times of affluence, when efficiency mattered little or when educational goals were overridden by other purposes: for example, keeping
the baby boomers off the street and out of the job market. When resources became scarce, postsecondary education institutions felt threatened and reacted to pressure for change by making use of defense mechanisms to protect existing ways. They evolved into a dynamically conservative system, i.e., the system as a whole developed a tendency to remain the same and a capacity to resist change through a variety of means like unionization (Paquet 1988a). At present, the PSE is not unlike the building industry — "a coalition of shared interests built on prevailing technologies" (Schon 1971).

For education is a social system and, as with all social systems, it contains a structure, a technology, and a theory. "The structure is a set of roles and relations among individual members. The theory consists of the views held within the social system about its purposes, its operations, its environment, and its future. Both reflect, and in turn influence, the prevailing technology of the system" (Schon 1971). The best way to initiate change is to create a disequilibrium among these three components.

Changes in technology and structure are easily neutralized by the existing institutions' "dynamic conservatism"; viz. the numerous attempts to change the PSE by computerizing it or by imposing standardized curricula. The PSE has a capacity to repress such threats in much the same manner as bees in a beehive neutralize the danger when a mouse invades the beehive in winter. The bees sting the mouse to death, then encapsulate it in wax; it looks alive, but it has become innocuous. The PSE finds it easy to prevent change by opposing or delaying it, or through continuous chanting that there is no existing problem in the PSE that more public money could not cure. On the other hand, it finds it difficult to initiate real change because of the fact that the very technical and structural devices it might mobilize for change in its so-called collegial way are easily frustrated by internal systems (guilds, etc.) with their traditional conservatism.

It can be argued that it is quite different in the case of theory. Tampering with the way in which educationists perceive the world and themselves and the way in which they answer the question — what should we be doing? — is very potent. It may appear more difficult to effect, but the likelihood of generating a truly creative disequilibrium and cumulative causation is much higher from that angle. Although it is true that theorizing may be a tool for rationalizing away any alternative procedure as unsound, it is also a most powerful channel of attack when it can be shown that the whole knowledge production operation is wrongheaded.

Epistemology as Lever

The positivist revolution, together with the so-called Rousseau-Dewey tradition, shifted the centre of gravity of the PSE by imposing a certain formalism on it: there was more and more emphasis on theory, general principles, and "methodism" and less and less on matters pertaining to the "oral," the "particular," the "local," and the "timely" (Paquet 1988a; Toulmin 1988). What has evolved in universities is a curriculum made up of a variety of general
principles and broad surveys, providing the necessary elements for the educated person to learn to think critically. The idea of a true vocationally-oriented higher education system has disappeared (Gunderson 1978) and the ruling philosophy of education has percolated down to the secondary level: even there, the skill component has dwindled and general content-free curricula prospered (Adams 1980).

But there has been a revival of practical philosophy in recent years (Toulmin 1988), and the ruling philosophy of education has been challenged by recent work on cognition. Critical thinking, it would appear, evolves not from general content-free principles or methodologies, but from schemata that are highly specific to the task at hand and that are not easily transferable from one task to the next. Developing a human being is, therefore, ensuring that he or she acquires a fair number of such schemata, shared by others in the community, so as to be able to communicate competently and effectively with them — providing the person with a sort of "cultural currency" in the sense that economists give to existing national currencies (Hirsch 1987).

The development of this basic currency — capacious and vague, but fundamental to communicative competence and competitiveness — cannot be ensured either through general disembodied principles, in the manner of the traditional curricula, or simply through skill-building, in the manner one proceeds to coach an athlete to success. Facts and skills are inseparable and background knowledge — even that which is specific culturally and nationally — is of great import in the development of critical reason, skills, and personal growth as a competent citizen. Traditionally, universities and colleges have provided through their core curriculum some smattering of background knowledge, but most often this has degenerated into formal general principles built into rigid curricula rather than being closely related to the national community, to the personal circumstances of students, and to schemata likely to be of use.

A revolution at the epistemological level is raising questions about existing structures and technologies in the PSE and is, therefore, creating pressure for change. Indeed, it may be said that one of the reasons why the PSE has chosen to insulate itself from the teachings of its own schools of education or to belittle considerably the significance of what might be learned from them is that such insulation constitutes an apt defense mechanism.

A different image of educating, i.e., of imparting knowledge, flows from the work of Schon (1983) on the epistemology of practice. Schon shows that the dominant model of technical rationality wrongly presumes that knowledge flows from underlying disciplines (basic science) to applied science to actual performance of services to clients and society. For this narrow view of knowledge flow — a sort of one-way street — he substitutes a two-way approach, emphasizing knowing-in-action/reflection-in-action, where knowledge emerges equally well from groping with situations and from surprises leading to on-the-spot experiments and knowledge creation.
The implications of this different approach to the professional education process are significant: an emphasis on the development of skills and a capacity for conversation with the situation though reflective practicum. It translates into a different curriculum (Schon 1987).

How Do We Learn?

One should not presume that there is unanimity on the epistemological front. Research on cognitive skills is buzzing with competing paradigms and is characterized by strong disagreements among critics of the current conventional wisdom.

Herbert Simon and others (Larkin et al. 1980) have been arguing that cognitive skills "depend on procedural and substantive schemata that are highly specific to the task at hand" and cast doubt on the idea that there are general or transferable cognitive skills and on the so-called Rousseau-Dewey tradition that has led us to believe that if students look at a few cases, they will understand general principles and learn how to think critically (Hirsch 1987). This work maintains that much of education is the imparting of a large number of schemata, and that this requires "extensive knowledge of specifics."

In this system, the process of abstraction provides bridges from sensations to higher levels of thought. The ladder of abstraction begins with sensory data from repeated observations; from these, observed replicated associations emerge and are memorized; the knowledge gained by association is generalized by inference to classes of objects and associations between classes of objects, such as those of cause and effect. Knowledge is thus the accumulation of these tried and true associations, and education becomes the distribution of accumulated knowledge (Emery 1980).

This approach departs from tradition and re-introduces specifics (the local, the timely, the oral, the particular) into the process of knowledge acquisition. However, many observers would say that it does not go far enough because this approach remains based on a theory of perception that leaves much to be desired: "to perceive the world one must already have ideas about it. Knowledge of the world is explained by assuming that knowledge of the world exists. Whether the ideas are learned or innate makes no difference; the fallacy lies in circular reasoning" (Gibson 1979: 304).

An alternative paradigm starts from a different theory of perception, a theory of direct perception that has no need for a ladder of abstraction. This Gibsonian (1979) approach may be summarized as follows:

- The act of picking up information is continuous — an activity that is ceaseless and unbroken.
- What is perceived are places, attached objects, detached objects, and substances, together with events that are modifications of these things.
- Information is the specification of the observer's environment.
• The perceptual system is a mode of overt attention: it can explore, investigate, adjust, optimize, extract.

• The perceptual system registers persistence and change.

• The process of information pick-up is susceptible to development and learning: better extracting, exploring, etc.

This new theory of active perception has important educational implications (Emery 1980):

• Because limitless information is available in the environment, access is restricted only by habits of perception.

• The perceptual systems can be improved: this is "an education in searching with our own perceptual systems, not an education in how to someday research in the cumulated pile of so-called social knowledge" (Emery 1980:29).

• Education is "learning to learn" from our own perceptions.

This foray into cognitive psychology is not an aside: it is central to the main theme of education reform. For these shifts from general principles to schemata, and from schemata to direct perception suggest different conceptions of knowledge and, consequently, different notions of education. The further one moves away from a view of knowledge attributed to Rousseau-Dewey toward a view of knowledge à la Gibson (with the Simon-Hirsch view standing somewhat in the middle), the less persuasive is the case for a standard liberal-education core curriculum.

In place of an educational system based on the accumulation of proven knowledge by memorization of established associations, rules of classification, and logical inference and based on students being taught to distrust their personal experience as a guide to knowledge (the goal is to produce a critical, disciplined, and literate mind), one is led to suggest one starting with the perception and experience of the individual, regarding education as the training of attention and higher studies as providing aided modes of apprehension or extraction of information (by means of instruments to allow metric knowledge; by means of language to make knowing explicit instead of tacit; and by means of pictures to extend perceiving and consolidate the gains of perceiving) (Gibson 1979; Emery 1980).

If one accepts a Gibsonian view of the world, knowledge is only restricted by our habits of perception, and one may and must educate one's perceptual systems. This entails recentring education on the process of searching, on learning to explore and learn, for the weight of evidence is that even literate adults find it difficult to use their own perceptions.

This revolution, in turn, calls for an education process that puts much more emphasis on exploration and playfulness than is usually accepted in the PSE, for this is the way to enhance the capability to extract information from our worlds (March 1976). The usual university insists above all that it must produce "disciplined intelligence... that is trained in logic and logical analysis" (Ross 1961). What is emerging from the new epistemology is a much broader
approach that covers a variety of types of thinking — mathematical, logical, lateral, etc. (De Bono 1969) and this does not mesh well with the way in which the PSE perceives its vocation and its task (Paquet 1985b).

Education Reform as Social Learning

At a time when the possibility of designing a liberal education curriculum is examined, it is essential to ascertain in some way what the ends of general education are and what kind or type of curriculum design is likely to lead in this direction in the light of what is known about cognition and learning.

On these questions, there is no clear a priori choice one can offer from the policymaker's point of view among mixes of goals, or among theories of knowledge acquisition, or among institutional/curricular arrangements likely to accomplish certain ends. This is the nature of a wicked problem. Policy analysts faced with ill-structured problems must learn on the job about both the configuration of facts, and the configuration of values, but they must also manage to learn from the stakeholders in the policy game and from the many groups at the periphery who are in possession of important local knowledge, for without their participation no effective policy can be implemented.

Friedmann and Abyoni's (1976) social learning model of policy research is a way to deal with these wicked problems (see Chapter 2). In Figure 5, "cognition is linked to the world of events via social action and the result of that action. The adequacy of a theory of reality, and/or the political strategy is therefore dependent on the results of action and the extent to which these results satisfy the given social values" (Friedmann 1978).

CONCLUSION

The challenge put to the PSE by the epistemological revolution underway is bound to entail much more than the reshuffling of a few courses, the development of a core curriculum, or the insertion in the curricula — one way or another — of the 5000 essential names, phrases, dates, and concepts to ensure "cultural literacy," the Hirsch (1987) middle-of-the-road solution. It forces a serious rethinking of what education is all about and it emphasizes the need to launch a social learning experiment to learn how "to learn how to learn."

The debate on liberal education has posed the problem of "the ends of general education and about the kind and type of general education that will best serve those ends" (Karelis 1989). In that sense, it has put on the front burner an issue that the PSE has been refusing to face for some time.

Those arguing for liberal education must establish why such a strategy would improve whatever postsecondary education wants to do; and we are back to the more general questions raised above. These more general questions have to be probed if one is to be able to put forward a strategy likely to be effective. Yet, there is no way to learn about these issues except through action hypotheses.
The challenge put forward by the liberal education debate cannot, therefore, be resolved a priori. It cannot be resolved in isolation either. What is required is a broad-based social inquiry into the problems of higher education very much on the model of the Energy Options Process launched in 1987 to provide an opportunity for a dialogue among Canadians about the common energy future (see Chapter 5). The resulting report (Kierans et al. 1988), although somewhat biased and unsatisfactory, showed that much had been learned within one year through a process of wide consultation with all interested parties and groups throughout the country.

It may well be that nothing less than such a process can clarify the objectives of our education system and answer questions about the kind of postsecondary education we should design for our grandchildren. The process is difficult to manage and does not always generate unambiguous or satisfactory answers (see Chapter 5); moreover, it is not likely that such a broad consultation can be engineered easily given the federal-provincial quagmire surrounding all issues educational in Canada. But such an inquiry may be the only vehicle likely to generate the sort of debate on postsecondary education that is so urgently needed. The problem of higher education is no easier to tackle than biculturalism or transportation; so, there is no reason to believe that anything short of an inquiry of the sort suggested is likely to bring forth the feasible, acceptable, and implementable solutions we are looking for.

Some may argue that we have shifted the debate from a simple question about liberal education to the broad question of higher education in general. This is undoubtedly true. One of the characteristics of wicked problems is that they are often a symptom of a "higher-order problem." Thus, crime in the street may be a symptom of general moral decay, lack of opportunity, poverty, etc. (Rittel and Webber 1973). In the same manner, the liberal education debate is an echo of a higher-order malaise in the postsecondary education system. The malaise in education may also reflect some still higher-order malaise in our society. The best way to deal with lower-order issues is not to deal with them in a restrictive way if they are only symptoms. One might be more effective by tackling the problem on as high a level as possible.