Working with the Region

Ian McAllister, Editor
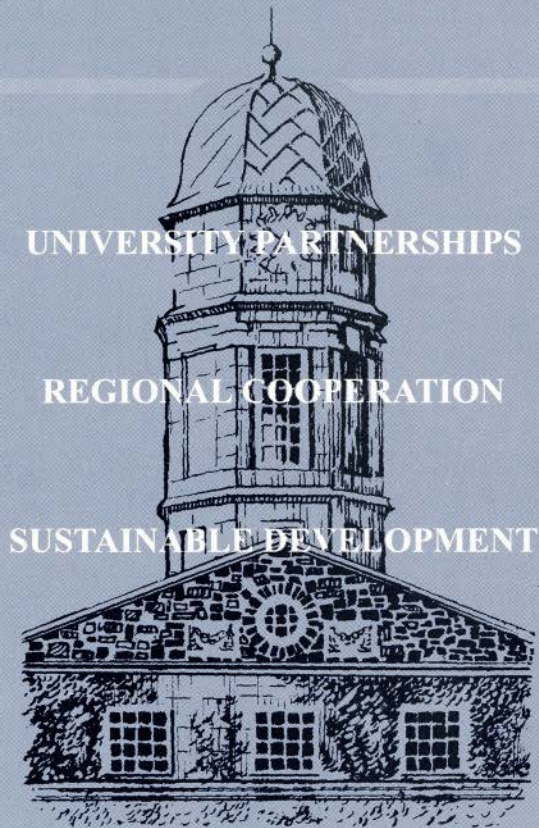
UNIVERSITY PARTNERSHIPS

REGIONAL COOPERATION

SUSTAINABLE DEVELOPMENT

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Learning Solutions For A Changing World

The mandate of Henson college is to provide leadership and support for Dalhousie's efforts to forge dynamic linkages with the communities it serves. Using the tools of program design and delivery, applied research, innovative teaching and technology, consulting, outreach and increased accessibility, the College works with constituencies far beyond Dalhousie's traditional student population.

In exploring the learning needs of the new economy, the College is committed to enhancing Dalhousie's contributions to regional economic, social and cultural development. It reinforces longstanding partnerships and builds new ones. It works closely with other faculties and units within Dalhousie. It connects with community groups, private sector and professional organizations, governments at all three levels, and a wide range of individuals and voluntary agencies.

Built upon this base, a number of Henson programs are well-known and highly regarded outside the region; they serve national and international, as well as regional, constituencies.

Cover design: Doug Swinamer

Also in the Series:

Creating a Common Future, Helen Jenks Clarke (editor), (Proceedings of the Conference on University Action for Sustainable Development). Halifax: Lester Pearson Institute, Dalhousie University, Halifax, May 1992, pp. xii, 166.

Windows on theWorld: *University Partnerships, International Cooperation, Sustainable Development.* Ian McAllister (editor), Lester Pearson Institute, Dalhousie University, Halifax, 1993; Second (Revised) Edition, July 1994, pp. xxv, 425.

Working with the Region

- *University Partnerships*
- *Regional Cooperation*
- *Sustainable Development*

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Ian McAllister: Editor

**Henson College
Dalhousie University**

First Published in 1997

This book explores the changing roles of universities, with emphasis on partnerships for regional development. The work represents part of a follow-up commitment of the Conference on University Action for Sustainable Development, held in Halifax, December 9-11, 1991 - preparatory to the Rio Earth Summit. That conference was sponsored by the International Association of Universities, the United Nations University, the Association of Universities and Colleges of Canada, and Dalhousie University.

WORKING WITH THE REGION

TABLE OF CONTENTS

Preface

Dalhousie, as a major Canadian University, has had long and extensive regional and international involvements. Located in the port city of Halifax, on Canada's east coast, facing towards Europe and with historical ties to European countries, Africa and the Caribbean, Dalhousie has seen its international connections grow substantially in recent years also to connect with South East Asian nations. At the heart of its relationships, however, are its numerous and intricate links within the Atlantic region of Canada. This book explores a cross-section of those connections, in the course of the process suggesting a number of lessons, ideas, questions and future options.

1996 marks the sixtieth anniversary of the foundation of the Institute of Public Affairs, predecessor of Henson College. That Institute was conceived as an experimental centre, with part initial funding from the Rockefeller Foundation: it was intended to be a bridge between Dalhousie University and the community - in the fields of social science and public policy. Its first director was Dr. Lothar Richter.

From the outset - as Kell Antoft, the IPA director from 1976 to 1982, has put it - the institute found itself, *'by its very nature ... at the vortex of...debates'* about the role of the university and its relationship to the wider community. This new book, *Working with the Region* continues that tradition.

Over the sixty year span, the Institute was a pioneer in the fields of economic, sociological, labour market and public policy research - in keeping with the changing patterns of world events and Canadian society. It was multi-disciplinary from the beginning. It enlisted the active participation of business, community and labour leaders and provided a forum where issues of common concern could be addressed. It developed further education and training programs for private and public sector managers, municipal and local government officials, and community developers. Many leaders in those fields found the IPA a starting point and a stepping stone for future advanced studies and expanded careers.

On several occasions the Institute of Public Affairs underwent major reorganizations in its relationships with Dalhousie University. In 1956, for example, Guy Henson, then Director of Adult Education for Nova Scotia, agreed to succeed Dr. Richter and secured the external support to translate Richter's vision further to contribute to the solution of practical community problems of the day.

Then, in 1984, the Dalhousie Senate combined the resources of the I.P.A. with those of the Office of Part-Time Studies and Extension, thereby establishing Henson College, named in recognition of Guy Henson's contributions over the era 1957 to 1976. The new college's establishment as a 'senior academic' unit marked a new recognition by Dalhousie of the importance of continuing education and training.

In the succeeding years, the college has expanded and changed in numerous ways. Such factors as the declining life cycle of 'knowledge' and education, the changing demographics of the student population, the emergence of new markets and new competitors and the demand for improved accessibility, innovative delivery, appropriate credentialling, and greater 'value for money' have raised the stakes for universities and their continuing education divisions.

A major response, by the College, to the threats and opportunities of change is to be found in "Transforming Education for the New Economy: The Henson College Strategic Plan 1992-1995." This plan predicted that the 'new economic order' or 'new society' was going to call for nothing less than a radical transformation of both the process and the product of the education system. It suggested that without substantial change, the university would face an indomitable challenge in providing the educational and intellectual leadership needed for the next century. *Working with the Region*, in the concluding chapter, re-emphasizes that point and suggests steps that might be taken further to reinforce the university's contributions to Atlantic Canada. In the word's of the Henson College document "Universities are challenged at their very core to meet the new and legitimate needs of society while preserving what is of value in their traditions."

Experiences of Henson College, since embarking on the directions of the Strategic Plan, demonstrate that continuing education units can be a force in making universities more accountable. The College has acted as a virtual laboratory for innovation in the development and delivery of new educational programs and in the recognition of educational attainment. Thus the College has worked with University Computer Information Services, the faculties of Arts and Social Sciences, Law and Management, in order to deliver new programs to meet specific community demands. These programs, as for example the MBA Financial Services, enlist the College's expertise in providing distance education and computer assisted delivery, adult education content and pedagogy, and prior learning assessment for certificate and credit recognition.

The relationship between Henson College and Dalhousie University continues to be multi-faceted, with numerous opportunities for developing leverage and synergy. Similarly Henson College's relationship with the wider community, through its programs, services, activities and partnerships, as well as through its community Board of Directors, provides great potential for increasing the university's impact on the community. One such example

is the leadership provided by the Henson College Board of Directors, in partnership with the Nova Scotia Community College and Native Council of Nova Scotia, in establishing a new pilot venture, the Prior Learning Assessment Centre. This is a collaborative approach to change *within the system*. It engages the six metro Halifax universities, the Community College system, the Native Council in a process of public problem-solving. It is intended to enable greater accessibility to post-secondary education and improved service to adult students, while maintaining control of quality within the respective institutions. Over time, this is intended to result in increasing the level of participation in the regional economy. Among other successful partnerships that have been pioneered and reinforced are the Transition Year Program for Black and Aboriginal students and the Certificate in Community Development. Such programs maintain their integrity and relevance through the guidance of Community Advisory Boards. In this book two other Henson College programs are described at length. The self employment/micro enterprise program (by Douglas Myers) and the fire and emergency measures training (by John Benoit).. In the areas of professional designations, the College partners with national and international professional associations, such as the International Foundation for Employee Benefits and the Credit Union Institute of Canada.

Working with the Region is thus very much in accordance with the tradition of Henson College. I am delighted that the Board of Directors of Henson College has decided to support this publication - to celebrate the sixtieth anniversary of the Institute of Public Affairs. It is this very subject, the quest for seeking strategic partnerships in both the university and the community, that has engaged our predecessors and continues to guide the work of Henson College.

As this is an enormously diverse question that drives the work of a number of our colleagues and partners, both with and without the university, I congratulate Professor McAllister for drawing together such a wide variety of examples, views and case studies for this volume.

I am sure that this collection will stimulate discussion on a wide range of topics and interests that are crucial to our future. I thank Ian McAllister, and his colleagues, for contributing not only to a greater understanding of our varied present and past initiatives, but for the commitment he has made through this understanding to building a better future.

Mary Morrissey
Dean of Henson College
Dalhousie University

Acknowledgements

WORKING WITH THE REGION
AN INTRODUCTION

by Ian McAllister

Main Theme

The theme of this book is the university as a partner in regional development.

The theme of this book is the university as a partner in regional development. The emphasis is on the experiences of a Canadian university that has, over many years, responded to a variety of local needs - ranging from training outpost nurses to music education, from the provision of regional business and library support services to medical research and co-operative work with minority groups.

The concept of a region is deliberately kept somewhat open. In the core of the book, which focuses on experiences of Dalhousie University, the region normally embraces the four Atlantic Provinces, albeit (within that framework) many papers emphasise Nova Scotian and/or community development. The definition of development is also interpreted broadly. Essentially it is the process whereby vulnerabilities (of individuals, communities and regions) are reduced, while capacities are strengthened and ranges of choice are increased. The issue of sustainability recurs. Sustainable development is not merely viewed in more conventional terms of economic growth, but embraces social and cultural enrichment, as well as the guardianship of the natural environment and ecological diversity for the benefit of future generations.

The primary functions of a university, wherever it be located, are essentially three. They are:

- Teaching and information exchange;
- Research and the guardianship and sharing of knowledge;
- Community service.

Background

The origins of this book date back to December 1991. At that time, Dalhousie University co-sponsored (with the Association of Universities and Colleges of Canada (AUCC), the International Association of Universities (IAU), and the United Nations University) a conference, in Halifax, on "University Action for Sustainable Development." This was preparatory to the Rio Earth Summit and resulted in, amongst other outcomes, the *Halifax Declaration* (a set of guiding principles for universities regarding sustainable development commitments) and a draft *Plan of Action* for universities. The conference proceedings were published (*Creating a Common Future*, May 1992) and the *Declaration* was presented by Walter Kamba, then president of the IAU, at the Earth Summit in June 1992. The Quarterly Journal of the IAU, *Higher Education Policy* (Vol. 5, No. 1, March 1992), was consequently devoted to the theme "University Action for Sustainable Development," drawing upon the work of the Halifax conference. Ivan Head, Halifax conference chairman, was guest editor of that edition.

Among suggestions that came from the Rio process was that universities should review their international and regional projects.

Among suggestions that came from the Rio process was that universities should review their international and regional projects. Are, for example, universities reinforcing sustainable development, is the concept marginalised or are they negating it? In short, are they practising what they often claim to be preaching?

As part of Dalhousie University's follow-up, a cross-section of outside experts, Dalhousie faculty and students were invited to contribute papers to two seminar series and then to two consequent books. The process was 'inaugurated,' in the form of a Killam Lecture, by Jim MacNeill in November 1992, "The Road to Rio: Setting the Compass" (*Windows on the World*, second edition, 1994). MacNeill had been secretary general of the 'Brundtland Commission' and also a major contributor at the Earth Summit.

The initial book, *Windows on the World*, drew together some twenty-five years of international development experiences.

Working with the Region is the companion volume. It draws together a cross-section of experiences, from some twenty five years of Dalhousie linked programmes and projects, that have supported, in various ways, the development of Atlantic Canada and its communities.

Structure

Working with the Region has eight parts.

Working with the Region has eight parts. Part One sets an international context. Keith Bezanson (President of the International Development Research Centre, Canada) highlights a number of global changes and challenges. An abridged form of UNESCO's new Policy Paper for Higher Education is next, followed by a paper on universities and regional development, by Guy Neave (Editor of the *Journal of Higher Education Policy*, IAU).

Part Two provides a Maritime Canadian context. Emery Fanjoy, long-standing secretary of the Council of Maritime Premiers, reviews regional development cooperation since confederation (largely at the governmental level - but with reference also to universities). This is followed by a survey, by Paul Pross and Fazley Siddiq, of the (largely economic) impacts of universities in Nova Scotia. The paper includes analysis of the structural underpinnings of the university system (in the province) and identifies a number of 'future rationalization options'.

Parts Three through Seven bring together a cross-section of perspectives, project and programme experiences, each of which has some connection with Dalhousie University. Part Three focuses on environmental themes; Part Four concentrates on connections with the business community; Part Five includes papers on the role and accomplishments of libraries in support of regional development, on music and its contributions to the region, on health research and on outpost nursing, ending with a

plea for a 'broader vision of education'. Part Six reviews university cooperation with the Mi'kmaq communities, with refugees, with volunteer firefighters across North America, and concludes with a paper that explores some of the challenges and tensions faced by non-governmental organizations (represented in the region) as they venture from more traditional disaster relief activities into complex developmental and peacekeeping roles. Part Seven further links the local region to overseas endeavours, starting with discussion of a training programme in cooperation with the Baltic States, then continuing with reviews of the work of Canada World Youth and the Nova Scotian-Gambia Association.

Part Eight looks forward. The shorter-run sustainability of Atlantic Canada's present levels of development is far from secure, it is argued, in a Canada that could readily fracture. Furthermore, it is suggested, the region retains a number of features more readily associated with Third World countries, including dual economy characteristics, substantial pockets of underemployment and a costly legacy of politically inspired 'megaprojects'. Atlantic Canada also is blessed, it is argued, with substantial capacities - including research, technology, industrial and infrastructure clusters that, collectively, hold considerable promise. Given the region's respective vulnerabilities and capacities, the university community is challenged to make a more concerted effort to strengthen the base, thereby to improve the options for the peoples of Atlantic Canada. A more strategic integration of a variety of teaching, research and community service resources is advocated.

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Finally, the draft framework for a possible 'plan of action' is delineated - one that will require serious and coherent institutional commitments to the future of Atlantic Canada. Some re-adjustments of internal priorities, programmes and mind-sets would be necessary - but the overall process, it is suggested, would be energizing. The current partnership that is being formed between Dalhousie and the Technical University of

Nova Scotia holds great promise. It is entirely consistent with the approaches suggested in this book.

Profile of Dalhousie University

Dalhousie University, located in Halifax on Canada's eastern seacoast, is a middle-sized institution, by Canadian University measures, with a student complement (December 1995 data) of some 11,700.

Dalhousie University, located in Halifax on Canada's eastern seacoast, is a middle-sized institution, by Canadian University measures, with a student complement (December 1995 data) of some 11,700 (see Table 1). Some 58 percent are women and about 86 percent of the student body are full time; approximately 40 percent are registered in graduate or professional programmes (e.g. law, health professions, management studies). Almost 20 percent have come from provinces outside Atlantic Canada (led by Ontario) and a further 3 ½ percent (according to visa criteria) from overseas. (Many other students, it must be noted, also have foreign origins, but, because they now enjoy landed-immigrant or Canadian citizen status, are not identified as 'international'). Some ninety countries are currently represented in Dalhousie's student body, despite significant declines in visa student enrolment over the past decade. The largest group of foreign students (79) came from the United States. One programme alone (the Masters in Development Economics) has attracted students from 42 different nations over the past twelve years.

An important point that emerges from the student data, however, is not the Ontario or international dimension but the strong regional connection.

An important point that emerges from the student data, however, is not the Ontario or international dimension but the strong regional connection. Table 2 shows that (as of December 1, 1995) 5,119 students were identified as permanent residents of the metro Halifax area, a further 2,064 coming from other parts of Nova Scotia. When Prince Edward Island, New Brunswick and Newfoundland are included, the Atlantic Provinces accounted for over three-quarters of Dalhousie's student population. On the basis of such numbers, it can be argued that Dalhousie is essentially a regional university.

TABLE 1

REGISTERED STUDENTS
BY GENDER AND FACULTY

1-DEC-95

Faculty	Female	Male	
Management	301	455	
Arts and Science	3493	2678	
Dentistry	138	71	
Graduate Studies	1052	711	
Health Professions	1267	352	
Law	236	221	
Medicine	301	413	
	6788	4901	11689

Source: Registrar's Office, Dalhousie University, August 19, 1996

TABLE 2
DALHOUSIE UNIVERSITY STUDENTS
(By Place of Residence and Faculty)
(1 December, 1995)

Permanent Residence	Manage-ment	A&S	Health	Law	Medicine	Dentistry	Grad Studies	Total
Halifax City	135	1520	360	112	221	52	510	2910
Dartmouth	64	527	153	18	30	19	91	902
Halifax County	96	811	193	14	45	14	134	1307
Metro Area	295	2858	706	144	296	85	735	5119
Other NS	141	1110	411	34	95	39	234	2064
Total NS	436	3968	1117	178	391	124	969	7183
PEI	20	88	59	13	34	17	39	270
NB	65	439	208	9	112	41	116	990
Newfoundland	46	249	103	51	17	17	72	555
Total Atlantic Provinces	567	5744	1487	251	554	199	1196	8998
Ontario	113	941	81	101	60	3	209	1508
Quebec	10	103	13	15	14	0	36	191
Manitoba	4	16	4	7	5	0	23	59
Saskatchewan	2	14	0	7	4	0	8	35
Alberta	7	65	6	28	20	2	37	165
BC	7	86	12	39	33	1	39	217
NWT & YK	0	5	1	2	0	0	5	13
Total Canada	710	5974	1604	450	690	205	1553	11186
Total Foreign	46	197	15	7	24	4	210	503
Grand Total	756	6171	1619	457	714	209	1763	11689

Source: Office of the Registrar, Dalhousie University

Dalhousie University is but one university within Atlantic Canada (albeit significant as to overall size, graduate, professional training and research roles). It currently houses nine faculties, within which are administered the academic departments, schools and Henson College. The university also contains a number of centres and institutes, some within faculty structures, some outside. During the past two decades, these centres and institutes (the terms have been used interchangeably) have played an important role across the university, facilitating new points of emphasis to be developed - whether for teaching, research or community service activities. Whereas departments have tended to be quite rigidly structured (the 'traditional' bases for academic programming), centres and institutes (drawing much of their funding from external sources) have infused additional flexibility and fostered (when working well) interdisciplinary research, innovative teaching, and extension education with the broader community. At the same time, the relationships between centres and institutes (which have substantially drawn upon faculty contributions for leadership, technical skills and management) and departments have not always been well-meshed - for example in faculty hiring practices and curriculum priorities, in student admission procedures and funding, in the teaching and guidance of students, and in the integration, marketing and recognition of applied research publications - as one vital ingredient of a university's mission. Given the current fiscal climate, it is probable that either some reduction in centres and institutes will occur or, of equal concern, they will become isolated from the main university body and treated as entirely independent cost centres. If that happens on a large scale, it could threaten the dynamism of the overall university and, in particular, be a setback for the essential spread of interdisciplinary studies and the linking of academic programmes, with applied research and community/extension services.

In the case of regional development, university involvement has been far more dispersed, varied as to approach, and harder indeed - for the purposes of assessment - to pin down.

In the case of international activities, a relatively few departments, centres and institutes have dominated the work (*Windows on the World*). In the case of regional development, university involvement has been far more dispersed, varied as to

approach, and harder indeed - for the purposes of assessment - to pin down. Funding sources, moreover, have been much more diverse, whereas CIDA and IDRC have dominated much of the international resourcing. Curiously perhaps, no 'regional development planning committee' nor any regional development focussed academic programme currently exists within the university. This contrasts with the international fields of work, at least when they were reported on in *Windows on the World*.

The weight any university may give to particular roles, challenges, opportunities and problems is likely to differ over time and, indeed, between sections of that same university at any one moment. Dalhousie University is no exception. Basic research and applied research are not always accorded equal credits, while teaching and community extension services are viewed by some to be far down the hierarchical 'pecking-order'. International activities (particularly in Northern industrialised countries), however esoteric they may actually be, are often accorded much more status than regional endeavours, however beneficial these may be to the welfare of local communities. The impacts on, and connections between, any university and the development of a region will be considerably influenced by the outcomes of many tensions and power struggles, as well as of visions, budget allocations and individual efforts. A diagram (as Figure 1) illustrates the kinds of connections and can minimally serve as an initial reference point for dialogue.
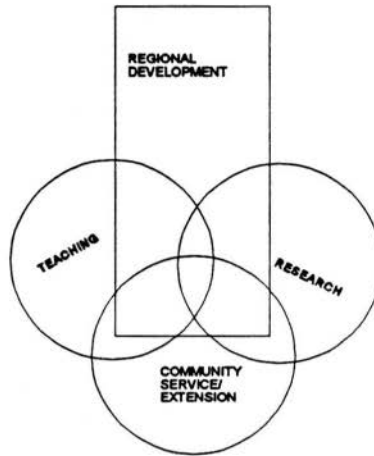
Figure 1

Towards a Framework for Analysis

David Korten's framework for analysing the 'maturity' of non-governmental organizations (see chapter 20, figure 1), has application for universities as well. It has been adjusted, in Figure 2, to provide a context within which university contributions to regional development can be explored.

Many of the more complex relationships described in Parts 3 to 7, such as the outpost nursing programme and library services, began with one or two individuals determining a regional need, then doing something about it. Often, from that phase, some form of contract was later drawn up and a three or four year project defined and implemented (the medical research with Amherst, chapter 14, and Fred Wien's description of cooperation with the Mi'kmaq communities, chapter 17, are good examples). Thence the relationships have often become more open-ended, involved a great deal of networking and have developed a 'momentum of their own.' The Nova Scotia Gambia

Association, the work of the Libraries and Music Department with many segments of the community, the Canada World Youth programming - all have developed numerous kinds of activities and connections, enriching the work and culture of the region and, in many respects, demonstrating qualities of sustainability..

Teaching, research and community services, in many of the more successful and complex 'third phase' relationships, have reinforced each other - not being viewed as isolated activities (or ranked in 'pecking orders' of self-importance), but as essential ingredients of the overall partnership.

Teaching, research and community services, in many of the more successful and complex 'third phase' relationships, have reinforced each other - (or ranked in 'pecking orders' of self-importance), but as essential ingredients of the overall partnership. Disciplines, moreover, have frequently criss-crossed each other (as solutions to problems were sought and, then, as research findings were drawn upon to generate relevant results). Time and again the authors place emphasis on community participation throughout the processes. It has not been a case of university groups 'deciding what to do and then imposing ideas on local communities' - there was an essential responsiveness, a give and take approach, by all involved.

It is not suggested, by offering this framework, that a 'third phase' linkage is 'better' than a first or second phase linkage. Some regional contributions are best kept at an individual or faculty member level: they are effective in their own right. Others may be more efficient when formalised as a project. From a sustainability point of view, a 'thickening' of second phase projects into third phase approaches might well be more resilient, more responsive to change and more proactive as to future opportunities. However, much will depend on the calibre and

REGIONAL DEVELOPMENT
Three Phases of University Linkages

PHASE		
	FIRST	SECOND	THIRD
Defining features	Faculty and/or student linkage (often informal and individualistic): quite specific targets	Departmental contract (formal) - goal oriented	Network linkage agreement (formal but also flexible) - driven by institutional visions
Problem definition	Shortage of a particular skill, need for 'technical' data, cultural or volunteer support	Several problems require a concerted commitment; Single disciplinary mindsets often limit project outcomes	Institutional and policy constraints - problems of sustainable development. Regional development is often marginalised as a university priority
Time frame	Relatively brief	Project Life (sometimes several years)	Indefinite long-term
Spatial scope	Individual, department in a government, community, committee, school, university or local NGO.	University or one/several government/business department(s)/local community/local NGO/local school.	Regional, often with National and International Connections
Chief actors	Individual faculty members or students	Single department teams/centres with (national, provincial, municipal)governments/ corporations/NGOs	Consortia of universities and public/NGO institutions; also increasingly private sector
Teaching	Isolated conferences; single talk; technical or research or cultural (e.g. music) instruction	Routine courses and occasional workshops. Often not directly linked to academic programmes	Degree programmes and regular workshops/conferences/ training of trainers
Research	Individual faculty , student, business or government department interests	Project research agenda with formal terms of reference and applied focus	Complex of flexible, inter-connecting research activities - applied orientation but with scope for basic research also
Community Service	Ad hoc support activities, normally disconnected	Project service to particular institution	A network of capacity-building activities
Management orientation	Very basic and individualistic logistics management	Project management at a decentralised level	Strategic/programme management (but not necessarily ideally) with more supporting bureaucracy

FIGURE 2

*Big or more comprehensive
is not necessarily better.*

style of management. If bureaucratic or control approaches dominate, individual initiative and creativity could be seriously threatened. A life-less programme could be the outcome: creative individuals will either lose spirit, or move on to other activities or organizations. Big or more comprehensive is not necessarily better.

Some Salient Points

In *Working with the Region*, the main finding is the variety of imaginative ventures and endeavours that have been embarked on (but, in many cases, were not widely known about). From many 'key points', developed within the various chapters in this book, the following are extracted, as a means of preparing the reader for the body of the work.

*Higher education is
undergoing major stresses,
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global change reach into
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their communities.*

• Higher education is undergoing major stresses, as are numerous societies, as complex impacts of global change reach into the lives of individuals and their communities. That is emphasised by Keith Bezanson, in chapter 1, and by the UNESCO paper, in chapter 2. Universities in many countries are clearly at a watershed: Atlantic Canada's experiences appear far from unique. Universities can either become more protective and seek to isolate themselves from the problems facing their particular regions, or (clearly the preferred path) rethink their options, further clarify priorities and contribute, in a more pro-active way, to the region's welfare and general sustainability. Guy Neave eloquently discusses this (in chapter 3) and Paul Pross and Fazley Siddiq provide a useful Nova Scotian perspective (in chapter 5). New kinds of institutional partnerships, innovative approaches to teaching, learning and the delivery of public educational and cultural services, to research connections and their application, and to community development cooperation are among the potential outcomes of pro-active approaches to global change and their regional impacts. The cases in this book illustrate that Dalhousie

University is indeed embarking on new approaches, albeit in a sometimes fragmented way.

The concept of sustainable development ... is far from universally defined or accepted, whether internationally, regionally or within university communities.

- The concept of sustainable development - embodying tensions between economic growth and change, employment and income opportunities across generations, and the natural and social environment - is far from universally defined or accepted, whether internationally, regionally or within university communities. A number of papers explore basic and practical steps in support of aspects of this concept, for example those by Martin Willison (on nature conservation) and by Raymond Côté (on thesis research within the Master of Environmental Studies programme). However, the essence of the concept of sustainable development often appears marginalised within the university and on the fringes of 'main-stream programming' (a point forcefully made by both Willison and Côté);

The essence of the concept of sustainable development often appears marginalised within the university and on the fringes of 'main-stream programming'.

Clearly, much more is being undertaken, by and through universities, within the regions of their location, than is often appreciated.

- Clearly, much more is being undertaken, by and through universities, within the regions of their location, than is often appreciated even within the universities themselves, not to mention outside. University contributions to regional development should not only be defined in conventional terms of direct impacts on economic growth. That is obvious from the papers, for example, on music and the community (by Walter Kemp), on health research (by Donald Langille and Richard Beazley) and on volunteer fire services (by John Benoit). The developmental value of many activities (cultural and basic research, for examples) is often not recognized. Yet such contributions can be as, or even more, effective, long-term investments for sustainable development as may be flourishing law or enterprising MBA programmes;

Never before has tech- nology placed so much information and potential for knowledge in reach of so many.

- Never before has technology placed so much information and potential for knowledge in reach of so many. The chapters on libraries and information services (by William Birdsall and Nancy Minard) and on technology transfers (by Michael Bradfield) open up new horizons. Sometime peripheral

regions (such as the Atlantic Provinces) are now less isolated than only a decade ago - largely as an outcome of transformations in communications' technology and transportation networks. Atlantic Canada can expect more international competition (not only in business, but also in the provision of traditional and new packages of university services). If viewed positively, this region can anticipate new opportunities for community growth and personal development. That point is well made by Emery Fanjoy, in his critique of lessons from the work of the Council of Maritime Premiers. Closer university-region alliances appear essential for the welfare of Atlantic Canada;

Sustainable development essentially calls for a balancing act between economic and social investments for long-term benefits and the drawing of resources for short-term consumption and immediate output needs.

• The strategic role of universities and other research and education institutions, as guardians of knowledge and as disseminators of ideas in the quest for wisdom, is not to be downplayed as governments and business corporations pursue short-run and locally focused objectives and seek particular technical skills. Sustainable development essentially calls for a balancing act between economic and social investments for long-term benefits and the drawing of resources for short-term consumption and immediate output needs. This point is given emphasis in the concluding chapter. Self-righteously to argue for deficit reduction and structural reforms on the grounds of 'fiscal realities', without searching for 'future visions', is to lose sight of the responsibilities of governance. Merely to preach longer-term visions, without demonstrating the value of particular skills and focused services, is to lose sight of the urgency of many current problems.

PART I

POLICY CHALLENGES FOR UNIVERSITIES
IN A CHANGING WORLD

PART I

POLICY CHALLENGES FOR UNIVERSITIES
IN A CHANGING WORLD

The opening chapters provide important global perspectives. They emphasise the dangers of parochialism and that the search for solutions to regional problems requires awareness of world-wide trends and opportunities.

In the first chapter, Keith Bezanson highlights six key features of global change: a dramatically changed political setting, economic and environmental globalization, a revolution in the context and direction of international trade, scientific and technological innovation and world-wide shifts in socio-cultural value systems.

UNESCO, in the second chapter, while also placing emphasis on the globalization processes, draws attention to a growing regionalization, polarization (including between rich and poor), marginalization of countries and populations, and fragmentation - which foments social and cultural discord, and in its extreme form, can lead to 'atomization,' through attempts to divide states and local communities along ethnic, tribal or religious lines. Universities, in this context, UNESCO suggests, are encountering three main trends: 'quantitative expansion ... accompanied by continuing inter-country and inter-regional inequalities in student access; diversification of institutional structures, programmes and forms of studies; and financial constraints'.

In the third chapter, Guy Neave, distinguishes between 'locational provision' and 'regionalization'. He effectively contrasts the 'regionally committed' university with 'one that, like Mount Everest, is simply there.'

1

THE CHANGING CONTEXT OF DEVELOPMENT

by Keith Bezanson

Last year, we paused to commemorate the 50th anniversary of the defeat of Hitler and the end of the Second World War. During most of the past half century, while the ideological duel of the Cold War was conducted, the idea of global development served as the engine and intellectual base of North-South relations. Yet today that idea and the forces that have nurtured and sustained it are in serious trouble. Poorer countries -- particularly those in Africa -- profess their alarm over what they interpret as international abandonment, if not betrayal, and development workers grow increasingly disheartened at the prospect of trying to do much more with much less.

Why is the idea of global "development" in such difficulty?

Why is the idea of global "development" in such difficulty? It has, after all, endured for almost five decades as a towering and inspiring vision which stimulated international enthusiasm. Why is the very idea of development in danger of total collapse?

Development as conceived in the post-war years was a radical departure and a revolutionary idea. Until that time, societies of the South were viewed as incomparable with those in the North. The post-war development paradigm placed all societies on a single continuum of less or more advanced relative to the criteria of the industrial North. What followed logically from the paradigm was that Third World societies were poor and that international actions were required to change this. The idea was, of course, more complex than this and involved:

- an economic component which held that, with the right combination of finance, technology and policy, all nations and peoples could achieve more or less equitable conditions;

- a political/ethical component which held that social justice on a global scale was both desirable and feasible through the cooperation of nations;

- a technical and geophysical component which assumed that the resources of the planet were inexhaustible and that science and technology would ensure their availability for all.

For most of the past four decades, this idea of development has reinforced perceptions that poorer countries are filled with potential. And it has spawned a vocabulary which referred to them as "young" and "emerging."

For most of the past four decades, this idea of development has reinforced perceptions that poorer countries are filled with potential. And it has spawned a vocabulary which referred to them as "young" and "emerging."

That this idea stands under attack today is manifestly not because the development effort itself has failed. True, many examples have been catalogued of efforts that were either misguided and naive or that applied "state of the art" knowledge and still ended in embarrassing failure. Equally true is the fact that the decade of the 1980's is characterized, quite correctly, as the "lost decade" in international development. Finally, and very disturbing, is the fact that the first two years of this decade witnessed declines in per capita income in developing countries as a whole (population weighted). Such year-on-year average reductions had never before been recorded in the more than 25 years during which the World Bank has collected these data.

It is also, however, the case that from 1960-1980 the gains in developing countries as a whole were impressive. GDP growth, for example, in developing countries exceeded that of the industrial North. The staggering gains in literacy, nutrition, life expectancy, infant mortality and agricultural output are all part of the historical record. That same historical record testifies to the speed with which development, as measured by output per capita, can occur. It took the United Kingdom, beginning in 1780, fifty-eight years to double its output per person. Starting in 1839, the United States accomplished the doubling in forty-seven years. Starting in the 1880's, Japan accomplished the same in thirty-four years. In the period following 1945, Brazil doubled its per capita

output in eighteen years, Indonesia in seventeen, Korea in eleven, and China in ten.

What seems clear, therefore, is that the vision of global development is today in serious difficulty not because its application has consistently and dramatically failed, but for other reasons.

What seems clear, therefore, is that the vision of global development is today in serious difficulty not because its application has consistently and dramatically failed, but for other reasons. And these other reasons have to do with an entirely new context, with the tidal forces of change and discontinuity which Alvin Toffler classifies as the "Third Wave," with the unleashing of revolutionary forces paralleled in history only by the agrarian and industrial revolutions.

What, then, can be said about the new context and what does that tell us about "development"? I would suggest six important features that define the current context not just for "development" -- whatever that word may mean to us -- but for all aspirations for improving the human condition.

First: **A dramatically changed political context**. This includes, of course the self-evident end of the Cold War and the breakdown of ideology. Beyond that, however, is something that I find far more significant in the political context of today: the supplanting of the nation-state itself by new forces, by transnational and supranational entities. The effects of these new forces traverse all boundaries. They are fast rendering meaningless the intellectual basis for differentiation along a North-South axis. A more accurate reflection of what is happening between and within societies is increasingly to be found on an "included-excluded" axis.

In his book "The Work of Nations," Robert Reich (now Secretary of Labour in the Clinton administration) tells us forcefully that these new forces will:

> "bestow...... ever greater wealth on the most skilled and insightful, while consigning (others) to a declining standard of living."

Reich is correct. The poorest segments of the world, whether they are within our society or in countries with annual per capita incomes of $300, are likely to be consigned to the declining standard of living to which Reich refers. The investments of transnational and supranational entities are unlikely to be the kinds of investments that the poverty ridden parts of the world require: basic infrastructure, health, education, and fundamental services for the integration of populations into their own economies and societies. Since the 18th century, these are the kinds of investments that have been made by the nation-state.

Furthermore, most development agencies work through the nation-state; that is to say, the delivery of what we call "development" assumes the effective intermediation of the nation-state. Finally, development agencies derive their financing from the benevolence of nation-states.

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Second: **Economic globalization**. This feature relates closely to my previous point. Starting in the 1970s, capital markets became increasingly liberalized or globalized. Borders opened, not just to the movement of capital, but to physical plant, to goods, to entrepreneurial activity. One result, as indicated above, is that countries are increasingly powerless in the distribution of social benefits to their citizens. The magnitude of this globalization is illustrated by capital markets where something in the order of one trillion dollars -- one thousand billion dollars -- changes hands every day. This is accomplished via technologies that allow global transactions at the speed of electronic impulse. These transactions are largely divorced from the production of goods and services. Most estimates agree that about 95% of the daily capital flow of a trillion dollars is short-term and speculative in nature, centering on, for example, whether a central bank rate will rise or fall a few basis points, whether an unemployment rate will increase or decrease a fraction of a percentage point, or whether

a monthly national trade figure will show movement in relation to that of the previous month. Should we be worried about this unprecedented movement of capital? Or should we believe orthodox economists who offer many reasons why the present financial system will continue? We know that Central Banks and finance ministries have put emergency controls in place to avoid a financial "meltdown." We also know that such controls have not yet been fully tested, but their very existence reflects fear on the part of those charged with monitoring this vast, free-flowing flood of capital.

The dominant belief is that we can profit from globalized capital flows and all other aspects of globalization by making the correct policy adjustments and by using highly trained, agile, managers. I hope that those assumptions are correct. But extrapolate these remedies to the poor countries of the world. Many of the world's poorer regions simply do not have the institutions, human resources or financial flexibility to make these adjustments. And, unless something is done about this, the result will be a further and possible permanent marginalization of an increasing percentage of the world's population. Development as we have understood it and practised it over the past forty years is hopelessly inadequate to deal with this aspect of our new context.

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Third: **Environmental globalization**. A foundation stone of Western thought since the nineteenth century has been a profound faith in progress, principally through advances in science and technology. Such advances had bestowed upon the industrial nations, and particularly the United States, a high material standard of living. The architects of the post-war order believed that those advances would continue indefinitely. It is this idea of progress and its inevitability that today is rapidly fading. The Western expectation, for example, that the next generation will necessarily achieve a more materially enriched standard of living than the present one is now seriously in doubt.

The condition of our life-sustaining environment is calling further into jeopardy the Western ethos of the inevitability of material

progress. There is little doubt that the world economy has already reached and surpassed its sustainable physical limits. We are drawing down groundwater, eroding soils, cutting forests and harvesting fish faster than they can replenish themselves. We are burning nonrenewable fossil fuels without developing substitutes, and overloading our ecosystem to the point that people fear the sunshine because of damage to the ozone layer.

The post-war vision of global development was a part of that larger faith -- part of the Western ethos -- that held material progress to be inevitable through science and technology.

Faced with these realities, a very fundamental component of the Western ethos -- the belief in a necessary link between advances in science and technology on the one hand, and the well-being of the earth and its inhabitants on the other -- is being eroded. The post-war vision of global development was a part of that larger faith -- part of the Western ethos -- that held material progress to be inevitable through science and technology.

Fourth: **The content and direction of international trade**. The content of international trade has shifted away from commodities, (exported primarily by developing countries) towards high-technology services and manufactured products, (typically the exports of industrial countries). These changes in the nature of international trade mean that, with the exception of oil, the industrial world simply does not need the developing world as it did 20 or 30 years ago. Also, powerful new trading blocks are growing up quickly and having major economic effects on all nations of the world.

Fifth: **Scientific and technological innovation**. Although the terms "biotechnology" and "micro-electronics" have been part of our vocabulary for some years now, they have not been easy to find in development literature until recently. Now, these and other similar phenomena are fast changing the way in which the international marketplace functions and the way in which we live our lives.

Communities and individuals who can tap into these new technologies by owning, using and adapting them will profit greatly. Those who are unable to do so are likely to become

increasingly marginalized from the global marketplace. Again, it is the poorer societies of the world and the poor segments of richer societies that are ill-equipped to benefit from the speed and intensity of scientific and technological change.

My sixth and final contextual point relates to the **major global shifts in socio-cultural value systems**. Aided and abetted by advances in communication and information technology, a westernized consumer/ popular culture is emerging all around the world. Accompanying this trend, is increasing evidence of deterioration in the collective bonds of community, kinship and the loss of traditional reference points of a spiritual and ideological nature. One growing reaction is the rise of religious fundamentalism, new religious sects, and anti-technology movements of various kinds. There is also growing evidence of serious intellectual questioning of the desirability of development in most of the forms in which we have known it.

These shifts of a socio-cultural nature may be of greater significance to "development" than the previous five. The approach to international development over the past four decades certainly included reference to culture and value systems. For the most part, however, values, beliefs and cultures were treated both in the literature and in practice as "externalities", very much in the same way as economists treated and continue to treat the environment as external to economic models. How could it be otherwise? Development and the vision that sustained it were linked inextricably to the dominant socio-economic paradigm. Development has been approached as a technocratic matter where the right combination of capital, technical know-how and of doing things "our" way would lead to "progress" or "development." And to be "developed" meant, by definition, to be like us.

The global shifts in socio-cultural value systems suggests to me more strongly than the other five factors I have listed that the once towering vision of global development cannot be rekindled by a bit of fine tuning.

The global shifts in socio-cultural value systems suggests to me more strongly than the other five factors I have listed that the once towering vision of global development cannot be rekindled by a bit of fine tuning. Things will not "return to normal" by mere

re-adjustment of the thresholds. New thinking, a new model -- yes, a new paradigm -- are needed. Imagination and humility will be needed to approach human existence and progress on a completely different basis, embracing people as beneficiaries not as resources and regarding their aspirations and beliefs as goals rather than constraints.

These six contextual features are components of a tidal shift, of the "third wave". We are living through no ordinary crisis; this is a "megacrisis", the dimensions of which we do not fully understand. Yet, our thinking, institutions and leaders are accustomed to addressing only limited manifestations of the megacrisis and always in a positive way. Our language reflects this. We speak of a temporary but nagging recession; we manage a Third World debt problem as a short-term liquidity problem; we look at the environmental peril of spaceship earth knowing that someone will come up with the right technological fix; we wage localized wars against inflation; recovery is just around the next corner. Yet, language and institutions aside, there is an awareness deep within -- a growing, amorphous awareness -- that this is indeed a **megacrisis**. The "New World Order" -- perhaps the fastest cliche ever to enter our language -- is quickly being replaced in our minds by the cynical words "New World Disorder". In all of this, it is hardly surprising that our 1950's concepts of economic development, of the elimination of poverty and misery, are in international free fall.

Yet, language and institutions aside, there is an awareness deep within -- a growing, amorphous awareness -- that this is indeed a megacrisis.

It may be instructive to pause for a moment and to recall a time when the world approached the end of a previous century and was staggered and bewildered by forces of tidal change. Thomas Paine (1737-1809), renowned in England, France and America as the protagonist of the Rights of Man, looked about his world at the end of the eighteenth century. What he saw was a Europe in disarray; the French revolution; the rise of the Reign of Terror; the American Revolution; Europe coming unstuck and on the verge of the Napoleonic Wars; demagogues rising up everywhere; the breakdown of government; people homeless in the streets as the result of the Industrial Revolution; individuals whose social,

economic and cultural roots had disappeared, who were no longer rural and had no place in an urban world; high degrees of violence and criminality; the beginning of the breakdown of the church.

Thomas Paine stood back from this frightening landscape and wrote the following:

> "We have it in our power to begin the world all over again. A situation similar to the present hath not appeared since the days of Noah until now."

Paine's words would, of course, be total hyperbole were it not for the fact that he was right. The very nature of society, of government, of the relationship of the individual to the collectivity was transformed in the years of the nineteenth century, as was the pattern of values, attitudes and beliefs.

We find ourselves again today in one of those rare historical or defining moments.

We find ourselves again today in one of those rare historical or defining moments. The world is being remade -- for good or for ill -- whether Canadians are active participants or passive observers. So how do we go about discovering or inventing a new vision of development, of a better, fairer, more sustainable world? In the words of Gus Speth, the new Administrator of the United Nations Development Program:

> "How do we turn off the crisis machine? ....How do we shape a new paradigm that can give the world hope, harness our energies and provide motivation?"

If there were ready answers to these critical questions, we would, of course, have discovered them by now. The megacrisis would be over; we and our fellow travellers on planet earth would be approaching the third millennium with some certainty as to direction and outcome. The Chinese proverb holds that: "If we don't change direction, we'll get to where we're going." With a few notable exceptions, opinion surveys from all parts of the world confirm a global sense of unease with where we are and a

13

deep fear of where we are going. Some will see hyperbole in this, but they would at least allow, I believe, that the way ahead in terms of the human condition is far from clear. Few would disagree that Pangloss would be as wrong today as he was when Voltaire had him say: "Tout est pour le mieux dans le meilleur des mondes possibles." And most today would associate with Voltaire's reply to Pangloss: "If this is the best of all possible worlds, what must the others be like!"

The diagnosis of a problem usually proves much easier than does prognosis.

The diagnosis of a problem usually proves much easier than does prognosis. Certainly, the dangers today are greater than when Paine saw in pervasive danger the opportunity to re-invent the world. Ours is a heavier legacy than Paine's and we have less time to fix things. Yet just as the Chinese ideogram for "crisis" is made up of two symbols -- one for danger and one for opportunity -- it is essential that we look beyond the dangers and that we seek out the opportunities. I have no roadmap to offer, but let me propose some modest thoughts as to what some of the opportunities might be. This I do knowing that these must be added to and expanded. What I see at the moment are three major clusters of opportunity which are fast emerging and which, if seized and nurtured, may help in moving us away from the megacrisis.

The first opportunity I see is in the trend towards increasing recognition and acceptance of global interdependence.

The first opportunity I see is in **the trend towards increasing recognition and acceptance of global interdependence**. To say this may appear at first blush to be naive, to ignore completely the current reality of ever increasing economic globalization with its unprecedented competition. Yet, in parallel with that globalization is the fact that the ideological battles of the past are being replaced by the search for a more pragmatic partnership between market efficiency and social compassion. And humanity is being reminded with the growing force of the rising environmental threat and of the imperative of common survival on this fragile planet, of the fact that we are all in this together.

This kind of thinking is, of course, not entirely new. Early in the 17th century, John Donne wrote that: "No man is an island, entire

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of itself; every man is a piece of the continent, a part of the main..." I don't think, however, that even Donne foresaw the global interdependence of which we are speaking. Some elements of this vision were clearly behind the founding charter of the United Nations, even though only 26 of the 184 nations now members of that organization were present as original signatories. The idea of global interdependence has been dangerously slow in taking root, but it is happening.

The United Nations Conference on Environment and Development, the Earth Summit at Rio, was evidence of this. Of the 182 nations who came to discuss the future of the world, 105 were represented by their heads of government. Also in attendance from all parts of the world and as major new players in international negotiations were non-governmental organizations, women's organizations, youth, and indigenous peoples' movements. Yes, there were different agendas. Yes, some came saying "the problem is in developing countries where population is growing too fast." Yes, some argued that "the villains are industrial countries where consumption is out of control." But, equally true is the fact that they came and that in some modest way some initial building blocks were laid for a global framework. Conventions on carbon-gas emissions and biodiversity were signed. Statements on forestry principles were promulgated. "Agenda 21" was announced as a global action plan, though one that was much watered down because it was in the end what it had to be: an intergovernmental, consensus document. But for whatever its defects, "Agenda 21" is a global action plan that assumes interdependence.

Another element of this recognition of interdependence is one which I detect in the debates within countries and within communities on "security". These debates are not on security in the Cold War sense of protection from nuclear attack; they entail a much more complex view of how a lifestyle -- be it national or individual -- depends on factors that are far removed from direct control, but over which some influence is desirable . Security for the northern hemisphere is seen increasingly in terms of what

happens to the rainforests of the Amazon or the drylands of Africa. Certainly, we do not understand all the linkages, but awareness and concern are growing.

The security debate does not end with environmental concerns. It is expanding to include security in terms of education and health security, food security, employment security and cultural security. And this is natural for we are already beginning to see that the conflicts of the future will be more between people than between nations. If we succeed in redefining security in this way, we may be able to take advantage of the only opportunity that history has given us to reduce military expenditures. In the past five years, we have seen a reduction of global military expenditure of some $250 billion. Never before, at least not in our lifetime, has this happened. There is a peace dividend and we should not be fooled into thinking that it is but an illusion. Military spending increased annually for over forty years, but it has decreased by 3 percent each year over the past six years.

This notion of interdependence is revolutionary; it requires not merely a change to some of our thoughts, but a change in mindset.

This notion of interdependence is revolutionary; it requires not merely a change to some of our thoughts, but a change in mindset. And one first step towards that may be the need for a change in language. Language is not mere detail; it hampers or facilitates our ability to look at a new set of relations and concepts that may be better adapted to the future. A characteristic of the current global transformation is that the landscape, or earthscape, is changing even as we attempt to understand and analyze it. A second characteristic is that our concepts and the language we use to express them are increasingly inadequate or, even, erroneous.

Interdependence is a concept of enormous complexity, requiring fresh thinking if we are to **understand** it. Although we know how to **describe** and how to **explain**, we can easily overlook the fact that describing and explaining do not amount to understanding. The former have to do with knowledge, which is the stuff of science, while the latter has to do with meaning, the stuff of enlightenment. I believe that I can describe and explain

interdependence, but I know that I do not understand it. I do not understand what it would mean to our theories of society, whether social or economic. And I do not understand what the boundaries of an interdependence paradigm would look like in terms of lifestyles and the relationship of lifestyles to physical ecology. What I do know is that much of my current language will not fit into an interdependence paradigm. Terms like "Third World", "North/South" or even "developing countries" suggest groups that are homogeneous, whereas we have long known that as labels they obscure as much as they elucidate. And I suspect that the word "development" itself will take on such a different meaning as to merit replacement rather than mere re-definition.

So, recognition of inter-dependence is a major opportunity and one that will require us to change our mindset and language.

So, recognition of interdependence is a major opportunity and one that will require us to change our mindset and language.

A second opportunity that we have is that **people are more and more clear about their desire to re-claim control** over their own lives. Now this is a simple assertion, but it has profound implications. The rate of technological and economic change has far outstripped the rate of social innovation, or even the power of governments to keep up. And this, of course, again challenges us to re-think what we mean by "development." Can we move beyond the simple controversies about whether economic growth is necessary or not? For most of the world, growth is not an option; it is an imperative. The debate is for the most part not about growth; it is about who participates in growth, who benefits from growth, and whether the growth is sustainable. Can we bury the mindset which holds that development is something that is done to and for people? Whatever else development is, it is self-administered; people do it by themselves and for themselves. Facilitation, help, the provision of the right conditions -- often called an "enabling environment" -- may be necessary to stimulate or to catalyse, but it is people that must act. In development many actors -- donor and government organizations -- have lost sight of this. In some cases, people have lost sight of it too. We want a clean environment, but it is someone else's responsibility to provide it.

The evidence is growing that people want to re-claim control over their own lives.

The evidence is growing that people want to re-claim control over their own lives. This is perhaps driven in part by sheer necessity, by the declining capacity of the nation-state to distribute social goods, by the basic drive for survival. But it is happening. Mabub ul Haq, principal architect of the UNDP's Human Development Report, captures brilliantly the opportunity this presents in issuing the following challenge as a Southerner to the South:

> "Can the South accept that 80 to 90 percent of the development task is its own responsibility? Will it finally refuse to find external alibis for their internal problems? Nobody from the outside has obliged Pakistan, Ethiopia and Somalia to spend more than three times as much on defense as on education and health. Nobody has forced Cameroon to experience public sector losses that exceed the total oil revenue of the state or Argentina to lose twice as much of its GNP on inefficient public enterprises as it spends on social services. And nobody has obliged Brazil to earmark 82 percent of its health budget to expensive urban hospitals while spending only 18 percent on primary health care facilities. We in the South have done it all ourselves. We must face up to this truth and take much-delayed actions on our domestic front."

There are elements of social innovation, or re-claiming control, that give cause for optimism. There is much despair about Africa, about the marginalization of most of an entire continent. And yet we are witnessing in Africa a veritable explosion of non-governmental and self-help organizations (a majority of them, by the way, organized and managed by groupings of women). We, at IDRC, have been so impressed by this and the opportunity it presents that we are trying to assist in the building of linkages between them so that they can learn from one another. And this is happening where, until quite recently, governments were hostile to these kinds of organizations, on the grounds that they infringed on government's role as the sole purveyor of development.

This phenomenon is by no means restricted to the poorer parts of the world. Throughout the industrial world, including very much our own country, we are seeing the emergence of new forms of consultation, stakeholders processes, roundtables, with a view to resolving potential conflict and building consensus.

John Evans, ex-President of the University of Toronto, now chair of Torstar Corporation, has recently spoken out about the importance of social capital as the engine of development, and he urges us to rediscover the virtues of community development and action. He has drawn attention to a recent book by Robert Putnam describing studies which strongly link economic development to the quality of social organizations in the community.

> "Historical reviews in Italy suggest that communities did not become civil because they were rich, but rather became rich because they were civic....... The social capital represented by networks of civic engagements seems to be a pre-condition for economic development and effective government. A society that relies on generalized reciprocity and mutual assistance is more effective than a competitive, distrustful society. The network helps to overcome anonymity, cultivates reputation and builds trust of others through communication and interaction. Successful collaboration in one activity builds social capital connections and trust for other activities. The social capital is built from an investment of the time and caring of individuals: it does not deplete the public treasury."

At the root of the re-focusing urged by John Evans is a paradigm shift in values. The practice of development over the past forty years has cloaked itself in the pretense that it was value-free or value-neutral. Nothing was further from the truth.

At the root of the re-focusing urged by John Evans is a paradigm shift in values. The practice of development over the past forty years has cloaked itself in the pretense that it was value-free or value-neutral. Nothing was further from the truth. The foundation stone of development thought and practice was the dominant socio-economic paradigm of the industrial north, emphasizing individualism, technology, consumption, personal wealth and the

19

inadvertent neglect of the social fabric of the community. Values and culture were externalities which simply "got in the way"; they were dealt with only as necessary.

The subject of values, of culture -- indeed, of human spirituality -- are becoming a much more accepted part of the development debate than they have been over the last 40 years.

The subject of values, of culture -- indeed, of human spirituality -- are becoming a much more accepted part of the development debate than they have been over the last 40 years. The change derives in considerable measure from our own feeling in the richer countries that **we have not got it all right**. Confidence in our unsustainable model has now been shaken, and that has brought...is bringing... a greater interest in questioning the value set underlying our own model, our own dominant paradigm. Similarly, our faith in technology -- that fundamental feature of our Western, secular ethos -- as the great fixer of all the ills we could visit on the planet and as a guaranteed source of higher living standards, has been shaken. With new-found humility, we are much more able to recognize what we don't know, and what we may even have to learn from others.

So people reasserting control, and re-focusing development has tremendous potential and is a powerful opportunity.

You will not be surprised that coming from a knowledge-based organization, I see a **third area of opportunity in the quest for innovation**. There is an awareness of the importance of innovating, and learning to do things differently that makes for a demand -- a thirst -- for knowledge. Not only are we in the midst of global transformation based on knowledge, in terms of our production processes, but we require better knowledge overall to respond to the conditions that define the crisis. And this demand for knowledge about how to do things better has probably never been more pronounced. The quest for innovation is accelerating and is evident at both the macro and micro levels.

At the macro level, we are emerging from a major ideological battle around the issues of the market and the state.

At the macro level, we are emerging from a major ideological battle around the issues of the market and the state. One of the myths that characterized the battle was that the market could do it all. Yet any reading of history tells us that the very qualities of

aggressiveness, daring and, yes, greed that make markets work also cause them to fail. And that same reading of history tells us that a strong state is needed to deal with market failure or, better still, to prevent the more severe dislocations by preventing market failure. History notwithstanding, we still hear strident claims that socialism is dead and the market has triumphed. Capitalism has shown its vitality and not for the first time, but we must ensure that the victory is not a victory only of personal greed. And if socialism as an ideology is vanquished, let us ensure that it is not also the death of all social objectives. Of course, the efficiency of the marketplace is needed. The creative energies of capitalism must be blended with the social objectives of equity and of human development.

The creative energies of capitalism must be blended with the social objectives of equity and of human development.

Robert Heilbroner in his 1992 essay "Twenty-First Century Capitalism" looks to the future and offers a reflection on the possible nature of an innovative economic-social blend:

> "If I were to hazard a description of the capitalisms most likely to succeed, I would think they would be those characterized by a high degree of political pragmatism, a low index of ideological fervour, a well-developed civil service, and a tradition of public cohesion. All successful capitalisms, I further believe, will find ways to assure labour of security of employment and income, management of the right to restructure tasks for efficiency's sake, and government of its legitimate role as a coordinator of national growth. "

The call for appropriate innovation at the macro level is striking an increasingly resonant chord. It is a call for the seizing of opportunity in the face of danger. At present, we can grasp but the dim outlines of appropriate innovations in this area, but it is here in the pragmatic combination of efficiency and equity that the viability of future models of development will be found.

Ongoing adaptation, enrichment and innovation to technologies is the key to more sustained economic growth.

At the micro level, innovation in technology also has a role to play -- if not as the all-powerful fixer, at least as the essential helper. We know that technology has been a driving factor in all cases of rapid economic growth. This proved as true for the United States in the 19th century, Japan in the 19th and early 20th centuries, as it has been for South Korea, Taiwan, or Singapore over the past few years. Entirely new technologies open fantastic new opportunities. But ongoing adaptation, enrichment and innovation to technologies is the key to more sustained economic growth.

We have also become, too late for many it must be said, much more mindful of the tremendous potential of indigenous knowledge, micro knowledge about particular plants, knowledge about how to live harmoniously with specific eco-systems. Having said this, we should be mindful of the high level of asymmetry in power and resources for essential R&D on such matters. Global R&D expenditures are estimated in the order of $450 billion. Only $20 billion (less than 5 percent) of that is spent in developing countries.

The quest for innovation is rising. The challenge is to nurture it, to capture its constructive impulse and to incorporate it fully, deliberately, strategically into new thinking on a new vision of development, into a new paradigm that can turn off the crisis machine and signal hope for a sustainable and equitable future.

Conclusion

I have argued that in understanding the "why" and the "how" of re-thinking "development", we must take account of the principal features of change in the global context. The scope of these changes and the transformation that we are in may lead us to talk of megacrisis, but this must not allow us to falter in seeking out a much-needed new vision of global development; rather it must inform and contribute to it. I am convinced that we have opportunities that can assist us in re-inventing the world and I have suggested three for further consideration. You will no doubt think of others. These opportunities are exciting and must command our active participation, as citizens, as thinkers, as human beings. But opportunities in themselves speak only to potential; they have to be grasped if they are to contribute to the solutions and to the vision that we require.

Building on the recognition of interdependence will require an international institutional framework that is more effective and more robust than the one we now have.

Building on the recognition of interdependence will require an international institutional framework that is more effective and more robust than the one we now have. The present set of institutions and mechanisms is inadequate for dealing with the changes that have already taken place in our world, much less those that are still to come.

People will expect and demand a more direct role in international, regional and national institutions.

People will expect and demand a more direct role in international, regional and national institutions. NGOs are going to play a bigger role in the UN either directly or through parallel but influential channels such as occurred at Rio. More experimentation and use will be made of inclusive means of consultation and consensus-building. Social innovation, building on our social capital, must invigorate our communities and our interactions.

The quest for innovation presents enormous challenges to knowledge-based institutions such as the International Development Research Centre and the universities. In IDRC's case, we see this as the challenge of putting knowledge into action -- building a global partnership of knowledge by

strengthening developing countries' capacity to participate and contribute to creating and using it for development. For knowledge to be used requires that those using it "appropriate" it, assume ownership of it, and this requires capacity. And we will do what we can to link these efforts to Canada's own research capacity, to ensure mutual learning.

The 21st century could be -- more than this, it must be -- a time when human knowledge supports a new vision of global sustainable and equitable development.

The 21st century could be -- more than this, it must be -- a time when human knowledge supports a new vision of global sustainable and equitable development. Let me end with two quotations. The first is from Harvey Brooks, one of the great senior statesmen of American science. In a recent lecture, he stated:

> "We find ourselves at a unique moment in human history on the planet .... a time not only of unprecedented problems but also of unprecedented opportunities.... We are thus in a time of transition --- a transition leading either towards catastrophe and social disintegration or towards a sustainably growing world society ....."

The second quotation is from Barbara Ward who served on the Board of Governors of IDRC. Speaking a quarter of a century ago she said:

> "The moral challenge of our day is nothing less than the ability of our civilization to use the technology of abundance to recreate, not destroy, the face of the earth."

2

CHALLENGES FOR HIGHER EDUCATION POLICY*

UNESCO

Introduction

Access to higher education and to the broad range of services it can render to society is part and parcel of any sustainable development programme in which high-level human expertise and professional skills are required.

Recent developments in higher education are diverse and often specific to regional, national and local contexts. Over and above these differences, however, three main trends emerge.

Recent developments in higher education are diverse and often specific to regional, national and local contexts. Over and above these differences, however, three main trends emerge which are common to higher education systems and institutions worldwide:

- quantitative expansion, which is nevertheless accompanied by continuing inter-country and inter-regional inequalities in access;

- diversification of institutional structures, programmes and forms of studies;

- financial constraints.

The widening gap between the developing and developed countries with regard to the conditions of higher education and research is of particular concern.

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*This paper is an edited form of UNESCO's Policy Paper for Change and Development in Higher Education. All changes have been made in consultation with Mr. M. Dias, Director of UNESCO's Higher Education Division. (No new ideas have been added. All changes are of a structural or synthesis nature).

Challenges for Higher Education in a Changing World

Current international trends are characterized by a series of concurrent, sometimes contradictory, processes:

- Democratization, which can be seen in the removal and collapse of many totalitarian regimes and in the steady advance of democratic forces. This serves as the foundation for development and collective action aimed at guaranteeing peace and respect for human rights.

- Globalization, which reflects the growing interdependence on a world scale of national and local economies and trade.

Regional arrangements may also be useful in matters of education, culture, environment, labour markets and infrastructures.

- Regionalization, in which States form groupings to facilitate trade and economic integration as a means of reinforcing their competitiveness. Regional arrangements may also be useful in matters of education, culture, environment, labour markets and infrastructures.

- Polarization, which is evident in increased inequalities on a global, regional and national scale and results in a widening gap between rich and poor countries and populations, with the whole array of political, economic and social consequences this process entails.

- Marginalization, which is clear from the international or local isolation of a number of countries as well as of certain segments of the population because of various forms of underdevelopment.

- Fragmentation, which foments social and cultural discord, and, in its extreme form, can lead to 'atomization', through attempts to divide States and local communities along ethnic, tribal or religious lines.

Some UN Perspectives

The emergence of a collective will for more efficient action at all levels to set development on a new course has prompted the United Nations and its Specialized Agencies, programmes and funds to search for new approaches. This line of action has been reflected in the agendas, debates and decisions of various international fora held under the auspices of the United Nations. These have included:

- *United Nations Conference on Environment and Development* (June 1992, Rio de Janeiro) which adopted *Agenda 21* as a blueprint for action for global sustainable development into the next century;

- *Agenda for Peace,* which sets out the objectives, principles and possible measures to be taken up in order to ensure peace and security, adopted by the United Nations in 1992;

- *World Conference on Human Rights* (June 1993, Vienna), the decisions of which reinforced the view that development is a universal right and an integral part of human rights;

- *International Conference on Population and Development* (September 1994, Cairo), which pointed to the corner-stone role played by education in coping with the population factor in the current and future development agenda.

The common denominator of the views set out in these documents is the strong recommendation for concerted action by all concerned - States and governments, intergovernmental organizations, business and professional communities, non-governmental organizations, the media and the public at large in order to shape the policies, attitudes and modes of action of the community towards **sustainable human development.**

Shifting Imperatives of Economic and Technological Development

One of the critical economic challenges facing many countries, including the most industrialized, **is how to enhance their ability to adapt to changes** in the economy, technology and international trade. The pace and depth of those changes are unprecedented and affect many domains of human activity. They create new opportunities but also pose numerous problems, particularly with regard to the world of work. Developments in this domain go beyond the usual ups and downs of economic fluctuations. It is also increasingly understood that the impact of economic and technological change is such that, if not dealt with in time and in an adequate manner, it can unravel a whole set of social and political problems with inevitable local, national, regional and international consequences. Much is expected of education and training in order to cope with these shifting imperatives.

The impact of technological development, particularly in information and communications, is such that all countries, regardless of their level of industrial development, have to use globally accepted standards and equipment This applies not only to **'hardware'**, but also to organizational structures and the human factor - **'humanware'**. This is dependent on or related to education, particularly at the vocational and higher levels.

The consequences of the above developments are particularly relevant for higher education, since it is this level which, in co-operation with vocational and technical education, is engaged in the development of a quality work-force on which depends the creation of quality jobs.

Research into modern social and economic development shows that it cannot flourish inside rigid or imposed structures.

Research into modern social and economic development shows that it cannot flourish inside rigid or imposed structures. The failure of development strategies based on the rigid transmission or imposition of economic models is one lesson drawn from practical experience, particularly in sub-Saharan Africa, Latin

America, and Central and Eastern Europe. This conclusion also applies to the problems facing higher education. One of the main findings of the UNESCO consultations organized in preparation for the policy paper (of which this is a synthesis) was that more and more people and institutions have become aware that, in all regions, the rigid adoption of foreign concepts and values and the neglect of regional and national cultures and philosophies have had negative repercussions on education. This finding should be borne in mind by States undertaking higher education reforms.

Responses of Higher Education - A New Vision

The options to be considered and decisions to be made by policy-makers at the international, national, regional and institutional levels should be guided by the three watchwords which determine the strategic positioning of higher education in society as well as its internal functioning - **relevance, quality and internationalization**. This paper will now explore each of these themes.

Relations with Society as a Whole: Relevance of Higher Education

The relevance of higher education is perhaps best expressed through the variety of 'academic services' it renders to society.

Relevance is considered particularly in terms of the role of higher education as a system and of each of its institutions towards society, as well as in terms of the latter's expectations with regard to higher education. It must thus include matters like democratization of access and broader opportunities for participation in higher education during various stages of life, links to the world of work and the responsibilities of higher education towards the education system as a whole. No less important is participation by the higher education community in the search for solutions to pressing human problems such as population, environment, peace and international understanding, democracy and human rights. The relevance of higher education is perhaps best expressed through the variety of 'academic services' it renders to society. In the years to come, the types and

methods of delivery of these services will need to be redefined and renegotiated.

The relevance of higher education is considered primarily in terms of its role and place in society, its functions with regard to teaching, research and the resulting services, as well as in terms of its links with the world of work in a broad sense, relations with the State and public funding, and interactions with other levels and forms of education.

Higher Education and the World of Work

Two parallel trends determine the relationship between higher education and the world of work.

Two parallel trends determine the relationship between higher education and the world of work. First, higher education is moving towards a mass enrolment system, as modern economies become increasingly knowledge intensive and therefore depend more on graduates of higher education, who constitute a 'thinking work-force'. Secondly, graduates will have to accept the need to keep changing jobs, update their knowledge and learn new skills. The world of work is being radically redefined and a large part of the specific knowledge that students acquire during their initial training will rapidly become obsolete. Continuous and interactive partnerships with the productive sector are essential and must be integrated into the overall mission and activities of higher education institutions. But it should be emphasized that higher education has to view its relations with the world of work from a long-term perspective and in broad terms.

Although higher education institutions are not the only ones in modern society providing professional training of highly qualified personnel, this nevertheless remains one of their major responsibilities. Universities and other higher education institutions are still considered a particularly appropriate place for the overall training of those leaving secondary education in many academic disciplines and on which further professional training can be based. They also provide an appropriate setting for young people to develop skills essential for effective collaboration between individuals with varied professional and

cultural backgrounds. This traditional function has to be seen in the context of the growing need for 'educational services', as society moves towards a model of **lifelong learning for all,** which is gradually replacing the prevailing model of selective and concentrated learning and study for a limited period. Only a sufficiently diversified and flexible system of access to and provision of higher education can meet the challenges of a rapidly changing labour market.

New conditions in the world of work have a direct influence on the aims of teaching and training in higher education.

New conditions in the world of work have a direct influence on the aims of teaching and training in higher education. Merely increasing curriculum content and students' work-load cannot be a viable solution. Preference should therefore be given to subjects which develop students' intellectual capacity and allow them to deal **judiciously with technological, economic and cultural change** and diversity, equip them with qualities such as initiative, an entrepreneurial attitude and adaptability, and allow them to function with greater confidence in a modern work environment.

With this in mind, higher education must develop both responsive and pro-active attitudes towards the labour market and the emergence of new areas and forms of employment. It needs to pay attention to changes in major market trends so as to adapt curricula and the organization of studies to shifting circumstances and thus ensure greater chances of employment for graduates. More importantly, however, higher education must contribute to shaping the labour markets of the future, both by performing its traditional functions and by helping to identify new local and regional needs conducive to sustainable human development. Put succinctly, at the times when the equation 'degree = job' no longer applies, higher education is expected to produce graduates who can be not only job seekers but also successful **entrepreneurs and job creators.**

In response to these challenges, the active involvement of the academic community with economic partners is increasingly perceived as an integral part of the mission of higher education. These relations still mainly concern research which can contribute

to technological development, but there is a growing understanding of the need to expand them to such areas as teaching, training, organization of study and institutional structures. At the same time, new arrangements based on flexibility in programme delivery are being sought to serve as viable mechanisms for the promotion, maintenance and strengthening of stable and mutually beneficial interactions.

As organizations in the private and public sectors are increasingly exposed to the effects of worldwide economic and political change, employees who can work efficiently in such settings also require an international context for training, retraining and refresher courses.

As organizations in the private and public sectors are increasingly exposed to the effects of worldwide economic and political change, employees who can work efficiently in such settings also require an international context for training, retraining and refresher courses. Higher education institutions, as organizations encompassing many cultures and participating in a wide spectrum of international activities, are well suited to providing a sufficiently dynamic studying and teaching environment with a pronounced international dimension and a global perspective.

The process of globalization provides additional evidence that modern development of human resources implies not only a need for expertise in advanced professionalism but also full awareness of the cultural, environmental and social issues involved. It has become important for higher education institutions to reinforce their role in enhancing ethical and moral values in society and to focus attention on developing an active, participatory civic spirit among future graduates. Greater emphasis is also needed on the student's personal development alongside preparation for professional life. The demand for such graduates and study programmes could represent an opportunity for the revitalization of humanities and the arts in higher education and open up new opportunities for co-operative links with various economic and public organizations.

Relations with the State and the Basis for Institutional Governance and Management

A clear grasp of the principles on which relations between higher education and the State are based is a pre-condition for quality

and accountability in governance and management of higher education institutions. **Academic freedom,** understood as a set of individual and collective rights and responsibilities, is central in this respect. Together with the recognition of institutional autonomy, it is essential for the preservation of the university or any other higher education institution as a community of free inquiry. It is these principles which, in many respects, make higher education institutions different from educational institutions at other levels and from research organizations. This should not be interpreted as an imposition of external models and principles but as a general prerequisite for progress in the dissemination of knowledge and the services higher education can offer to a given community and to society as a whole.

Recent history has provided strong evidence of the need to defend the principle of academic freedom as a sine qua non for the existence and normal functioning of higher education institutions.

Recent history has provided strong evidence of the need to defend the principle of academic freedom as a *sine qua non* for the existence and normal functioning of higher education institutions. The proper degree of statutory institutional autonomy should therefore be granted to both **public and accredited private higher education institutions** to allow them to be relevant and perform their creative, reflective and critical functions in society. While the State may ensure general co-ordination in various system-wide policy matters such as accreditation and quality assessment. institutional self-governance should be given adequate, pragmatic form. At the same time, the entire socio-economic environment is compelling higher education institutions to build up ties and partnerships with the State and other sectors of society and to accept that they are accountable to society.

However the principles of academic freedom and institutional autonomy should not be used as a cover for professional negligence and/or organizational incompetence.

However the principles of academic freedom and institutional autonomy should not be used as a cover for professional negligence and/or organizational incompetence. They should imply increased responsibility in academic work, including its ethical context, and in matters of funding, self-evaluation of research and teaching, and a constant concern for cost-effectiveness and efficiency. On the other hand, evaluation and quality assessment, particularly of public higher education

institutions, should not be made synonymous with external over-regulation or used as a way of restricting public funding. They should function as mechanisms allowing higher education to secure its self-improvement. In this complex policy environment. Both the State and higher education institutions should recognize the positive role played by 'buffer organizations' and other institutional forms of collective representation.

The most viable institutions of higher education, in both financial and operational terms, are those which have succeeded in incorporating mechanisms and information systems that enable them to remove mediocrity and guarantee quality of teaching, research and service.

The most viable institutions of higher education, in both financial and operational terms, are those which have succeeded in incorporating mechanisms and information systems that enable them to remove mediocrity and guarantee quality of teaching, research and service. These are also the institutions which stand a better chance in competition to obtain resources from the public and private sectors.

A key to improved governance and management is confidence in the leadership and managerial qualifications of those involved in these activities. This implies improvements in selection and assessment as well as the enhancement of appropriate training and development provisions at the system, institutional and department levels. It also implies further promotion of research on higher education which should be regarded as an important 'knowledge base' for policy- making.

Funding and Cost-sharing Responsibilities

Higher education has to show that it can compete with other organized interests for financial attention from public funding sources.

The major problem facing almost all developed and certainly all developing countries is the basic dilemma that arises from continued high social and individual demand for access to various forms of studies and educational services at a time of growing constraints on public budgets. This situation is nowadays a principal source of strained relations between the State on the one hand and higher education institutions and the academic community on the other. Higher education has to show that it can compete with other organized interests for financial attention from public funding sources. However, the existing and projected difficulties of public budgets should not be the sole context in

which the financing of higher education is discussed; it is also timely to discuss these problems from the point of view of shifting the burden for expansion of higher education from public to private sources.

Under existing economic conditions, institutions of higher education sometimes have recourse to selective 'cost recovery' regarding their service activities. The adoption of such measures should be accompanied by an earnest search for ways of making more efficient use of their own human and material resources. The introduction of **tuition fees,** for instance, is a sensitive issue in higher education and should, accordingly, be approached with due caution since it touches on many aspects of social justice and mobility, educational equity and the educational, social and fiscal policies of the State in general. It also has to be seen in the context of academic streaming, which is affected by existing tuition fees at the preceding levels of the education system because of its external and internal implications for the student body, governance and public standing. Above all, due attention should be paid to accompanying fees with adequate provision of support for needy students in the form of grants and loans.

There is a risk that a radically applied policy of detachment of the State from higher education in matters of funding, influenced by a narrowly interpreted concept of the 'social value' of a given level of education, may result in excessive pressure for 'cost recovery' and calls for 'alternative funding' and 'internal efficiency gains' in teaching, research and administration. Another danger is an excessive demand to 'commercialize' the activities carried out by higher education institutions. In this case, observance of standards concerning student admission, study programmes, graduation and teaching may become a matter of general concern and a source of tension between higher education establishments, the State and the public at large. Efforts should therefore be made, through appropriate monitoring and accreditation procedures, to reduce these tensions since all genuine higher education establishments, regardless of their form of 'ownership', are called upon to perform mainly public functions.

Above all, due attention should be paid to accompanying fees with adequate provision of support for needy students in the form of grants and loans.

The main criteria for evaluating the functioning of higher education are the quality of teaching, training, research and service to the community.

The main criteria for evaluating the functioning of higher education are the quality of teaching, training, research and service to the community. Therefore, it is important not to confuse the liberalization of economic relations and the need to promote an 'entrepreneurial spirit' with the absence of public social policies, in particular in relation to financing of higher education. Nor should the granting of institutional autonomy be interpreted as a policy alternative to force institutions to raise their own funds - either by excessively contracting out their services to industry or by introducing or raising tuition fees and other study-related charges.

Ultimately, if the university or any other higher education institution is expected to make a significant contribution to change and advancement in society, the State and society in general should perceive higher education less as a burden on the public budget and more as a long-term national investment for enhancing economic competitiveness, cultural development and social cohesion. This is also the framework within which the problem of cost-sharing responsibilities needs to be addressed. In conclusion, **public support to higher education remains essential to ensure its educational, social and institutional mission.**

Renewal of Teaching and Learning - Issues of Content and Delivery

There is general consensus on the need to enhance the interdisciplinary and multi-disciplinary content of studies and to increase the effectiveness of methods of delivery.

To meet the needs of the agenda for sustainable human development, higher education must adapt its study programmes and, whenever necessary, adopt and develop new ones. The knowledge explosion has resulted in a considerable increase in the number of programmes offered by higher education institutions. One characteristic of this explosion is the interdependence of various scientific disciplines, and there is general consensus on the need to enhance the **interdisciplinary and multidisciplinary** content of studies and to increase the effectiveness of methods of delivery. Initiatives aimed at the renewal of learning and teaching must reflect such developments.

In order to achieve this aim, higher education institutions should re-evaluate the place of teaching in their overall mission and provide incentives which would better reflect the current importance of this activity. At the same time, they should establish numerous - but not necessarily formalized - links with organizations, trade and industry. They could help to improve conditions of access and ease participation in **new forms of higher education.** While based on traditional studies, these could also encompass advanced programmes of vocational training for those unable to follow the traditional system of admission. For instance, more flexible organization of studies and certification as well as the development of external programmes with the assistance of new communication and information technologies would facilitate access for individuals and communities in rural areas. This would also mean that higher education institutions should make a stronger commitment to the emerging general model **of lifelong learning.** This would call for the establishment of new types of relations between higher education institutions and their social partners. It would also imply a continuous analysis of the need for study programmes, training and retraining, and would require the establishment of methods for adequate recognition of work experience relevant to students' academic work and to instructors' teaching qualifications.

New roles for higher education will need to be defined to provide lifelong learning opportunities at the highest level.

New roles for higher education will need to be defined to provide lifelong learning opportunities at the highest level. Less formal and more flexible methods of advanced training and updating knowledge and skills must be found. Flexible organizational structures for teaching should not only be in harmony with the existing subtle links between knowledge-generating activities and teaching, but should make it easier for specialists from economic and other sectors to teach in higher education institutions. Experienced people from the world of business, government and international organizations could thus inject new ideas into study programmes.

The effectiveness of the renewal of learning and teaching also depends on how knowledge is transmitted. It is increasingly

evident that under the combined impact of software and hardware development in information and communication technology, avenues have now been opened up to facilitate new types of educational service. This technology-based learning environment calls for rethinking teaching practices as well as the overall functions of campus-wide information systems. In order to be favourably accepted by the academic community, in particular by students and teachers, and to be fully beneficial to learning and teaching, the use of information technology should be judiciously placed on the institutional agendas of commitment aimed at improving learning, teaching and information services, particularly libraries. Further development of these technologies in higher education also depends on finding satisfactory solutions to reconcile the academic community's need for access to information and the interests of the owners of intellectual property rights, especially those involved in commercial publishing and information exchanges.

Higher education institutions should make greater use of the advantages offered by the advancement of communication technologies.

Higher education institutions should make greater use of the advantages offered by the advancement of communication technologies. It is now possible, for example, to integrate distance learning into more traditional study programmes without loss of quality. As a result of such developments, the distinction between distance and traditional education is becoming blurred. Alternative delivery systems are an increasingly viable element in a forward-looking blueprint for higher education, especially in opening up to a new clientele and creating flexible strategies in order to overcome the disadvantages associated with the traditional organization of studies. Co-operation with both public and private organizations and associations should be fostered in this respect.

In this search for new solutions, institutions in many countries have been looking for alternatives to traditional study programmes through the development of **knowledge modules.** The introduction of modular curricula as organizational frameworks for studying and teaching warrants further exploration and encouragement. It requires improvement of the

system of study counselling, appropriate adjustments concerning the course ownership and term-structured formats used by many faculties, redesigned student support and tutoring services (especially in distance higher education) and opportunities for study credit and staff transfers between various forms and fields of study.

The system of mutual national and international recognition of studies, diplomas and degrees should reflect and facilitate this flexible system and stimulate vocational counselling and the upgrading of professional qualifications. At the same time, it seems evident that the adoption of modular systems could facilitate the international recognition of studies and diplomas, thus favouring academic flexibility and increased mobility. The need for international agreements, co-operation mechanisms and practices in this field seems both justified and indispensable.

Strengthening the Research Function of Higher Education

No system of higher education can fulfill its mission and be a viable partner for society in general unless some of its teaching staff and organizational entities - in accordance with their particular institutional goals, academic potential and material resources - also carry out research.

No system of higher education can fulfill its mission and be a viable partner for society in general unless some of its teaching staff and organizational entities - in accordance with their particular institutional goals, academic potential and material resources - also carry out research. This statement needs to be reiterated particularly now that higher education, in common with other research organizations, needs renewed public support. Society must restore the scientific 'faith' of researchers to enable them **to pursue new goals** in the light of the complex ecological, economic, social and cultural issues facing humanity.

The research function of higher education has also become characterized by the diversification of those engaged in leading-edge scholarly work. Higher education institutions, particularly in the developed countries, face strong competition from research institutions outside the academic community which, in many fields, possess better equipment and more resources. On the other hand, the public funds allocated for research in academic institutions are being subjected to greater

administrative restrictions. Under such conditions, higher education institutions and researchers themselves have to show their capacity to compete with other research organizations and adapt to new approaches to funding and to devise new organizational forms of co-operation in research.

Emphasis on short-term gains and the pressure of budgetary constraints can lead to serious long-term consequences for higher education institutions as the proper seats for the advancement of knowledge and the training of future scientists and industrial researchers. Research departments in higher education institutions, although costly, are a crucial source of skills and ideas in the context of the global economy based on knowledge and constant technological change. The best way to make the general public, government bodies and economic organizations aware of the role of research in higher education is to demonstrate, through convincing results, the scholarly quality, economic value, humanistic perspective and cultural relevance of research and the related study programmes and teaching.

Because of the costs involved, many countries, particularly those facing serious economic difficulties, have tended to resort to cuts in funding research in higher education, even though they are sometimes the main, and in many developing countries the only, places where significant research activities take place and where technology suited to local needs can be developed. Meaningful rationalization of research efforts should incite many countries and institutions, particularly in developing States, to effectively coordinate their sometimes over-fragmented research programmes and establish **linkages** and/or **networks** of centres where meaningful research can be carried out.

The educational benefits of activities associated with research are often under-estimated, partly because the links between teaching and research are not always straightforward or tangible.

The educational benefits of activities associated with research are often underestimated, partly because the links between teaching and research are not always straightforward or tangible. It is important that research in higher education institutions be undertaken not only for reasons of scholarly prestige or for economic considerations but also as part of the overall renewal

and development of learning, teaching and public service activities, including the dissemination of knowledge. Researchers should therefore also look at how their findings can be included in curricula and retraining programmes. Besides its educational value, participation in scientific projects teaches students how to work as part of a team and to accept the discipline inherent in any scientific pursuit.

Science is continuously confronted with new issues requiring knowledge from several fields and therefore the interdisciplinary training of researchers.

Science is continuously confronted with new issues requiring knowledge from several fields and therefore the interdisciplinary training of researchers. The number of areas of common concern, subtle links and joint explorations between science, technology and culture is rapidly increasing. Higher education institutions and other innovative organizational settings, such as science parks or technology incubators, provide a suitable environment to embark on such experiments.

Responsibility of Higher Education Towards Other Education Levels

Any forward-looking vision of education and any adequate education policy must consider the education system as a whole.

Any forward-looking vision of education and any adequate education policy must consider the education system as a whole. Accordingly, any reform of higher education must take into account its close interdependence with all the other levels of education.

This indispensable coherence of the educational system stems from the fact that higher education both depends on the results of the work done by prior levels of education and is responsible for the training of teachers for primary and secondary education. Moreover, research and innovation, including the development of new educational methods and teaching and learning materials, are often conceptualized, developed and tested by those working in higher education institutions before being applied in the system as a whole. **Higher education needs to assume a leading role in the renovation of the entire education system.**

The other persuasive argument for greater links between higher education and schools is that teaching at primary and secondary level and in technical and vocational schools increasingly demands the qualities and skills of university-level training, particularly in developing students' capacity for autonomous learning and critical thinking. Full command of the discipline being taught also calls for periods of in-service training. By playing such a role in the professional development of teachers, higher education can contribute to the improvement of the status of the leaching profession.

Higher education should assume a greater role - together with the preceding levels of education and in co-operation with scientific organizations and the mass media - in bringing science more into education and culture.

Higher education should assume a greater role - together with the preceding levels of education and in co-operation with scientific organizations and the mass media - in bringing science more into education and culture. One way would be to develop 'science-friendly' curricula and activities to enhance functional technological literacy and encourage more young people, especially women, to pursue studies in natural science, technology and engineering.

Quality of Higher Education

The demand for increased relevance in higher education should go hand in hand with the general concern for enhanced quality.

The demand for increased relevance in higher education should go hand in hand with the general concern for **enhanced quality.** Quality in higher education is a multidimensional concept which depends to a large extent on the contextual setting of a given system, institutional mission, or conditions and standards within a given discipline. For several years now, the policy debate in higher education has been dominated by concern for quality. There is every reason to believe that this will continue in future, given its implications for the development and reform of higher education. Quality embraces all its main functions and activities: quality of teaching, training and research, which means the quality of its **staff and programmes,** and quality of **learning** as a corollary of teaching and research. However, it should be accepted that the search for 'quality' has many facets and goes beyond a narrow interpretation of the academic role of different programmes. It therefore also implies attention to questions

pertaining to the quality of **students** and of **the infrastructure and academic environment.** All these quality-related issues, together with adequate concern for good governance and management, play an important role in how a particular institution functions, how it is assessed and what 'institutional image' it can project to the academic community and society at large. Finally, it is essential to indicate that the principal objective of 'quality assessment' is to achieve institutional as well as system-wide improvement.

Quality of Staff and Progressions

Many higher education establishments, primarily universities and other university-level institutions, enjoy a deserved prestige on the national and international scene. This status is assured principally by the academic eminence of their past and present teachers and researchers.

Many higher education establishments, primarily universities and other university-level institutions, enjoy a deserved prestige on the national and international scene. This status is assured principally by the academic eminence of their past and present teachers and researchers. It represents an important factor in the intellectual and moral authority of academe and for the preservation and promulgation of institutional culture and academic standing. It is, however, improper for higher education to take such recognition for granted, especially now that governments, politicians, representatives of the economic sector and the public are insisting on evaluation, quality assessment and the accountability of all kinds of public institution, including higher education establishments.

The analysis of the quality of academic staff, which should be one of the prerequisites for the renewal of teaching and research, involves the following main issues:

- The **proper distribution of the resources and tasks** constituting the work-load of academic staff, i.e. teaching, tutoring, research, participation in institutional governance, management and administration, as well as community service.

- The appropriate financial and nonmonetary **recognition** to be given to the above activities.

43

- The **recruitment and staff development policies, strategies and practices** which are integral parts of national and/or institutional policies for higher education and the concern of teachers and their associations to acquire tenure and job security. This brings to the fore the issues of contractual arrangements for the employment of academic staff, including tenure and the procedures for granting it, promotion, retirement and positions of emeritus professor.

The solutions needed to enhance the quality of higher education can be found in measures covering not only financial issues but also respect for the principles of academic freedom and institutional autonomy. However these fundamental principles should not be invoked in order to militate against necessary changes or as a cover for narrow-minded

Quality of Infrastructure and Academic Environment

One of the barriers to enhancing the quality of teaching and research is the state of what may be broadly described as the 'physical academic environment' of higher education institutions.

One of the barriers to enhancing the quality of teaching and research is the state of what may be broadly described as the 'physical academic environment' of higher education institutions, which covers everything from access roads to computerized networking and data processing facilities. The quality of this environment is also important in the context of institutional culture, which attaches importance to institutional identity, or keeping together an academically and socially diversified network of buildings and/or campuses.

This matter is particularly pertinent in the context of UNESCO's projections showing that participation in higher education by the 18-23 age-group is set to increase. By the year 2025 it will be necessary to provide adequate places for an additional 35 million students. These figures do not include other categories of student (part-timers, for example) whose numbers are rapidly growing in almost all countries.

Capital investment aimed at modernizing and improving the infrastructure of higher education should be seen by both public

and private local, regional and national organizations as 'public works' forming an integral and important part of overall efforts towards modernization of the economy-related infrastructure. No less important in this respect is the fact that some facilities of higher education institutions are often used for civic, cultural and sporting events by both the academic community and the general public.

One area which should receive particular attention is libraries.

One area which should receive particular attention is libraries. The term 'library' has taken on a new meaning in modern academic institutions. It is no longer just a place where books and other printed material relevant to teaching and research are regularly collected, catalogued and preserved. It is increasingly a nerve centre for the interaction between information providers and users on which modern learning, teaching and research greatly depends. Along with archives and museums, libraries provide not only a physical location but also an intellectual context - for the storage, preservation and exchange of knowledge.

Internationalization of Higher Education

The growing international-ization of higher education is first and foremost a reflection of the global character of learning and research.

The growing internationalization of higher education is first and foremost a reflection of the global character of learning and research. This universal context is being reinforced by the current processes of economic and political integration, the growing need for intercultural understanding and the global nature of modern communications, consumer markets, etc. The ever-expanding number of students, teachers and researchers who study, teach, undertake research, live and communicate in an international context attests to this overall welcome development.

In addition to the increased mobility of individuals, we are witnessing an intensification of transnational research links and considerable expansion in various types of networking and other linking arrangements among institutions, academics and students. The steady advance of information and communication technologies facilitates this process. There are, however, serious

problems posed by some misdirections of international academic relations. The transfer of knowledge and access to data bases are severely affected by various adverse factors, not always related to educational matters; for instance, high-level training and research capabilities are unevenly distributed geographically. Since knowledge is universal, its pursuit, advancement and dissemination can only be achieved through the collective efforts of the international academic community - hence the inherent international dimension of academic life and of institutions, scientific societies and student organizations.

International cooperation is a goal shared by the world academic community; moreover it is a sine qua non for assuring quality and efficiency in the functioning of institutions of higher education.

International cooperation is a goal shared by the world academic community; moreover it is a *sine qua non* for assuring quality and efficiency in the functioning of institutions of higher education. Higher education has acquired a fundamental role in the development, transfer and sharing of knowledge, and international academic cooperation should bring its contribution to the total development of human potential. This will help to narrow the gaps between nations and between regions in the fields of science and technology and to improve understanding between individuals and between peoples so as to promote the culture of peace.

Principles and Forms of International Cooperation

International co-operation should be based on genuine partnership, mutual trust and solidarity. It should make use of flexible procedures which allow the participating institutions and/or individuals to address problems responsively, and should be aimed at enhancing national, regional and local capacities for the development of human resources. Yet in recent times, the flow of intellectual manpower, which is particularly important for any long-term development strategy, has tended to go in one direction from South to North. Renewed inter-university co-operation, particularly with the developing countries, should not only entail a rapid transfer of knowledge and technology but should also promote incentives to retain students, academic staff and researchers in their local institutions. This is why

international agencies, intergovernmental and non-governmental organizations, the national authorities in charge of higher education and the institutions themselves are becoming increasingly aware of the advantages of an international academic relations strategy which will contribute to the rehabilitation of higher education in the developing countries and diminish the phenomenon of external brain drain. The importance of South-South partnerships, moreover, should not be played down - higher education institutions often have more to share of operational value when they can compare similar sets of experiences.

It is vital that participation in international academic mobility should not be restricted to an instrument of regionalization or be determined by a mercantile approach to the selection of foreign students or to enhancing the supposed prestige of a particular establishment. There should also be ample room for innovative forms of 'learning from abroad' directed at countries and higher education institutions in great need of international assistance.

The most pressing need for international co-operation in higher education is to reverse the process of decline of institutions in the developing countries, particularly in the least developed.

The most pressing need for international co-operation in higher education is to reverse the process of decline of institutions in the developing countries, particularly in the least developed. The adverse conditions in which higher education has to function call, first of all, for appropriate measures and efforts by the respective States and institutions. They must learn to be more effective and efficient in strengthening their links with society so as to play a full part in the development efforts of their region or community. It is not unusual to perceive the university-level establishment as part of the institutional machinery of the State instead of seeing it as an essential part of a local community and of society in general. It is essential to persuade the decision makers and all of society that the latter is the case.

Beset as they are with serious socio-economic and political problems, many developing countries will not find it easy to divert significant resources towards higher education. It is

therefore up to the international academic community and international organizations to assist higher education in those countries which are facing particular difficulties in developing their education systems and their scientific and technological capabilities.

Searching for solutions aimed at greater relevance, quality and internationalization in higher education requires a renewed convergence of thinking about the centrality of human resources development and of the role played by all levels and forms of education. In that respect, it is crucial that the international and national development funding agencies, non-governmental organizations and foundations and the academic community at large should see support to higher education institutions in developing countries as essential for the overall development of the education system as well as for the enhancement of endogenous capacity-building.

The policy of seeking specific solutions stems from a sense of the distinctiveness of many regional, national and local problems. It also relates to the under-standing that while knowledge is universal, its application is usually local. Higher education depends on and has a responsibility to its local community.

The policy of seeking specific solutions stems from a sense of the distinctiveness of many regional, national and local problems. It also relates to the understanding that while knowledge is universal, its application is usually local. Higher education depends on and has a responsibility to its local community. This local presence is an integral part of the service mission of the university or any other higher education institution. But while developing local relevance, institutions should also consolidate their international presence by positively seeking solutions to various scientific, educational and cultural problems which are relevant to society in general.

Access to Knowledge

In the academic world, as in many other spheres of human activity, the promotion of academic competition, while indispensable for the advancement of knowledge, should not preclude seeing many aspects of access to scholarly discoveries from the point of view of the ideals of academic solidarity. Members of the world's academic community should be

concerned not only about the quality of their own individual institutional setting, but also about the quality of higher education and research everywhere.

The quality gap between academic institutions in different parts of the world is a direct reflection of the wider economic and social imbalances existing between developed and developing countries. The serious socioeconomic situation in many developing countries, particularly the LDCs, has had inevitable repercussions on their higher education systems. Yet in today's knowledge-intensive world, sound higher education systems are central to any prospects for a reversal of the trend. The question, then, is how disadvantaged education systems can escape from the vicious circle in which they find themselves.

Networking for Academic Excellence

While it is imperative for each institution of higher education to aspire towards excellence, none of them can ever hope to attain the highest standards in every field. This is why inter-university co-operation is becoming increasingly important.

While it is imperative for each institution of higher education to aspire towards excellence, none of them can ever hope to attain the highest standards in every field. This is why inter-university co-operation is becoming increasingly important to avoid the marginalization of certain institutions, particularly in the developing countries, and to make academic excellence more readily available through a 'division of tasks' among universities that transcends national frontiers. An interlocking system of international postgraduate and research centres can provide an important boost to higher education within a given region and can help to promote South-South co-operation, especially when such arrangements are based on common interests and adequately shared financial responsibilities.

Modern technological advances make the creation and functioning of such centres look particularly promising. They allow the expansion of the concept of academic mobility so as to include not only the traditional mobility of students, teachers and researchers, but also a sort of mobility in reverse, placing researchers from centres of excellence at the disposal of students, teachers and researchers of institutions in distant and

49

disadvantaged places. This can be done through electronic networks, video cassettes, CD-ROMs and other modern forms of communication. These new technologies should also make it possible to tackle the problem of dissemination of research findings by researchers working in higher education institutions in the developing countries.

Towards a Renewal of Higher Education

UNESCO, being committed to the idea of renewal of higher education, considers it essential that all forward-looking systems and institutions of higher education should build up their own mission with this broad vision in mind, which can best be described as that of a **'pro-active university'**.

This vision of a 'pro-active university' will ... guide UNESCO in the development and implementation of its activities in the field of higher education.

This vision of a 'pro-active university' will also guide UNESCO in the development and implementation of its activities in the field of higher education. The goal of the action in which all stakeholders need to participate is to turn every institution of higher education into:

- a place for high-quality training, enabling students to act efficiently and effectively in a broad range of civic and professional functions and activities, including the most diverse, up-to date and specialized;

- a place to which access is possible primarily on the basis of intellectual merit and of the ability to participate actively in its programmes, with due attention to ensuring social equity;

- a community fully engaged in the search, creation and dissemination of knowledge, in the advancement of science, and participating in the development of technological innovations and inventions;

- a place of learning founded on quality and knowledge alone, which inculcates, particularly in the minds of its future graduates, commitment to the pursuit of knowledge and a

sense of responsibility to place training at the service of social development;

- a place that welcomes return for updating and enhancement of knowledge and qualifications as part of institutional practice and culture;

- a community in which co-operation with industry and the service sectors for the economic progress of the region and nation is encouraged and actively supported;

A place in which important local, regional, national and international issues and solutions are identified, debated and addressed in a spirit of learned criticism, and where the active participation of citizens in the debates on social, cultural and intellectual progress is encouraged.

- a place in which important local, regional, national and international issues and solutions are identified, debated and addressed in a spirit of learned criticism, and where the active participation of citizens in the debates on social, cultural and intellectual progress is encouraged;

- a place to which governments and other public institutions can go for scientific and reliable information which is increasingly being required for decision-making at all levels, and which also promotes public participation in the decision-making process;

- a community whose members, being fully committed to the principles of academic freedom, are engaged in the pursuit of truth, defence and promotion of human rights, democracy, social justice and tolerance in their own communities and throughout the world, and participate in instruction for genuine participatory citizenship and in building a culture of peace;

- an institution well situated in the world context, with all its accompanying threats and possibilities, and adapted to the rhythm of contemporary life, the distinctive features of each region, and of each country.

No country can consider itself isolated from the influences of international events and developments.

This broad vision of the 'pro-active university' implies its creative adaptation in the process of searching for specific institutional models and practices which meet the needs, conditions and possibilities of particular higher education institutions, communities, regions and countries. Such a search for the development and change of higher education should also be seen as an essential part of the broad process of changes in contemporary society. Responsibility for the actual form and measures of implementation of the renewed higher education system belongs to every country and to its academic community - yet in a fast changing world, no country can consider itself isolated from the influences of international events and developments.

3

UNIVERSITIES AND
REGIONAL DEVELOPMENT

by Guy Neave
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Introduction

In the hinterland of Lebanon, there is a TV station of great theological rigour. Before subjecting its audience to the delights of the world culture of Mickey Mouse, the greed of Dallas and the passably sordid investigations of the wall-eyed Inspector Colombo, it reminds its viewers of life's higher purpose. It does so by displaying the names of God. These are many and I have no doubt that it is a sobering experience though perhaps a trifle protracted.

There is, of course, no equivalent orthodoxy involved when we turn our attention to the university and the region.

There is, of course, no equivalent orthodoxy involved when we turn our attention to the university and the region. The definitions of a region are almost as many as the names of the deity. To some, the region is a sub-national division. To others, it is a transfrontier territory, sharing certain commonalities to which those interested in boosting it feel more attention ought to be paid. One example of this latter definition involved an aptly named Council of Europe project - the project on Trans Regional University Cooperation - or, if you prefer acronyms TRUC, which means thingamyjig in French. It brought together universities in the upper Rhine basin, Acquitaine and the Pyrenees in France and Spain. I believe it also included the

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[1]The views expressed in this paper are those of the author in his personal capacity. They do not necessarily reflect the views of the International Association of Universities.

Northern parts of Scandinavia inhabited by the owners of reindeer. And then there is what one might call the Maharishi definition of region. It is transcendental. It surpasseth the wit of Man to understand and stands as a quasi metaphysical entity above the nations. Such a definition places this unhappy term within a planetary setting and mixes geography, culture and occasionally propinquity, together in a heady amalgam. Such one finds, for instance, in UNESCO's way of splitting up the globe.

A Cultural Dimension

Most studies on the region and the university begin, if they do not always end, as species of impact assessments ... But a region is not just a space waiting to be filled with a university. It can also be a cultural entity with its specific patois, language folkways and traditions.

In short, from the first we are faced with a fundamental definitional ambiguity which turns around the scale of the operation. And since most studies on the region and the university begin, if they do not always end, as species of impact assessments, such ambiguity runs across the rest of the study. But a region is not just a space waiting to be filled with a university. It can also be a cultural entity with its specific patois, language, folkways and traditions, though it is often more rare for such features conveniently to be contained within a coherent administrative unit. This aspect has tended to be overlooked by planners of universities and often by those seeking to assess the effect they have upon their environment.

There is perhaps good reason for this. Assessing cultural impact is one of the most delicate and difficult tasks that scholarship can undertake. It requires a goodly time and if here and there investigations of an anthropological bias have been made - Ryan's work on the University of Calabria is one, (Ryan, 1976) and indirectly Frankenberg's work on Welsh border society (Frankenberg, 1957) may stand as another - they tend to be very much the exceptions than the general rule. And yet, there is a good case to be made in favour of enquiries of such a nature. In the first place, they have the inestimable advantage of revealing the accumulative and durable consequences in an area which current metaphors of higher education as a market, or as a consumer good, tend to leave aside. This perspective also reminds us that the university most specifically, and higher

54

education by extension, have a long-term contribution to make to development, whether national or in this case regional, on which earlier metaphors of the university tended to set different priorities. The university also contributes to the forming of political attitudes and beliefs, aspects that are vital to the health of a democracy which, I would add, is not the same thing as happy consumerism, though we are often told that it is.

The Significance of the Extra Economic Dimension

There is also a good pragmatic reason for taking account of the impact within a region of the university, as part of what might be termed the 'cultural' and political infrastructure alongside economic equivalents of the same.

There is also a good pragmatic reason for taking account of the impact within a region of the university, as part of what might be termed the 'cultural' and political infrastructure alongside economic equivalents of the same. And that is to be found in a good many of the retrospective studies, which have sought to 'explain' the success or, rather more rare, the absence of success, of such endeavours as science parks as nodal points of exchange between university and region. Much of the success in creating a power of attraction for highly qualified manpower to a region is a function not simply of the research facilities which central governments or, more rare, city fathers, may place at the disposal of the university. Success is also the product of an intense 'cultural' infrastructure that has grown up around higher education and which, if it does not always draw in people from outside, serves often to retain the highly qualified already in the region. Amongst examples of this particular phenomenon are Cambridge in the United Kingdom, Grenoble and Sophia Antipolis in South Eastern France and in Provence (Dreyfus, 1976; Blackman & Segall 1992). To be sure, these are perhaps outstanding situations in which the 'cultural' tissue is particularly dense. And those who wish to suspend disbelief can always find counter illustrations. But the point I am making is a relatively simple one and that is, however exceptional such 'opulent environments' may be, they are nevertheless of material significance to the degree of impact that higher education and its research function will have upon the community. To be sure, that a university may be set in a less rich environment does not obviate it from the task of offsetting such disadvantages (Lane

1992). But what it does suggest is that the impact of higher education upon the economic development of its region, whilst it may be quantified in terms of income generated, is also affected (a cautious sociologist might say mediated to an extent which at present remains largely unexplored) by the cultural environment in which it is set.

The Reverse of the Medal

There is another reason for extending our perspectives beyond the economic and seeking to make our analyses more subtle in what might be called the 'non material' contribution that the university makes to its region. And this is what I would call the obverse side of the medal to the 'globalization' thesis. From an historian's perspective, the university has, perhaps since the time of its inception, been pulled by two countervailing forces - of the universalism of learning against the pragmatic specificities of serving the occasional needs of the Prince (who was often in many instances its founder if not always its willing patron). We have a similar tension today though it emerges in forms that thankfully are no longer feudal. Our contemporary tension is a central feature of the issues with which this book is concerned. One of the most pervasive of our contemporary views on higher education is its central function as part of the 'intellectual productive process'. The emergence of a global economy gives a new immediacy to the historic mission of the university as the major agent in the generation and transmission of knowledge across frontiers. And to boot, the pace of this change places very severe penalties on those who, for one reason or another, are not in a position to participate in this process.

The emergence of a global economy gives a new immediacy to the historic mission of the university as the major agent in the generation and transmission of knowledge across frontiers.

Decentralisation or Regionalisation?

Against this 'new' universalism (of global markets of international flows of technologies and techniques) (Neave, 1987) runs a very substantial counter-current which, if anything, has been building up far longer in Sweden than elsewhere in Europe, though clearly Sweden is not in a position to claim

56

exclusivity here. This counter-current is, of course, the strengthening of the regional dimension in higher education. And by regional dimension, I mean sub-national areas of administrative coordination and oversight. One can of course make the point, as I have done, that the sub-national dimension of higher education has long been an integral part of the overall problematique. And that establishments which often in their early years started off as meeting the needs of their immediate locality subsequently moved onto the national and even sometimes the international stage. There are plenty of examples of this happening in all our systems of higher education. And that at widely different epochs. And though some have seen in this a species of 'academic drift' or 'mission re-definition' it is almost certainly due to the natural propensity of disciplinary cultures to move beyond the local and to seek standing and reputed recognition and excellence for their practitioners at the national, or international, level (Neave 1979). In other words the tension between what one American scholar in public administration termed 'locals' vs 'cosmopolitans' is ever present in our universities and colleges and it is right that it should be (Gouldner, 1958).

But this does not answer the question 'Why should the regionalisation of higher education have become so strong a force in present day Europe?' After all, the insertion of a regional layer of coordination is visible not just in Sweden but also next door in Norway, in France, in Spain, to some extent in Britain in the form of the regionalised Higher Education Funding Councils, and has reached its most radical expression in Belgium, where the tensions between the two linguistic communities - French and Dutch speaking - have given rise to all intents and purposes to two judicially separate regional systems, each with its own Ministry of Education or Higher Education, regional Parliament and which is each rapidly moving on its separate ways - in a country of 10 million people in the heartland of Europe.

If we look at regionalisation as an historical phenomenon and take as our period of analysis the past 20 years or so, it is, at least

in the Western European context, clear that two very different processes have been involved. Here I wish to draw a distinction between what I will term 'locational provision' and 'regionalisation' stricto sensu. Since these notions are central to my argument I will spend a little time elaborating them.

A Basic Conceptual Dichotomy: Locational Provision or Regionalisation?

Location provision, as its name implies, involves the spatial setting down of an institute of higher education. The decisions involved are usually taken at a national level and, quite naturally, call (as a well- known Beetles' song of the Golden Sixties had it) for 'a little help from its friends,' since landladies, the owners of taverns and Members of Parliament, if not always econometricians, have long realised that universities bring a certain financial liveliness and buoyancy even to the drabbest of sites. The arguments employed by interested parties are naturally many, varied and persuasive: the need to observe equity in physical access to higher education in regions under-endowed with higher education facilities; the injection of capital and the renewal of local industry through the presence of research and development facilities; the improvement of national competitiveness by developing local technological capability and potential. However genuine, these are effectively arguments of opportunity the purpose of which is, basically, distribution - that is, they are aimed at attracting a certain portion of the national provision of higher education to that particular region. Thus locational provision may indeed involve claims and counterclaims put forward in favour of a particular geographical area. But the basic process involves either the completion or the extension into a region of the national higher education system. The region is almost coincidentally the place where the nation decides to site a university.

What I want to suggest is that there is a very great distinction between locational provision and regionalisation.

What I want to suggest is that there is a very great distinction between locational provision and regionalisation. And the difference resides in the inescapable fact that, in the case of

locational provision, the university like the Anabaptist sects of 16th century Germany (Troelsch, 1966) may indeed be in the region but it does not follow that the university is most definitely of the region. Just as it suggests that, if the university may indeed have the effect of being a substantial income multiplier in the region, it need not have the slightest commitment to serving any of the specificities that go to make up that region. Regionalisation, as opposed to locational provision, turns around the existence of an explicit formal mandate as part of the mission of higher education to serve regional stakeholders, a mandate which is backed either by a budgetary base from regional sources of income and/or the existence of officially constituted bodies, boards or groupings of public purpose, which bring together the representatives of regional government administration and those of the institutes of higher education within the same geographic-administrative area. To revert to my theological analogue, with these conditions united, higher education is of the region and in it.

Regionalisation, as opposed to locational provision, turns around the existence of an explicit formal mandate as part of the mission of higher education to serve regional stakeholders.

With this particular distinction set out, we get a rather different perspective, not merely on the analyses that ought to be undertaken. We also have a better purchase over the dimensions which draw a line between the impact that universities may have upon the region and policies which specifically involve strengthening the role universities have in their regions. Or, to put matters slightly differently, we ought to distinguish between a national facility set in the region and an establishment endowed with a specific responsibility for regional development.

The European Significance of Sweden's 1977 Reforms

What I want to argue is that the Swedish reforms of 1977, short-lived though they were, represented an important watershed between these two processes. They involved elements of locational provision, principally by extending physical access to higher education in regions where hitherto it had been limited. But it also anticipated, perhaps by as much as a decade in certain instances, the setting up of regional 'interface bodies' in the form

Innovation was evident in two respects: the first was the creation at regional level of an additional layer of coordination - the regional Boards. The second involved conferring upon the university a specific regional responsibility.

of regional boards having budgetary provision and the power to negotiate with universities short courses of specific concern and interest to the regional labour market (Premfors, 1984). That the university world should have seen such developments as a further extension of bureaucracy's weight upon academia (Skoldberg, 1991) was perhaps unfortunate, as too was the relatively hard and fast line drawn between the university stricto sensu and the non-university sector. But neither of these apparent shortcomings detracts from the radical nature of the innovation. From our perspective, innovation was evident in two respects: the first was the creation at regional level of an additional layer of coordination - the regional Boards; the second involved conferring upon the university a specific regional responsibility.

Both of these developments were, I would suggest, breakpoints of immense significance, particularly when placed against what had gone before and in view of what was to come after elsewhere in Europe. Locational provision, by contrast, did not involve any major shifts in the patterns of system management. On the contrary, the expansion of higher education throughout the Sixties and on into the following decade, tended, by and large, to cleave to established lines of control. It simply increased the numbers of establishments. Nor did it in any way challenge the basic distinctions between the university serving as a vehicle for national provision, retaining the monopoly over fundamental research and, just as important, remaining the sole institute recognised for the training of future researchers (Clark, 1993). The non university sector with varying degrees of timidity, was further assigned the complementary role of acting in a regional setting. Indeed, if one looks at parallel developments in the non-university sector during this period, irrespective of whether the particular model turned around the 'binary principle' or the 'multiple access model' (Furth, 1992), there is good reason for arguing that whatever weight was placed upon higher education's responsibility for regional development - and one can find references tucked away here and there in the reports of enquiries into the future of the French University Institutes of Technology (Bernard, 1970), and in the Norwegian District Colleges

(Sandvand, 1976) - it was not then the concern of the academic mainstream.

That the situation has changed over the past decade - and that out of all recognition - is self-evident. At present, the major trend remains somewhat unclear. For whilst the regional dimension is now a specific item on the mission agenda of many universities and various regional development groups, we nevertheless remain in a state of Heraclitan flux. In some instances, it is possible to argue that regionally-based financing of higher education constitutes a species of de-nationalisation of higher education control. Yet, in other instances (and perhaps Britain is a case in point) the upgrading of polytechnics to university status can be interpreted as nationalising what has hitherto been a municipally controlled higher education system. Whether such a development will involve a further sundering of ties between institution and region is something only time can tell. Much will depend on whether the individual establishment feels it is in its interest to compete wholly on the national stage for non-core funding, or whether the region - or its industry - have sufficient resources to make a regional commitment attractive.

Hard-nosed Views

The emergence of the region as one element in a multi-source funding base will, I suspect, force many establishments of higher education, be they universities or not, to take a rather more hard-headed assessment of where their interests - if not their fortunes and their friends - lie.

The emergence of the region as one element in a multi-source funding base will, I suspect, force many establishments of higher education, be they universities or not, to take a rather more hard-headed assessment of where their interests - if not their fortunes and their friends - lie. Or at least, to take greater account - and that in a formal manner - of what might be called a 'mix of commitment' to nation and to region. To undertake this exercise calls for rather more sophisticated assessments of the nature of the region's economy, potential and resources than universities have hitherto tended to do in the past.

This brings me back to a basic issue which I touched upon earlier, namely the difference between the impact that a university has upon its region by dint of simply being in it and the contribution

Operationalising the difference between a regionally committed establishment and one that, like Mount Everest, is 'simply there' is itself a daunting methodological challenge.

it may make as a result of formal commitment to a regional remit and strategy. Logically - and that, frankly is all we have at present since most of the impact studies which have been undertaken remain in what I have termed a setting of 'locational provision'- an establishment with a formal regional strategy ought to have greater impact upon its region than one in which regional impact is a species of coincidental by-product of institutional presence. Operationalising the difference between a regionally committed establishment and one that, like Mount Everest, is 'simply there' is itself a daunting methodological challenge.

New Research Perspectives

Yet, daunting though it is as a technical and practical exercise, this challenge cannot be side-stepped: for if it is not met, then much of the political validity for arguments in favour of specific regional engagement fall by the wayside. They fall by the wayside on the simple and devastating replique that, even if the university has no specific regional commitment, or despite its wholly national or international orientation, it nevertheless brings benefits to the region. So why do we need an additional regional commitment? The answer must surely be because such a commitment and strategy bring either additional benefits to the region over and above those bestowed by the presence of an institution, or, as an alternative possibility, that a specific regional commitment causes such manna and quails to be delivered more quickly. Or, as a third possibility, that whatever benefits are to be had, they are more enduring, are better focussed and more in keeping with 'regional needs', howsoever construed. If these claims are to be substantiated, then it is not sufficient simply to make additional impact studies of an individual establishment upon its region. There need to be enquiries of a comparative nature. And in this regard, I would suggest that one of the most appropriate would involve an institution with an established commitment to the development of its region and one which is, as far as possible, comparable in every other respect save that its formal mission does not include this dimension.

A Few Modest Proposals

Given the state of impact studies of universities upon regions - and given too my barbs about how one goes about defining a region - I have to confess this is a pretty tall order. It is made taller by the fact that a region, however defined, is itself a variable in respect of its economic structure, the modernity or the ancientness of its industry, of the patterns of population structure, inflow outflow and level of qualification. And these structural features go very far in determining the 'regional environment' and that, in turn, as I mentioned earlier, will not be neutral upon the degree of impact that higher education may have within the region. And yet, even those studies of high technical sophistication - one thinks here of Florax' work in the Netherlands (Florax, 1992), or Brownrigg's pioneering study of the University of Sterling in Scotland during the early Seventies (Brownrigg, 1974), there has been very little attempt to analyse in similar depth the regional environment. This is not to say that systems of classification for different regional economies and environments are absent. Lane's two by two typology of 'community environments' split between the economy (rich or poor along the vertical axis and population large and small along the horizontal axis) is one (Lane, 1992). Another, the so-called Okun-Richardson model, characterises the region on the basis of its economic growth rate compared to the national average - dichotomizing it between stagnant and growing and, on the other dimension, compares the regional income level with the national average, assigning the region to one of two categories - low or high.(Okun & Richardson, 1973). These are rough and ready descriptive categories and useful as such. But anyone who has been involved in regional impact assessments cannot help being struck by the number of enquiries which focus uniquely on the institution and which leave aside the nature of the regional environment. The university is set, like flies in amber but strangely, and all too often the scholar gazes rapturously at the fly, tending very often to discard the amber. The value, as any jeweler will tell you, lies in both.

But anyone who has been involved in regional impact assessments cannot help being struck by the number of enquiries which focus uniquely on the institution and which leave aside the nature of the regional environment.

Envoi

In short, if we are to contribute to strengthening further the 'regional dimension of higher education', we need to centre our efforts rather more closely on the interaction between the fly and the amber and that, where possible, dynamically and over time. Static interpretations are useful as datum points, as points of departure and as the base from which we may draw later to show what we have done. But neither regions nor universities are static entities. Whether they move together or move apart, whether they support each other or merely co- exist, are matters of vital concern to both parties. Our research needs now to take this dynamic into account.

Neither regions nor universities are static entities.

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PART II

REGIONAL COOPERATION AND UNIVERSITY IMPACTS

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REGIONAL COOPERATION
AND UNIVERSITY IMPACTS

The two chapters in Part II set a regional context for the remainder of the papers. The university is but one kind of institution in a family of organizations that interact within the Maritime provinces. Like the others, it both impacts on the shape and essence of the region's society and economy and, itself, is a product to some very considerable extent of that environment.

Emery Fanjoy traces the evolution of Maritime Province intergovernmental cooperation and the life of the Council of Maritime Premiers, highlighting the competing interests, which he describes as a 'quicksand awaiting the unwary'. He sets Maritime Province opportunities and constraints alongside relationships with Quebec and the New England States and draws on work by Charles McMillan regarding such 'compelling issues' as the North American Free Trade Agreement, new growth markets in Japan and other Pacific Rim countries, changing demographies, the 'declining shelf-life of knowledge ... and the need to overcome that with life-cycle learning'.

The second paper in this section, by Paul Pross, Fazley Siddiq et al., explores three important ways the Nova Scotian family of universities contributes to the provincial economy - by the direct economic impact of spending and subsequent spinoffs, by the development of human capital and by 'fostering economic development'. The paper explores the structural underpinnings of the university systems and identifies a number of the options that face future 'rationalization' of the Nova Scotian university complex.

4

MARITIME COOPERATION
AND THE MARITIME PREMIERS

by Emery M. Fanjoy

Introduction

This chapter discusses four phases in the growth of Maritime inter- governmental relations.

The governments of New Brunswick, Nova Scotia and Prince Edward Island are among the smallest in Canada. One way they overcome the disadvantages of size is by cooperating.[1] They do so to an extent unparalleled in Canada. This chapter discusses four phases in the growth of Maritime intergovernmental relations.[2] The central agency of cooperation, the Council of Maritime Premiers, is highlighted.

Three other aspects of the subject are noted also—the influence of the Government of Canada, relations of the Maritime governments with neighbouring jurisdictions, and regional activities in the university sector. The chapter will close with comments on some of the challenges facing the three societies and their governments today.

Three Provinces but One Region

France and Britain established administrations in Nova Scotia in the 17th century. Prince Edward Island was split off from that colony in 1769 and New Brunswick in 1784. Geography, local and provincial traditions set by settlers, and economic life since then, have resulted in considerable cultural diversity between the provinces. Among the differences, one thinks of:

▸ New Brunswick: its borders with Québec and the State of Maine—the large forested interior—dependence on natural resources and export markets—competition between its

three largest cities—and, of over-riding importance, one-third of the population being francophone;

▸ Nova Scotia: the proximity of all communities to the ocean—an older, larger and more diverse society and economy—the dispersal of political power—Cape Breton Island—and the Halifax Regional Municipality; and

▸ Prince Edward Island: being an island and the smallest jurisdiction in North America by most measures—its unique system of land ownership until well into the last century— and the personal scale of geography and institutions.

It would be an exaggeration to make too much of the cultural differences between the three provinces and within each province, but they are real. One must understand and respect them.

It would be an exaggeration to make too much of the cultural differences between the three provinces and within each province, but they are real. One must understand and respect them.

The similarities and links between the provinces are also significant: majority British and Irish populations, economic and cultural attachment to the Atlantic Ocean, remoteness from centres of political and economic power, awareness of a shared destiny, dependence on natural resources, the personal nature of politics, and the many regional organizations, branch offices and networks.

Two other important similarities for the subject of this chapter are that: (1) the Liberal and Progressive Conservative (and its forerunner) parties dominate politics in the three provinces and no third party has ever come close to winning office; and (2) Maritimers have always been active participants in the two parties nationally, and so have always had "insiders" in the federal government.

Sovereignty and Cooperation: Two Sides of the Same Coin

The word "cooperation" will be used many times in this paper. However, one must keep in mind the overriding reality of sovereignty. It is a basic characteristic of any polity, and is buttressed by culture, laws, institutions, momentum, legal rights and powers, and acceptance by its people and other governments.

Canadian provinces are sovereign in a number of policy sectors and share authority with the national government in others. The borders between the provinces are real. It is simplistic to think that, because the Maritime jurisdictions are small, it should be easy to "dilute" or remove their borders through integration. It is never easy.

Nearly 100 years ago, Prime Minister Wilfred Laurier commented perceptively when asked about the possibility of Maritime union. "I doubt if any change will ever take place in the condition of things in the Maritime Provinces. You could no more induce Nova Scotia, New Brunswick and Prince Edward Island to drop their identity than you could get Rhode Island, Connecticut and New Hampshire to join together. It is a respectable sentiment and one which must be recognized."[3]

Universities as institutions are local and provincial, with the exception of some of their regional and international teaching programs and research centres.

The Maritime media tend to be local and provincial, with important exceptions. Universities as institutions are local and provincial, with the exception of some of their regional and international teaching programs and research centres. Interest group boundaries reflect government boundaries, again with some exceptions. All of the above bodies, and many others, tend to reinforce sovereignty.

Having made the point about sovereignty, I should state three caveats: (1) not all residents of a province give allegiance to their government's use of sovereignty on all matters at all times; (2) sovereignty is increasingly weakened by global and national forces and events; and (3) courts can overturn a province's

attempt to assert its sovereignty. The exercise of power is tempered by many realities.

Canadians have limited experience with cooperation between provincial governments. It is arguably less essential to the functioning of the federation than federal-provincial cooperation. That was especially so in times past. As such, interprovincial cooperation has never been an important subject for academic or practitioners.

There is no higher authority to compel cooperation between provinces on matters within their jurisdiction, as is inherent in unitary states. Cooperation must come from the voluntary will of provincial leaders and, especially for major change, have support in the populace.

Following national tradition, on almost any policy issue the Maritime governments seek (and usually find) a province-centred solution.

Following national tradition, on almost any policy issue the Maritime governments seek (and usually find) a province-centred solution. However, increasingly they also look at the alternative of a regional solution. Technology, global and continental trade agreements, and government deficits and debt are making traditional approaches less attractive.

Both provincialism and regionalism are now part of the way of life in public affairs in the Maritimes. On the challenges before them, each premier and his/her ministers and officials must weigh the myriad factors on both sides of the coin.

Phase 1: From Colonial Times to 1954

"Whereas the subject of a Union of the North American Provinces, or of the Maritime Provinces of British America, has been from time to time mooted and discussed in all the Colonies...." is the opening clause of a Resolution passed unanimously by the "Parliament" of Nova Scotia on 15 April, 1861.[4]

The clause is an indication of the mood of the 1850s and 1860s and the longevity of the idea of Maritime union. The Resolution helped launch the debate that led to Confederation. The major regional issue at that time was transportation. Some things do not change.

The larger union came into being in 1867 and Maritime Union was set aside for 97 years. During those years the governments devoted themselves to province-building. Some line departments worked together sporadically but cooperation was seldom intense.

Fingard's comment below on the state of Maritime cooperation in the 1880s could equally apply to all decades until the middle of the 20th century, except for the 1920s:

> The moulders of public opinion gave precedence to almost any identity other than a regional one, whether it be community, province, nation, continent, or empire. Consequently, manifestations of interprovincial co-operation were slight, and the provinces' emotional distance from one another was aggravated by community rivalries such as those that divided Saint John and Halifax....[5]

Cooperation outside government was strategic to a degree.[6] The business community, churches and universities all had common bodies in which to operate joint endeavours, advance common interests and share information. However, parochial forces constrained even them. For example, in 1922 well-considered recommendations to form a federated University of the Maritime Provinces came to naught.[7]

The Maritime Board of Trade encouraged the governments to work together. In 1922 it spearheaded creation of the extra-parliamentary Maritime Rights' movement. In 1928 the Board formed the first regional organization that had employees—the Transportation Commission of the Maritime Board of Trade.

This long period was one
of province-building and
province-protecting.

However, in essence, this long period was one of province-building and province-protecting. In the preface to his book, Reid said that, "Recent historical writing on the Maritimes leaves no room for comfortable stereotypes, and the reality is that the history of the region is shot through with struggles between people divided by nationality, ethnicity, economic interest, and social class...The major historical events have shaped the region as it is today."[8]

The three governments and
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sibility to act. They did as
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that did not include
working together as a
region.

It was a period when momentous decisions were made—in the three capitals, Ottawa and elsewhere—that set in motion the drift toward economic disparity that still plagues the region. The three governments and the region's representatives in Ottawa had the responsibility to act. They did as they saw fit. Until the 1950s that did not include working together as a region. The words "none" or "minimal" best describe this phase of cooperation.

Phase 2: Growth of Regional Identity - 1954 to 1971

Newfoundland became a Canadian province in 1949. From then on the Maritime region had to "compete" with the new and wider concept of the Atlantic region. This new phase of cooperation started with the creation of the Atlantic Provinces Economic Council (APEC) in 1954. The decision was the culmination of a process that involved the premiers of the Atlantic provinces and the executive of the Maritime Board of Trade. From the start, APEC was, as it continues to be, a catalyst for cooperation and a contributor to research and publications on common issues facing the four provinces.

One early outcome of creating APEC was the decision of the Atlantic premiers in 1956 to meet annually and to establish a continuing committee of officials to advise them. APEC played an important role in bringing this about and provided a secretariat service for the premiers for some years.

The creation of the Atlantic Premiers' Conference (APC) was a ground-breaking move in Canada. The premiers nationally did

not start to meet annually until 1959 and the Prairie premiers not until 1965.

APC and APEC unleashed creative energies and the beginnings of a regional identity and vision. Evans gives an excellent summary of the growth in cooperation during the 1950s and 1960s, and the personalities involved.[9]

In October 1958 APEC sponsored a seminar at Dalhousie University "to assess and determine the needs and opportunities for economic and socio-economic research in Canada's Atlantic provinces". One outcome of the seminar was a federal commitment of multi-year funds for an Atlantic Provinces Studies program, under the general editorship of Dr. John F. Graham of Dalhousie University. The vehicle for the research was the Atlantic Provinces Research Board, which commissioned several studies on the Atlantic economy.[10]

There were achievements in the economic sector—an office of the Atlantic governments in London, transportation improvements, New Brunswick-Nova Scotia electrical power exchanges, trade missions, etc.—and in other policy sectors including health and education. Line agencies that had not been meeting, or that did so on an ad hoc basis to share information, began to pool resources and, in some cases, to act to meet common goals.

In September 1964, Premier Louis Robichaud of New Brunswick suggested the Atlantic premiers should look into political union, set aside 97 years before. Premier Robert Stanfield of Nova Scotia agreed to pursue the subject but the other Atlantic premiers rejected it outright. Premier Stanfield went further to suggest that New Brunswick and Nova Scotia could pursue the matter alone and the other provinces come into it later if they wished.

Evans summarized the Newfoundland position at the time as follows, "(Premier Joey Smallwood) maintained that Newfoundland could not be considered a 'Maritime' province as

it was not a mainland province, and that it was culturally, economically, socially and politically unique."[11]

In February, 1965 the New Brunswick and Nova Scotia legislatures unanimously passed in free votes identical resolutions to study political union. After this action, Premier Smallwood attended no more APC meetings. Newfoundland premiers maintained that self-imposed isolation until Premier Clyde Wells came to a meeting of the Council of Maritime Premiers in 1989.[12]

Also in February, 1965, academics at Mount Allison University organized a conference titled "The Idea of Maritime Union". Its purpose was "to provide an opportunity for discussion of the idea of Maritime union on the basis of some background papers prepared for the event." Seven well-known academics were among the speakers.

In 1966 New Brunswick and Prince Edward Island allocated their shares of federal funds for new medical facilities to the construction of the Sir Charles Tupper Medical Building at Dalhousie University in Nova Scotia. In the same spirit, the four provinces agreed to share the costs of upgrading the Halifax School for the Blind, a privately-run organization that served the region. The school enlarged its board to reflect the new cooperative mood.

The proposed study of Maritime union, hampered in the search for a head, was given a push in 1966 with the election of Alexander Campbell as premier of Prince Edward Island. He agreed the next year that his province would participate. Premier Stanfield went on to national politics that year but his successor, G. Ike Smith, supported the study also.

In March 1968, the premiers announced that John Deutsch of Queen's University would be the special adviser on the study. Fred Drummie of the Government of New Brunswick was named as its executive director.

After more than two years of work, including commissioned research, public hearings and consultations, the Maritime Union Study was made public in November 1970. The report proposed political union. It recommended sectors for integration plus three institutions to lead Maritimers and their governments in the transition to union. It published sixteen research papers.

What did the region achieve during the 16 years? The premiers started meeting regularly. They put a process in place to develop a meaningful agenda for their attention, improved communications between their governments, and formed a committee of central officials to guide cooperation. The era of pooling, harmonizing and compromising had started. Negotiations increased awareness of the potential and difficulties of pooling resources and integrating policies. Successes raised the confidence to do more. In effect, the governments replaced the practice of minimal cooperation up to 1954 with one of continuing cooperation.

Further, Maritimers gained a sense of common identity and shared destiny. They increased and strengthened networks of relationships within and between the public and private sectors. They gained a somewhat better understanding of the neighbouring provinces.

On the other hand, some of the initiatives of the period died. Many ideas did not get off the ground or were too compromised to be effective. Cooperation was unstructured and non-strategic. Most opinion leaders still had little interest in regionalism. The Newfoundland and Maritime governments were further apart in 1970 than in the 1950s and early 1960s.

Throughout the two decades the Government of Canada was becoming committed to an attack on regional disparities, influenced by the findings of the <u>Royal Commission on Canada's Economic Prospects</u> (Gordon Commission) in 1958. The government created the Atlantic Development Board, later subsumed under the Department of Regional Economic

Expansion (DREE), plus other agencies, to advance its plans. It used the carrot-and-stick technique a few times to achieve cooperation. However, in general, its approach in Atlantic Canada was to act unilaterally or bilaterally rather than multilaterally.

Phase 3: Creating the Formal Framework for Cooperation

The Council of Maritime Premiers: 1971 to 1991

By November 1970, two of the Maritime premiers were new—Richard Hatfield in New Brunswick and Gerald Regan in Nova Scotia. They, along with Premier Campbell, had to decide on the recommendations of the Maritime Union Study. They disposed of the recommendations within two months. They did not agree with the recommendation for political union. Therefore there was no need for the proposed Joint Legislative Assembly or the Maritime Commission.

They did create the Council of Maritime Premiers (CMP), a body with executive powers and comprising the premiers of New Brunswick, Nova Scotia and Prince Edward Island.

However, they did create the Council of Maritime Premiers (CMP), a body with executive powers and comprising the premiers of New Brunswick, Nova Scotia and Prince Edward Island. The Council came into being in May 1971 by formal agreement of the cabinets. This signalled the start of the third phase in the evolution of cooperation.

Identical bills passed in 1972 gave the Agreement legislative status in each province. The goals of the Council, as stated in the *Council of Maritime Premiers Act*, are to:

▸ Promote unity of purpose among the three governments;

▸ Ensure maximum coordination of activities of the governments of the three provinces and their agencies; and

▸ Establish the framework for joint actions and undertakings.

The framework for cooperation now includes powers and processes legalized in the *Council of Maritime Premiers Act*, the *Maritime Economic Cooperation Act* (see Section VI), the CMP Agreement, and minutes of the Council and its Regional Treasury Board.[13] Elements of the framework include:

1. Scope: The Council may discuss any "matter of importance to the three provinces";

2. Goals: In addition to the three general goals listed above, there are seven specific goals in the *Maritime Economic Cooperation Act*;

3. Powers: The Council can engage staff, initiate studies, appoint committees, contract and sign agreements with other parties, coordinate public policies, initiate and sustain joint programs, approve joint submissions to the Government of Canada and its agencies, and more generally, do anything to advance the common interest;

4. Decisions: Decisions of the Council must be unanimous. However, under the *Maritime Economic Cooperation Act*, any two of the three governments can decide to act together on matters in the economic sector. Their actions are not binding on the third province;

5. Financing: The Council receives its base funding from the provinces as part of the Provincial Estimates. A per-capita formula is used, with other formulas used when appropriate. The Council also receives minimal funding from other sources;

6. Staff: From the start, the Council has had a secretariat to serve it and be a point of contact on regional matters for people within and outside government. The Secretariat also serves as the central agency for Council's line agencies.

The unique CMP Labour Code permits agencies to have employees in more than one province working under a single labour regime rather than under two or three regimes; and

7.   Continuity: The Council must meet at least four times per year. It can make decisions between meetings.

It would be impossible to discuss the activities and decisions of the Council over these two decades in this paper. They cover the spectrum of public policy and public administration. They include outreach activities to the Government of Canada, neighbouring jurisdictions and internationally. They include working within the governmental machinery and going outside it. They include using various techniques to lever change.[14]

During this period the Council had a few outstanding "successes", many reasonable achievements and a few resounding "failures".

During this period the Council had a few outstanding "successes", many reasonable achievements and a few resounding "failures". I use both words guardedly because success and failure are hard to define and measure in intergovernmental affairs, and depend on one's point of view. Further, today's failure may be tomorrow's success and vice versa.

Richard Hatfield, the Premier of New Brunswick from 1970 to 1987 and a founder of the Council, commented on its success in 1982. At the Council's 50th meeting, the media asked him to assess the Council. His reply is as appropriate today as it was then:

> We are making progress slowly, but I think the fact that we have existed as long as we have, that we have met quarterly...for as many years as we have, is very exemplary...You can't light up the sky every day...The important thing is that we meet, and that we keep talking, and that we keep making progress as we made with the decisions taken at this meeting. Once in a while we will light up the sky.

The requirement that the premiers meet four times per year has proven to be important. Quarterly meetings are frequent enough for the premiers to be able to maintain personal control of the direction and pace of cooperation. The meetings keep the profile of cooperation higher. Relatively frequent deadlines put discipline in the machinery of government. They also create extra pressure to show progress. The regularity of meetings also moderates conflicts of vision and personality. If one has to deal with another person on at least a quarterly basis, the tendency is to be more mannerly and professional than might be the case if meetings were less frequent.

Such a schedule puts demands on the resources of the provinces, starting with the time of the premiers. Those demands conflict with provincial and federal-provincial ones. It is to the credit of the governments that they have regularized Council meetings, and a much increased frequency of meetings at other levels, into their operations.

The period from 1971 to 1991 was far from one long honeymoon.

The period from 1971 to 1991 was far from one long honeymoon. The "honeymoon" period, if any, was probably for only the first three or so years. The Maritime Union Study had created expectations for action on its recommendations. By establishing the Council, premiers Campbell, Hatfield and Regan had pressure on themselves to make it succeed.

Those influences wore thin as time went by, issues arose, and premiers and governments changed. Cooperation ebbed and flowed based on the personalities, the issues and the merits of provincial versus regional solutions. People still recall the protracted and difficult negotiations 12-19 years ago over the creation of the Maritime Energy Corporation (not achieved) and the Atlantic Veterinary College (achieved), and tensions in the late 1980s over the future of the Council.

To summarize this phase, the new framework, structures and practices of cooperation, refined by many decisions since 1971, stood the test of time.

To summarize this phase, the new framework, structures and practices of cooperation, refined by many decisions since 1971, stood the test of time. Cooperation became formalized and part

of the routine of the provinces. Executive and coordinating machinery and several program agencies were created and matured. Strategic approaches became a part of provincial planning but to a lesser degree regionally.

The federal government, first under DREE and then (from 1987) through the Atlantic Canada Opportunities Agency (ACOA), continued to stress unilateral and/or bilateral policies and programs, which generally included strategic goals. With a few exceptions, it did not try to influence multiprovincial cooperation.

Phase 4: Becoming more Strategic

The Council of Maritime Premiers: 1991 to the Present

In the late 1980s Canada was changing because of the Free Trade Agreement, fiscal policies of the federal government and political and constitutional pressures. In 1988, the Council commissioned Charles McMillan to report on:

- ▸ The Council's role, operations and operating capabilities now and in the future; and

- ▸ The key issues facing the provinces of New Brunswick, Nova Scotia and Prince Edward Island in the 1990s and a plan of action for the Council on those issues.

In December 1989, McMillan presented the Council his report, Standing Up to the Future: the Maritimes in the 1990s. He said, "The Council of Maritime Premiers has served the provinces...well—very well indeed."[15] However he pointed out some weaknesses. The main one was that the Council's agenda was neither strategic nor focused. Although the Council was dealing with good, even necessary, issues, it was not dealing with the basic ones that would shape the region in the 1990s. No one other than the premiers could deal with those issues.

While rejecting political union, McMillan called for a new approach by the provinces, one that stressed cooperation and integration rather than each province going it alone. The approach had to be strategic and goal-oriented. The premiers had to lead it.

> "Maritime cooperation must be a creature of political leadership...The Council is a creature of political will. Its success depends on political vision. Rarely in recent decades has the need for vision become so important."[16]

The Council accepted the key recommendations in the McMillan Report. In 1991, it issued the white paper, Challenge and Opportunity: a Discussion Paper on Maritime Economic Integration.[17] The paper outlined a vision, goals and an action plan for cooperation.

These acts marked the transition from Phase 3 to Phase 4, the current one. The main characteristics of the present phase are the high degree of personal involvement of the premiers, the strategic approach, bold goals and precedent-making solutions, the number, variety and intensity of activities, the involvement of Newfoundland (see Section VIII), and the premiers' determination to see results.

The white paper was widely discussed, including in two legislative committees. Maritimers accepted the need for a regional, strategic approach and transformational change instead of what they had seen in previous decades.

In 1992 a vision, seven goals, five principles and decision-making rules were enshrined in each province in The Maritime Economic Cooperation Act.

In 1992 a vision, seven goals, five principles and decision-making rules were enshrined in each province in *The Maritime Economic Cooperation Act*. They are guiding the greatest amount of cooperation within and between the public and non-governmental sectors in the history of the region.

As of June 1996, the Council has met 95 times. Since 1991, the governments have proclaimed 12 legislative bills in five sectors to integrate policies. They have signed twelve multiprovincial and six federal-multiprovincial sectoral agreements. The purposes of the agreements are to integrate programs, pool resources and initiate joint processes on major items. As remarkable, people in the non-governmental sector are working together on a regional basis as never before, stimulated by the strategic economic initiative.[18] Also during this phase, the federal government began to encourage multiprovincial integration. That was a considerable change from its approach in the 1970s and 1980s.[19]

The Government of Canada

The political environment for cooperation between the Maritime governments differs fundamentally from that between nations in that the provinces are sub-units in a nation. The provincial governments have extensive bilateral relations with the national government, which are much more important than their interprovincial relations.

The provinces receive vital fiscal transfers from the national government. Both orders of government have policies and programs, or views, on most areas of public policy which are the focus of cooperation or confrontation. Each government is an influence on the other in the world of public opinion.

Politicians are elected to the provincial legislature and Canadian Parliament from each province. They both speak for the electorate of their province. They too may have different views on any subject, for any number of reasons. There are no institutions and few forces that require politicians in a legislature to compromise and cooperate with those in Parliament. Further, the bureaucracies of a provincial government and those of the federal government in the same province may have different but legitimate views on what policies and programs are best for the province.

Working with the Region

This is a huge maze of competing interests, with quicksand awaiting the unwary at every turn.

Historically the federal government has not been a leader in encouraging the Maritime or Atlantic provinces to work together.

This is a huge maze of competing interests, with quicksand awaiting the unwary at every turn. The bilateral relationship is "managed" officially through agreements and arrangements between the federal government and each province. Prominent among them are the economic development agreements and sub-agreements.[20] The relationship is also managed unofficially by the links between federal and provincial politicians and officials who have complementary responsibilities or shared visions and interests, and by discipline within each government and each political party.

As was mentioned, historically the federal government has not been a leader in encouraging the Maritime or Atlantic provinces to work together. It may see little to gain. It may open itself to charges of interference in provincial affairs. It may be drawn into expenditures that it could otherwise avoid.[21] The exceptions to the statement are few and generally recent. Time will tell whether that government is adopting a different strategy.

The provinces have approached Ottawa together on many occasions requesting consideration on matters. However, to my knowledge, they have never proposed a federal-multiprovincial strategic planning process. That should not be surprising. The planning environment in government is highly complex. The planning process would be that much more complex with more than one government involved, let alone with two levels of government involved.

However, two questions must be asked: (1) Might the region have avoided the current macro-economic situation (provincial debt, deficit and fiscal vulnerability), pointed out so bluntly in the McMillan Report, if there had been federal-multiprovincial planning in the 1960s and 1970s? (2) Will the current strategies of the Council, in sectors where the federal government has a role, be able to meet desired and planned goals without the formal and active involvement of the senior government?

Relations with Neighbouring Governments

NEWFOUNDLAND: The Conference of Atlantic Premiers

As mentioned, Phase 4 of cooperation differs from Phase 3 by the inclusion of the Government of Newfoundland and Labrador at the highest level in decision-making and coordination. The institution for the renewal of Maritime-Newfoundland cooperation is the Conference of Atlantic Premiers (CAP).

The Atlantic premiers created the Conference in December 1989 after Premier Clyde Wells attended two Council meetings as a guest. The four premiers agreed to create the Conference as a vehicle to identify and act on common interests. As of June 1996, CAP has met 15 times.

CAP meets concurrently with the CMP. The Secretary to Council and his staff serve CAP also. Newfoundland contributes financially to projects, generally on the Atlantic per-capita formula, but not to the operation of the Secretariat.

Atlantic matters now dominate the formerly Maritime agenda, a dramatic contrast to the situation before 1990.

Atlantic matters now dominate the formerly Maritime agenda, a dramatic contrast to the situation before 1990. Over the past five years, the four provinces negotiated formal arrangements in eleven sectors. Newfoundland is a participant in most of the activities of the strategic initiative. Few, if any, items in the overall relationship now fall through the cracks.

One must bear in mind that Newfoundland is a considerable distance from the Maritimes, has a different culture and economy, and there is not a long history of intergovernmental relations with the Maritimes. Four-province relations are neither as extensive nor intensive as those between the Maritime governments. However, the Newfoundland government has now had considerable experience working within the structured environment of the Council and its secretariat. The regional framework accommodated that province's interests and concerns and adjusted smoothly to the new participant.

It is important that Newfoundlanders' confidence continue to grow in their relations with the Maritime governments and the structures and processes of cooperation. If it does, the opportunity should emerge to put the larger relationship on a more secure footing.

QUÉBEC: A Closer Relationship?

Links between Québec and the Maritimes go back centuries, based on mutual interests in education, commerce, family, recreation, culture and every other aspect of life. Maritimers respect Québec's culture and the French language.

New Brunswick and Prince Edward Island have cultural agreements with Québec. There are seats for Maritimers at universities in that province in several degree programs not offered in this region. Since 1980 Québec has had an office in Moncton. The office coordinates programs in the region on behalf of its government and "reports" to Québec on Atlantic perspectives.

Until recently, the relationship between the Maritime governments (excepting New Brunswick) and Québec was not much different than their relations with Newfoundland before 1990, and with the more westerly provinces to this day. That may be changing. New Brunswick and Québec signed a joint procurement agreement in 1993 and expanded it in 1994, with the agreement of the other Atlantic provinces. Le Carrefour Acadie-Québec brought together over 100 leading Maritimers and Quebécers outside government in a first-ever networking event. Until recently, the Secretary to the Conference of Atlantic Premiers briefed Québec officials following the regular meetings of CAP and CMP.

The environment for cooperation with the Government of Québec is abnormal at present because of the latter government's stated goal of sovereignty.

However, the environment for cooperation with the Government of Québec is abnormal at present because of the latter government's stated goal of sovereignty. One would hope that the

people and governments of the provinces will continue to develop and deepen their relations in the larger and longer-term interest.

AMERICAN STATES: Long-standing Friends

Links between New England and the Maritimes also go back centuries.

Links between New England and the Maritimes also go back centuries. They too cover pretty well all aspects of life but with less intensity than with Québec. The creation of the Conference of New England Governors and Eastern Canadian Premiers in 1973 was a logical outgrowth of those links. Further, it was relatively easy to accomplish because the six states had a long record of working together, as was the case between the Maritime governments. Secretariats in Boston and Halifax support the Conference. In the latter case, the Secretary to the Council of Maritime Premiers has that separate responsibility.

Since 1973 the governors and premiers have met annually (with three exceptions). They have commissioned studies and sponsored research, conferences, trade shows and seminars—some 250 events in about 14 policy fields. They have influenced the United States and Canadian governments on environmental policy, the offshore fishery and other matters. They have raised public awareness on acid rain, depletion of the fishery, the North American Free Trade Agreement, energy supply and conservation, and other subjects.

The multilateral relationship stimulates, and is stimulated by, bilateral relations between provinces and states outside the framework of the Conference. The Atlantic governments have taken advantage of the opportunities, especially on energy, trade and investment. Nova Scotia has had a tourism office in Portland since 1976 and one for economic development in Boston since 1990.

A link of growing importance is the one between Acadians in the Maritime provinces and Acadians in the State of Louisiana.

A link of growing importance is the one between Acadians in the Maritime provinces and Acadians in the State of Louisiana. A cultural agreement that had been in place for some time was

90

expanded in 1994 to cover other areas of public policy including education, economic development and tourism.

The Universities

An Example of Non-governmental Regional Cooperation

Relations between the Maritime governments are only one element of the interactions across the borders. Non-governmental groups in most sectors meet regionally as well as provincially. The Maritime Union Study reported on the extent of this.[22] It is not possible to discuss non-governmental cooperation fully in this brief paper. However, an overview of what universities do on a regional basis is suggestive, in some respects, of what is done in other sectors.

The AAU has been an important vehicle for the presidents to advance common interests to governments and for coordinating joint programs.

In 1964 the presidents of the Atlantic universities created the Association of Atlantic Universities (AAU). The AAU has been an important vehicle for the presidents to advance common interests to governments and for coordinating joint programs. It has a secretariat, several standing committees, and 16 affiliated post-secondary bodies and committees. On another administrative intiative, the presidents of four Halifax universities created Interuniversity Services Incorporated over ten years ago. ISI is now governed by and serves 17 Atlantic institutions of higher education. It manages over 50 procurement and equipment services' agreements for them and others.

The AAU submission to the Maritime Union Study proposed the creation of what was to become the Maritime Provinces Higher Education Commission (MPHEC). In 1973 the Maritime premiers accepted the presidents' vision of regional coordination of post-secondary education. The Council also accepted the key recommendations in a 1993 report by an external committee that reviewed the MPHEC. C.W.J. Eliot, then president of the University of Prince Edward Island, chaired that committee.

91

In 1987 the Association proposed to the Council a regional centre on distance education, after research and intensive consultation and negotiation. Although the Council did not accept the proposal, cooperation is growing toward making better use of this powerful tool for education and training.

A study by the Council Secretariat in 1985 identified 65 research bodies at Atlantic post-secondary institutions whose work focuses on more than one Atlantic province. Covering many disciplines, they advance basic knowledge of the region.

About 250 teaching programs at Maritime universities are regional. In them, the province of residence of a student studying in another Maritime province is responsible for the government share of that student's education. The gross interprovincial flow from this policy is currently about $20 million per year. In five other programs, seat-purchase or cost-sharing arrangements are in place between the governments. The MPHEC coordinates the arrangements.

Faculty members in many disciplines have formed regional bodies to share views on their research and improve the quality of their teaching. The largest group is the Atlantic Provinces Council on the Sciences, which has been active since 1962 and has a permanent secretariat. Since the mid 1970s, the Atlantic Canada Studies' Conference has organized large, multidisciplinary conferences biennially on a regional theme. Other examples are the Atlantic Provinces Political Science Association and the Atlantic Canada Economics Association.

Over the years, the universities have hosted or organized many conferences and seminars on regional themes.

Over the years, the universities have hosted or organized many conferences and seminars on regional themes. Notable among them was the remarkable two-part conference in 1980 on the theme, "The Atlantic Provinces in Canada: WHERE DO WE GO FROM HERE?/Les Provinces de l'Atlantique dans le Canada: VERS QUOI NOUS DIRIGEONS-NOUS?" The first part was a closed weekend meeting at the Université de Moncton where 12 academics shared views with the Maritime premiers on the

formers' draft papers on the theme. The second part, held two months later, was a three-day open conference at Acadia University, attended by over 200 persons including the Maritime premiers. The 12 academics and others presented papers and discussed them with panelists and the audience. The proceedings were published (see WINTER in Bibliography).

Many individual professors contribute toward greater understanding and cooperation in the region through their research, teaching and community service roles, their publications and media appearances, and their leadership in organizing and hosting conferences and seminars such as the ones mentioned above.

Finally, the Maritime governments have cost-shared in the construction of three major capital facilities at post-secondary institutions. In the 1980s that amounted to $41 million of provincial money, matched by $31 million from the Government of Canada.

Challenges Facing the Provinces and the Council

Three general challenges face each Maritime province: (1) forces from outside the region; (2) provincial forces for change; and (3) how the province and its government respond to the first two.

Three general challenges face each Maritime province: (1) forces from outside the region; (2) provincial forces for change; and (3) how the province and its government respond to the first two. I phrased the previous sentence as "each province" rather than "the region" intentionally. One of the dilemmas in intergovernmental affairs is that governments do not always, or seldom, see a problem in the same way. Without agreement on the problem, solutions are hard to reach.

On the first general challenge, McMillan pointed out eight "compelling issues" that are affecting our provinces:

1.   The U.S.-Canada Free Trade Agreement (his report was issued before the North American Free Trade Agreement and the World Trade Agreement were signed);

2. New technologies;

3. New growth markets overseas, plus markets of enormous wealth, especially Japan and other Pacific Rim countries;

4. New competitors—vertically integrated, global, fast-moving, based elsewhere—and new business relationships, such as partnerships;

5. The declining shelf-life of knowledge in most aspects of life, and the need to overcome that with "life cycle" learning;

6. Changing demographics;

7. The new rule of the global economy—that international conditions should drive and shape the domestic agenda; and

8. At least a decade of severe fiscal pressures on the federal government and "not overwhelming evidence for (sic) a strong federal desire to make Atlantic Canada a focus of policy priorities."[23]

"The smaller and poorer a country is, the better its administration must be because the margin for error is less."

The second general challenge comes from within a province. An example is the need in New Brunswick to maintain consensus on being a two-language society. Other thrusts are the recent and current municipal, school and hospital board amalgamations in Nova Scotia and Prince Edward Island, and fiscal restraint measures in all provinces. Yet another example is the need for the public service in each province to reach exceptional levels of effectiveness, efficiency and excellence. In this context, I recall the remark by a senior Israeli official in a speech: "The smaller and poorer a country is, the better its administration must be because the margin for error is less."[24] How true that statement is for the Maritimes. Although province-centred challenges do not usually affect other provinces, they drain energy and resources that one could otherwise apply to cooperation.

The third general challenge is how to meet the first two. Each province must decide whether to meet the "change" challenges alone or whether to collaborate with neighbouring provinces. I quoted Fingard and Reid earlier on the difficulty of reaching regional consensus. Former Prime Minister Pierre Trudeau spoke to the matter also:

> The task of providing good government in the Maritimes...a high degree of cooperation among provinces as well as between Ottawa and the provincial governments.

> I think all of us still recognize that the price for a lack of regional consensus about goals, or about policies to achieve them, is very high in a region like the Maritimes where the population base is smaller, the challenges of economic development are greater, and political authority is more divided than elsewhere in the country.[25]

I think all of us still recognize that the price for a lack of regional consensus about goals, or about policies to achieve them, is very high in a region like the Maritimes.

When some or all of the provinces agree to transfer an issue to the Council or CAP, the latter influences the outcome through policy initiatives, intergovernmental processes, and by influencing the environment for cooperation. Each will be commented on briefly.

The Policy Agenda

The measure of the Council, according to McMillan, will be whether it acts on the vital issues affecting the future of the Maritimes. That suggests initiatives that help the societies transform themselves, in addition to initiatives that are important but would result in less dramatic change. The former ones should be the particular interest of premiers.

Challenge and Opportunity laid out the action plan for the Maritime Economic Initiative as of mid-1991. The 1991-1994 period brought good results. Transformational projects in the

period included public purchasing, harness racing, commercial trucking, and corporate registration. All involved legislation that changed the policy regime within which the private sector functions.

From Opportunity to Results lays out the Council's action plan as of the end of 1994. Two of the projects listed are now a reality—the Atlantic Investment Fund (ACF Equity Atlantic Inc.) and Atlantic Canada On-Line. Several others will be transformational if they are implemented as stated in official releases, including employment mobility, public school education, distance education and health.

Public-private partnerships is a concept that is leading to regional solutions in several areas that, collectively, make that concept itself a transformational one. The ACF Equity and Atlantic Canada On-Line initiatives are both regional partnerships with the private sector, the first with several banks and the second with a consortium led by Unisys Canada Inc.

The premiers play the principal role in developing, approving and monitoring the policy agenda.

The premiers play the principal role in developing, approving and monitoring the policy agenda. This includes setting the goals. Ministers and senior officials in the line departments are also pivotal. In many cases they propose the projects, and they always implement them.

Intergovernmental Processes

Process activities relate to creating the policy agenda, monitoring progress on it and encouraging results. They increase awareness of the issues and options, and give people the mandate and encouragement to act. They influence who is involved, and how. They identify and overcome some of the barriers to success, and incorporate checks and balances to ensure that the outcomes are the right ones.

The most important process steps ensure that the premiers and ministers are in charge of the policy agenda—the issues and ideas

to pursue and the boldness of the goals to meet. That must be the sine qua non of the strategic initiative. There will not be important change without political ownership and leadership of the change. That was a key observation in *Standing Up to the Future*.

Appropriate, shared information and effective communications can help lead to trust, confidence and support for change. The flow is from many sources to many recipients.[26] People receive a deluge of information already and it is not easy to sort out the necessary from the interesting from the irrelevant. Information must be geared to each intended audience and be communicated in a professional and timely manner.

Consultation with those directly affected by change will always be important. The best results can only be assured by ensuring adequate consultations, professionally done. Most consultation on the strategic initiative has been by the provinces, within provincial traditions, but the trend has been for more being done on a regional basis. Both approaches are appropriate.

Another important process item is that the premiers continue to demand policy results and to set deadlines for them. It is too easy to defer policy decisions, settle for watered-down ones, or be satisfied with progress on process only, in this region where "political authority is more divided than elsewhere in the country." (see Trudeau, above)

The strategic planning process itself is very important.

The strategic planning process itself is very important, and raises two issues. The first issue is whether to plan regionally. Henson commented on that in 1970:

> In the absence of effective unified planning, can the most effective economic development plans be made and carried out in the region? Can maximum federal and other funds be obtained for development purposes? And can the obtainable funds from all

sources be used to best advantage? The answers must be negative.[27]

Savoie made a similar point twenty three years later:

> The three provinces need to articulate a well thought out 'regional' position in their dealings with the federal government. In the past, the three provinces have sought to strike bilateral deals with Ottawa in virtually every economic sector. This did not serve the region well when the national economy was growing and when federal coffers were full. It will serve the region even less well in the future.[28]

The second issue is whether the provinces, working together, are willing to plan strategically with the federal government, as mentioned earlier. Many commentators have talked or written on the interdependence of governments. That is especially true in the Maritimes because of the far-reaching presence of government in the three societies.

The federal and provincial governments plan strategically, both alone and bilaterally. The Maritime and Atlantic governments plan together to a limited degree. It has been done on a federal-multiprovincial basis in a few policy sectors. However, it is not being done strategically as an ongoing function by the federal government and the three or four provinces together. A broader planning process could only be positive.[29]

Garret FitzGerald spoke exactly to the point in a speech in 1988 on the European Community (now the European Union): "The remarkable progress already made by the Community...was achieved by a combination of careful advanced planning and a clear-sighted view of the objective to be attained, combined with the creation of a unique decision-making mechanism of a supra-national character."[30]

In Western Europe the "careful advanced planning" is being carried out by two levels of government working together—the national level and the European level. It requires effective joint research on key policy issues and the political and bureaucratic will and discipline to develop and "sell" the plan. Why not in Canada?

Timing is always a consideration in politics. Picking the opportune time to advance proposals for cooperation is more of an art than a science. Sir Charles Tupper, in a speech in 1860 on the union of the Maritime provinces, gave sage advice on the matter that is still applicable, "The time best suited to the calm and rational investigation of such questions is previous to any imperative necessity arising for an immediate solution."[31]

The Environment for Cooperation

One factor that is not easily amenable to change is the political culture of a province.

The environment in this case is a general word that covers all those underlying factors that influence attitudes in a province toward cooperating with neighbouring provinces and to change itself. Some factors are not very responsive to initiatives; others are. One factor that is not easily amenable to change is the political culture of a province. Political culture is "...a short-hand expression to denote the emotional and attitudinal environment within which the political system operates."[32] We will set political culture aside.

Factors that are amenable to change include:

▸ The "comfort level" of the political system toward cooperation, and especially the knowledge and attitude of members of the legislatures toward cooperation and on the external forces on their province;

▸ The views of premiers and ministers on the subject at the time of taking office (unless they have strongly negative ones);

▸ The confidence of the public in government and public policy as vehicles to improve their quality of life, and cooperation as a means to that end;

▸ The quality and timeliness of research on key public policy issues and the extent of its distribution and use throughout the region;

▸ The extent and quality of communications and information flow between the governments, and to the public in each province about the other provinces;

▸ The visibility of cooperation and the reasons behind it;

▸ Having a legal and structural framework and processes that stimulate trust and cooperation and lead to results;

▸ The distribution of tangible and intangible benefits and costs; and

▸ Special concerns of groups that perceive threats in the changes contemplated.

Depending on the personality and the personal visions and goals of each premier from time to time, the intensity of cooperation ebbs and flows.

Political leaders are always pivotal in intergovernmental relations, whether at the international, national or sub-national level. The Maritime premiers have, by far, the greatest effect on the goals and pace of cooperation and the environment for it in this region. They control the specific items in which they take a personal interest. They influence the climate greatly in which their bureaucracies and the non-governmental sector make deals. Depending on the personality and the personal visions and goals of each premier from time to time, the intensity of cooperation ebbs and flows.

Having said that, influential interests outside government must be mentioned (business, unions, media, intellectuals, interest groups, professional societies, etc). They influence their government greatly. They should never underestimate their potential to

influence cooperation. For example, it was the private sector in Western Europe that pushed their governments to initiate the Treaty of Maastricht process which led to the European Union. Maritimers tend to leave regional cooperation to their governments and premier. That is a mistake. Organized, sustained pressure, supported by good research and effective communications, can make a difference.

Conclusion

This chapter has discussed cooperation between the governments of the Maritime provinces, and with the federal government and neighbouring jurisdictions. The four phases of cooperation described show the gradual increase in the intensity of the relationship. The region is getting better at achieving solutions, building on its 40 years of experience. The several regional policy regimes and major programs negotiated in the past five years set precedents and a new plateau from which the governments can face new challenges.

The Maritime provinces have come a long way, especially in the past five years—getting their fiscal houses in better order, improving structures and policies in the health, education and municipal sectors, improving literacy and job training programs, creating a better environment to attact investment, and so on. In addition, they have implemented new region-wide policies and programs, many involving Newfoundland. It would be unfair to expect more in such a short period.

One could argue persuasively that our governments are responding well to the forces of change. One could also argue persuasively that the responses are too slow and inadequate to the challenges.

However, change is taking place at a rapid pace within and outside the region. It is against that backdrop that our governments must set their goals and agendas. One could argue persuasively that our governments are responding well to the forces of change. One could also argue persuasively that the responses are too slow and inadequate to the challenges.

In any event there is much more to be done cooperatively. A number of the needed measures are discussed in Section X. It is

not time for a break but for continued imagination, boldness, effort and more results. Everyone has a role. Everyone has a stake.

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Endnotes

1. The word "cooperation" is defined broadly to include sharing information, pooling resources, harmonizing policies, integrating programs, having common agencies and taking other actions to meet shared goals. The more specific words "integration" and "union" are implied in the more general word. They are used only when the context so requires.

2. By long convention, New Brunswick, Nova Scotia and Prince Edward Island together make up the Maritime region. The Atlantic region comprises the Maritime provinces plus Newfoundland. The Eastern provinces are the Atlantic provinces plus Québec.

3. Leach, Richard H., Interprovincial Relations in the Maritime Provinces, Maritime Union Study, 1970, p. 85.

4. Whelan, Hon. Edward, The Union of the British Colonies: A Brief Account of the Several Conferences..., Charlottetown, G.T. Hazard, 1865, Reprinted Summerside, Pioneer Publishing Co., 1949, p. 2. Whelan was one of the Prince Edward Island delegates to the constitutional conferences.

5. Fingard, Judith, "The 1880s: Paradoxes of Progress", in E.R. FORBES and D.A. MUISE, eds., The Atlantic Provinces in Confederation, Toronto, Buffalo and London, University of Toronto Press and Fredericton, Acadiensis Press, 1993, p. 112.

6. The word "strategy" is used as in the classic definition—a long-term plan to meet long-term goals.

7. Reid, John G., Six Crucial Decades: Times of Change in the History of the Maritimes, Halifax, Nimbus Publishing, 1987, pp. 172-175.

8. Reid, p. vi. .

9. Evans, Paul H., <u>Report on Atlantic/Maritime Interprovincial Cooperation between 1950 and 1971</u>, Halifax, Council of Maritime Premiers, 1985. Also available as <u>Rapport sur la coopération entre les Provinces des Maritimes (de l'Atlantique) de 1950 à 1971</u>.

10. Sir Alec Cairncross, the prominent British economist, prepared one of the studies (see Bibliography). Ian McAllister commented privately to the author that the presence of Cairncross in the region in the early 1960s and Thomas Wilson (Adam Smith Professor of Economics, Glasgow University) in the late 1960s (see Bibliography), and their reports, raised awareness of the goals and activities of the European Economic Community. This influenced attitudes toward cooperation during the 1960s and the work of the Maritime Union Study from 1968 to 1970.

11. Evans, p. 98.

12. The four premiers did not meet regularly during this long period even though the Maritime premiers did. However, Atlantic premiers did meet from time to time (but not often) on specific policy issues, especially transportation. Newfoundland did continue to participate in joint programs with the Maritime provinces, including some new ones, and to support APEC and federal agencies for regional development. Some line departments of the Atlantic governments continued to work together effectively during the period.

13. The Council created the Regional Treasury Board in 1972 and delegated to it the responsibility for most management policies and financial matters for Council agencies. Decisions of the Council and the Board are communicated by minutes to those required to act on

them.

14. The reader is referred to annual reports of the Council and other documents in the footnotes and the Bibliography for details of the Council's work over the years.

15. McMillan, Charles J., Standing Up to the Future: the Maritimes in the 1990s, Halifax, Council of Maritime Premiers, 1990, p. 1. Also published as Pour faire face à l'avenir: Les Maritimes dans les années 90.

16. McMillan, p. 3.

17. Council of Maritime Premiers, Challenge and Opportunity: a Discussion Paper on Maritime Economic Integration, Halifax, 1991. The French version is on the flip side as Défi et perspectives: un document de travail sur l'intégration économique des Maritimes.

18. Council of Maritime Premiers, From Opportunity to Results: an Update and Outlook on the Maritime Economic Initiative, Halifax, 1995. The French version is on the flip side as Des Perspectives aux Résultats: Mise à jour et perspectives d'avenir sur l'initiative économique des Maritimes.

19. Atlantic Canada Opportunities Agency, Five-year Report to Parliament: 1988-1993, Moncton, pp. 44, 72.

20. General Development Agreements were started in 1974, followed by Economic and Regional Development Agreements in 1984.

21. For general comments on these points, see especially the paper by Michael J.L. Kirby at the "Conference of Regional Cooperation in the Maritimes", Halifax, The Institute of Public Administration of Canada, 21-22 April, 1981.

22. Leach, <u>Interprovincial Relations...</u>, several sections.

23. McMillan, <u>Standing Up to the Future...</u>, p. 2-3.

24. Yaacov Nitzan, speaking at the annual conference of the Institute of Public Administration of Canada in 1973.

25. Speech at a gala dinner in Fredericton, N.B. on 1 June, 1981 to celebrate the 10th anniversary of the founding of the Council of Maritime Premiers.

26. Governments, interest groups, academics, institutions, media, residents, etc.

27. Henson, Guy, <u>Interprovincial Relations in the Maritime Provinces</u>, Maritime Union Study, 1970, p. xvi-xvii.

28. Savoie, Donald J., "Looking Ahead", in Donald J. SAVOIE and Ralph WINTERS, eds., <u>The Maritime Provinces: Looking to the Future</u>, Moncton, The Canadian Institute for Research on Regional Development, 1993, p. 287.

29. The federal government established the Atlantic Development Council in 1969 to "...make reports and recommendations to the Minister on plans, programs and proposals for fostering the economic expansion and social adjustment of the Atlantic Region...;", among other things. ADC existed for about ten years, consulted with the provinces, and produced two strategic planning reports. Work like that of ADC, if it still existed, would be an input, one of many, to a federal-multiprovincial planning process. It is not a substitute for the latter.

30. At the time he spoke, FitzGerald had completed his period as prime minister of Ireland.

31. Tupper, The Rt. Hon. Sir Charles, <u>Recollections of Sixty Years in Canada</u>, London, New York, Toronto and Melbourne, Cassell and Company, Ltd., 1914, p. 15. Tupper was Leader of the Opposition in Nova Scotia at the time.

32. Kavanagh, Dennis, <u>Political Culture</u>, London and Basingstoke, The Macmillan Press, 1972, p. 10. This is one of many definitions of political culture. Kavanagh elaborates his definition by adding "...we are concerned with *orientation* towards *political objects* (his emphasis). Orientations are predispositions to political action and are determined by such factors as traditions, historical memories, motives, norms, emotions and symbols." See also PUTNAM.

5

UNIVERSITIES IN THE
NOVA SCOTIAN ECONOMY

by Paul Pross and Fazley Siddiq
in association with
Brad Fraser, Dina Kalogeropoulos
Patricia Kahuthu and Heather Sheehy

Introduction

In debating the future of their universities, Nova Scotians have
generally taken one of two positions. The government and those
who advocate a reduction in public spending have argued that the
university system is inefficient. They see rationalization as a
vehicle for reducing costs, primarily by eliminating what they
perceive as identical programs that are found in too many
universities, or that graduate more students than society currently
needs, or that they consider simply to be unnecessary. University
administrators, faculty members and many alumni defend the
present system on the grounds that a university education is
intrinsically valuable; that specific programs should be retained
either because they have academic merit or because they serve a
particular sector of the economy, and that individual institutions
make an important contribution to the life of a region of the
province.

Neither side convinces the other. Government sees the university
community as self-serving and its supporters either as
sentimentalists or as regional or economic special interests.
University supporters are appalled at the crass and, apparently,
uninformed positions that government has taken. Both sides are
rapidly becoming intransigent, each unable to comprehend the
position of the other and unwilling to admit that the other's point
of view has some merit. This impasse is further complicated by
the attempts of individual institutions and government agencies

What is being lost in this confrontation is a sense of the long-term well-being of the province, and the region.

to position themselves advantageously in the debate. What is being lost in this confrontation is a sense of the long-term well-being of the province, and the region. A major newspaper report on Dalhousie's proposal to merge the Halifax universities illustrates the point. Playing on the theme that the merger is analogous to a marriage proposal, the Chronicle Herald's education reporter, Cathy Shaw, asked:

> A little extra money would be nice, but would a shotgun marriage work? Who gets to control the marital checkbook? And what would be best for the 22,000 student children?[1]

'What would be best for Nova Scotia?' is not asked.

The question, 'What would be best for Nova Scotia?' is not asked. The article went on to report interviews with metro's university presidents which demonstrated the possibility that in their anxiety to protect academic institutions, advocates for individual universities are rejecting changes that could reinvigorate post-secondary education in the province. Equally, there is a distinct danger that in their zeal to rescue the Province from bankruptcy, the budget cutters will do irreparable harm to a tap-root of the provincial economy.

In this paper we stand back from the debate and ask what policies the government of Nova Scotia could pursue that would ensure that our universities make their maximum contribution to the provincial economy.

In this paper we stand back from the debate and ask what policies the government of Nova Scotia could pursue that would ensure that our universities make their maximum contribution to the provincial economy. In doing this, we recognize that we over-simplify the issues that face the government and people of the province. We recognize, for example, that the universities are much more than economic institutions. They play a large role in the cultural, political and spiritual life of the community. We make the assumption, however, that these less tangible contributions depend ultimately on the capacity of the economy to support the universities. Hence it is important that we understand how the universities contribute to the economy and how we can make the best use of the resources that they have to offer. After all, a community that appreciates how an institution

contributes to its own well-being is the more likely to reciprocate with material support.

We are aware that in focussing on the Province's relationship with the universities, we may appear to be ignoring the role the federal government plays in maintaining and developing post-secondary education in Nova Scotia. In fact, though our primary focus is the Province -- it is, after all, constitutionally responsible for the universities and, in the first instance, their paymaster -- we are very much aware impending changes in the federal government's approach to university funding are having a profound effect on the university system, and we spend some time discussing the new resource environment these changes will create.

We begin our discussion by looking at the three most important ways through which our universities contribute to the provincial economy.

We begin our discussion by looking at the three most important ways through which our universities contribute to the provincial economy, those being the direct economic impact of spending by the universities and subsequent spinoffs, the development of human capital, and fostering economic development. We draw some conclusions about the extent of these contributions and their impact on the economy. We then take up the funding issue, showing the impact that anticipated changes in government funding levels will have on university budgets. This in turn leads us to investigate how the expected shortfall might be made up. We conclude that while some additional revenues can be generated from donations and non-traditional sources, the greater part of the shortfall will have to come from increased fees. This in its turn, however, introduces new problems. In particular, it threatens to pitch the province's post-secondary institutions into a fees' war that would benefit some students in the short run, but would ultimately force the closure of programs and research activities that are critical to the economic well-being of Nova Scotians. To forestall such an outcome, we argue, the Province should consolidate the Halifax universities, preferably in a fashion that would retain the identity of the existing institutions.

The Economic Impact of Nova Scotia's Universities

Established two hundred years ago, post-secondary education in Nova Scotia today comprises eleven institutions enrolling 33,404[2] full-time equivalent (FTE) students and offering an extensive range of programs.[3] Although these institutions can be classified in a number of different ways, we have chosen to organize them under three broad headings that best help us relate their resources to the roles they have undertaken in the Nova Scotia economy. Thus, we categorize them as undergraduate, specialized and full service universities.

Undergraduate universities include:

Saint Mary's University (SMU)
Saint Francis Xavier (St. FX)
Mount Saint Vincent University (MSVU)
University of King's College
Acadia University
University College of Cape Breton (UCCB0

Although these institutions offer some graduate programs, they are primarily engaged in preparing students for undergraduate degrees. Located in Wolfville, Antigonish, Sydney and Halifax, in 1992-93 they enrolled 20,176 students.

Specialized institutions comprise:

Universite Ste. Anne
Technical University of Nova Scotia (TUNS)
Nova Scotia College of Art and Design (NSCAD)
Nova Scotia Agricultural College (NSAC)

They offer their students programs that are very different in character, but have the common feature of being highly specialized and generally quite expensive to mount. Since enrollments are relatively small, a combined total of 3,097 in 1992-93 in the four institutions (see Table 6), the cost per

student is much higher than that faced by the undergraduate universities. Like several of the undergraduate universities, Universite Ste. Anne plays an important role in the economy of its region and has a unique function as a pillar of Acadian culture. NSAC, located in Truro serves the farming community primarily and is affiliated with Dalhousie. TUNS, which in April 1997 will become a constituent college of Dalhousie, consolidating many years of close relations between the two universities in the province with doctoral programs, has historically drawn most of its students from the universities across the three maritime provinces offering two-year undergraduate diploma programs in engineering.[4] It is expected that with the amalgamation of Dalhousie and TUNS, new four- (or five-) year undergraduate degree programs in all major fields of engineering will eventually be introduced at Dalhousie.

Dalhousie is the only university which can be considered a full service institution. It offers a wide array of programs at both the graduate and undergraduate levels and prides itself on its capacity to undertake major research. In 1992-93, it enrolled 10,131 students, a significant number by Maritime standards, but well below the enrollments of most other Canadian institutions in this category and insufficient to sustain the high operating costs associated with a major commitment to research and to specialized programs.

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It is commonplace today to decry the number of universities in the province, but each at the time of its founding was hailed as a building block of its region, a source of support for its economic development and a vital contributor to its cultural and spiritual life. As the universities matured, these local affiliations persisted, fostering a spirit of institutional independence and buttressing the claims each made for Provincial support. Today local affiliation and institutional independence are probably most responsible for the intensely political character of the debate over university rationalization.

Fundamentally, both local support and institutional independence are intimately related to the role the universities play in Nova Scotia's regional economies. Foremost in the minds of many supporters is the direct impact universities have on their local communities. Salaries, student spending and the purchase of goods and services affect local economies significantly and visibly. The universities' effect on the development of a region's "human capital" -- its pool of workers -- is also important, however, as is their ability to foster local development by conducting research and spreading knowledge of new technologies. As the Ministry of State for Science and Technology put it, in a background paper to the 1987 National Forum on Post-Secondary Education:

> While the teaching and research roles are well-established functions, the third and growing role of the university is to be an active agent of progress, through the diffusion of knowledge, technology and expertise to other sectors of society.[5]

In Nova Scotia particularly, where post-secondary education has a significant role in the province's economy, it is increasingly recognized that technology, education and knowledge are becoming more and more important to the province's well-being.

Indeed, awareness of the potential of universities to enrich the human capital of an area and to foster its economic development is responsible for much of the ferment which currently surrounds post-secondary education policy. In Nova Scotia particularly, where post-secondary education has a significant role in the province's economy, it is increasingly recognized that technology, education and knowledge are becoming more and more important to the province's well-being.

Our analysis here reflects these preoccupations. We look first at the impact Nova Scotia's universities have on the provincial economy by virtue of their spending and that of their employees. Next we assess the contribution they make to human capital development and, finally, we consider briefly the role universities can play in fostering economic development.

Spending Impacts

Direct spending by the universities and by the universities' communities induce additional economic activity that spreads throughout the entire economy.

Direct spending by the universities and by the universities' communities induce additional economic activity that spreads throughout the entire economy.[6] There are essentially four channels through which university related expenditures make this initial impact (Spears, 1994; Hogan, 1992; O'Sullivan, 1991), namely:

- direct expenditures of the universities on goods, equipment and construction, and services rendered by people other than regular employees;

- direct personal expenditures of faculty and staff, and other regular employees;

- expenditures by students attending the institutions;

- expenditures by out-of-province visitors taking part in conferences, meetings, sporting events and other functions.

These autonomous, or initial, expenditures translate into an increase in the demand for goods and services within the economy, from which additional incomes and employment are generated. In this study, our analysis deals with only the first two of these expenditures. Hence, in our estimates, we do not consider expenditures by students and by out-of-province visitors, thereby understating to a considerable degree the total contribution of the university system to the provincial economy. "Leakages" or expenditures on goods and services outside the province are also not considered, but these expenditures are likely to be relatively small. As a result, they are not likely to overstate in any significant way the estimated impact of the university system on the provincial economy. The latter effect will only partially offset the former, resulting in a net discrepancy that will almost certainly understate the total contribution of the universities. Estimates of the net impact on the economy will

depend on the amount of initial expenditure attributable to the universities, and the size of the multiplier assigned to that expenditure.[7] As we shall see, different assumptions have led analysts to use multipliers that vary quite widely.

In the following tables we take a conservative approach to estimating the impact of universities' expenditures on the provincial economy. We select only two forms of expenditure for analysis: university operating expenditure and total university expenditure. These are the least controversial figures available. It is generally accepted, for example, that calculations of operating expenditures are derived from standardized and publicly available sources, and that the expenditures themselves are made chiefly within the province. By contrast we have no reliable estimates of the amount students spend outside the universities, nor of the expenditures of visitors to the universities, though these are by no means negligible.[8] Statements of total expenditures are nearly as reliable as those reporting operating expenses, but as they include spending on research, consultations and contract teaching which often involve payments made outside the province, it is much more difficult to estimate their impact on the Nova Scotia economy. These uncertainties, together with the fact that the mix and composition of university spending patterns will vary somewhat from institution to institution, suggest that it is prudent to use a number of different multipliers of varying magnitudes to establish estimates of the total impact due to university spending that range from fairly conservative to quite expansive. Those readers inclined to take a conservative view of the importance of spin-off benefits will opt for the conservative multipliers, while the more optimistic will choose those that are expansive. Accordingly, we subject the 1992-93 total operating expenditures of the universities to three multipliers selected from nine, ranging from 1.43 to 2.50, applied in recent studies.[9]

In Table 1 we estimate that the 1992-93 total operating expenditure of $345 million by Nova Scotia's universities generated down-stream benefits ranging from $493 million to $762 million. A middle-ground multiplier of 1.73 suggests that

in 1992-93 the universities' operating expenditures generated nearly $600 million in total expenditures. Table 2 applies the same multipliers to total expenditure. Here again we suggest that a multiplier of 1.73 is the most appropriate. It yields an estimated benefit to the province of $752 million or 4.12% of Nova Scotia's gross domestic product of $18.3 billion in 1992-93. It must be emphasized that these estimates include only the direct expenditures and associated spinoffs of spending by universities on goods and services, and by faculty and staff. They do not include expenditures by students attending the universities and by out-of-province visitors. Hence, these estimates understate the actual contribution of the university system to the provincial economy. As well, they do not include the indirect contribution of universities in the development of human capital and in the overall development of the economy. It is to the discussion of these two critical issues that we now turn.

Human Capital Development

It is widely, though not universally, believed that an individual's skills are enhanced by a university education. Recent research supports this belief.

It is widely, though not universally, believed that an individual's skills are enhanced by a university education.[10] Recent research supports this belief. Canadian women between the ages of 25 and 54 holding university qualifications earned 37% more than their high school counterparts in 1980 and 1990 (after controlling for other personal characteristics). The differential in net advantage for men within the same age bracket amounted to 24.7% in the same period. For Atlantic Canada, Osberg has found that the return to education is slightly greater. Female university graduates aged 25 to 54 earned 44.2% more than their counterparts with a high school diploma, while male university graduates within the same age cohort earned 30% more.[11]

Such findings suggest that labour force participation in higher education will positively affect the provincial economy. By applying to Nova Scotia Osberg's estimates for Atlantic Canada, we can calculate the additional output generated by the university-educated Nova Scotian. Table 3 measures the differential in earnings between those with a high school diploma

and their counterparts with a university degree. It indicates that in 1992-93 individuals holding a university degree in Nova Scotia earned, on average, $9,557 (37%) more than their counterparts with a high school diploma. It assumes that these degree holders received their university education in Nova Scotia, not an unreasonable assumption since there is a net inflow of students to the province. The estimated additional contribution to Nova Scotia's annual output of a labour force, many of whom hold university degrees as opposed to high school diplomas, amounts to over $702 million.[12]

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Investment in human capital not only raises Nova Scotia's output, and thus strengthens its tax base, it may save governments substantial sums of money in transfer payments, simply by reducing the likelihood that individuals will require social assistance because they are unemployable. As compared with those not having a university education, university graduates are able to secure jobs faster even in a relatively tight labour market. Finally, it is important to remember that in order for Nova Scotia to attain long run economic development, a highly educated labour force is required. The educational levels of potential workers frequently determine the location decisions of innovative firms. This is because education may facilitate adjustments to new technologies, reducing the uncertainties arising from the introduction of innovation and thus the costs of such adjustment.[13] A highly educated indigenous labour force would be a potent attraction to innovative and expanding industries. This Nova Scotia possesses. Table 4 reports the percentage of the population in Nova Scotia, 20 years and older, to have attended university. It shows that Nova Scotians between the ages of 20 and 34 are more likely to have attended university, and thus to be better qualified than their contemporaries elsewhere in Canada. In this context, then, Nova Scotia's apparent over-abundance of university resources may be a major asset, and not the disaster so many decry.

At the same time, neither Nova Scotians nor their universities can afford to be complacent about these figures. They report current,

but not necessarily, future strength. The changing nature of the economy is constantly making new demands on the provincial post-secondary education system. It is all very well for business, political and university leaders to trumpet that university-acquired human capital will play a key role in imparting the skills required by business. In order to play that role, the universities must develop a curriculum that is sensitive to current labour market needs and thus capable of adapting quickly to new fields of knowledge and practice. Such flexibility is difficult to attain. It draws heavily on the human and financial resources of institutions at a time when they face a considerable scarcity of resources. For example, in order to sustain teaching programs that are responsive to the new economy, universities have to ensure that their faculty members are themselves constantly engaged in their own learning and research. Heavy teaching loads and the rote regurgitation of hackneyed lectures that come with 'high productivity' in academe may balance university budgets but do little to prepare students for the new economy.

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Economic Development

Economists would argue that from the Renaissance onwards one of the central roles of universities has been to enhance the human capital of society. The idea that universities are an economic asset to a community -- analogous, in some respects, to a steel mill, a prison, or a fish plant -- is of more recent origin, but it has been implicit in local support for Nova Scotia's universities for some decades. What is novel about the current debate over the role of the province's universities is the realization that these institutions can influence the economic development of the province as a direct result of research and the diffusion of technical knowledge. Nova Scotians, no less than Canadians in general, are well aware that:

The economic prosperity, and consequent standard of living, of whole nations is becoming increasingly dependent on science and technology. How well countries develop, acquire and use knowledge and technical know-how is determining their ability to

The economic prosperity, and consequent standard of living, of whole nations is becoming increasingly dependent on science and technology.

119

compete internationally and to provide employment and a higher standard of living for their citizens.[14]

Both basic and applied university research assists significantly in developing and transferring new research, particularly by moving ideas and inventions towards application and product development. Experience has shown that universities can play a key role in reducing the lag between the development of a particular technology and the realization of its benefits. They can also provide technical assistance to local industries and producers. This is particularly important in an economy like Nova Scotia's where small and medium sized businesses are seen as the main-spring of community economic development. Through partnerships with universities, these businesses can overcome their own inability to make major investments in research and development. In the universities they have an effective well trained workforce which can be made available to them at minimum cost and risk.

Nova Scotia's universities are aware of this role. Indeed, most of them have sought for several decades to grapple with its complexities and have in place institutes or centres charged with bringing the fruits of research to their local communities. The Acadia Institute has served this function in the Valley. The Coady Institute, at St. Francis Xavier University in Antigonish, has been a major influence throughout the Maritimes and internationally. In Halifax, various programs at the Technical University of Nova Scotia, the Gorsebrooke Institute and Henson College have been launched to foster the diffusion of technical knowledge and to apply research skills to the resolution of development problems. As well, a review of the activities of all the universities in Nova Scotia would reveal a plethora of formal and informal linkages between individual academics and departments, and the local economy.

Unfortunately, these efforts are often judged to be inadequate. There are a number of reasons for this. First, universities and businesses have not been used to working with one another.

Inevitably it takes time, as businesses and universities around the world have discovered, to learn to work together, and there are many mistakes made in the process. Second, the universities' central priorities continue to be -- and have to be -- teaching and research. These are the activities that they are paid to do, and that their internal cultures and incentive systems have evolved to support. While it is possible to add to these activities, they remain primary functions. Third, university research and development is expensive. If they are to support local economic enterprise, the universities have to bear the costs of maintaining the 'effective, well-trained workforce' that businesses cannot afford to hire individually. These costs are considerable and are not met by the charges that universities are able to levy for research and development services. Traditionally, these overhead costs have been subsidized by tuition-based government grants, but increasingly Nova Scotia's post-secondary institutions are finding it extremely difficult to divert from their teaching programs and basic research, the resources needed to give development research the standing it should have in provincial economic development.

Funding

Our brief survey of the economic role of universities has drawn attention to two key points: First, our developing economy, with its emphasis on technology, assigns to the universities a crucial role in enhancing the human capital of the community and in fostering economic development. Second, this new role is expensive to maintain.

In light of these two factors it is useful to look at how Nova Scotia's universities are funded and what the current debates imply for their ability to contribute to the provincial economy in the long term.

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University revenues come from five different sources:

- government grants in support of degree programs;
- fees;
- donations and bequests;
- research grants;
- non-traditional sources.

Figure 1.1
"Specialized" Universities
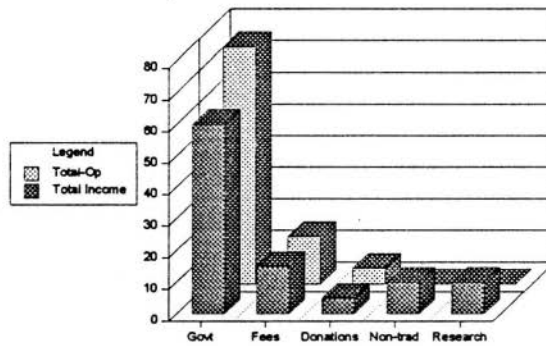
Figure 1.2
"Undergraduate" Universities
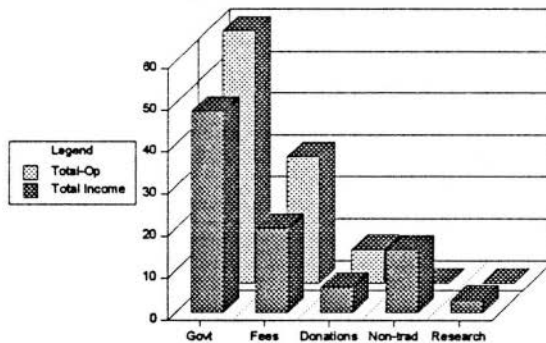
Figure 1.3
"Full-Service" Universities
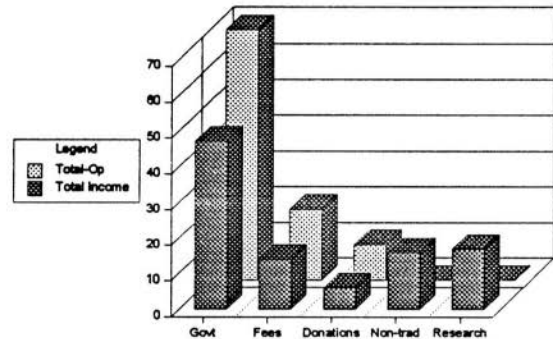
Table 5 displays how much each Nova Scotia university derived from each of these sources in 1992-93.

The table exposes very clearly two fundamental aspects of the university funding situation in Nova Scotia. First, that government grants in aid of degree programs constitute by far the largest source of income for universities. In 1992-93 these grants represented 67% of their combined operating income, and 49% of all income. Fee revenue amounted to 25% of the combined operating income and 19% of total income while donations accounted for 8% of the combined operating income and 6% of total income. Twenty-six percent of total income was derived from research grants and non-traditional sources. The second striking feature of the funding situation is that the universities derive revenue from these sources in very different proportions. Although these proportions are presented in Table 5, they can be demonstrated more clearly if we group the universities into the three categories that we referred to earlier -- undergraduate, specialized and full-service -- and if we summarize their revenue sources in suitably constructed figures.

In Figure 1.2 we look at the revenue sources of the six undergraduate universities. Their dependence on government grants is 60% of operating budget; less than the provincial average. They received 31% of their funding from fees in 1992-93 and 8% from donations. As proportions of total revenue, these sources supplied 49%, 25% and 7% respectively. At 76%, the four specialized universities drew 16% more of their operating revenue from government grants (see Figure 1.1) than did the undergraduate universities, only slightly more than half as much (17%) from fees and only 5% from donations. Dalhousie, which partially subsidizes research and the offering of specialized programs by maintaining a substantial undergraduate enrollment depends less on government grants than do the specialized universities, but, at 70%, a good deal more than do the undergraduate universities (see Figure 1.3). Both Dalhousie and the specialized universities derive a much larger proportion of total revenue from non-traditional sources and research grants than do the undergraduate universities. Sixteen and 17% respectively in the case of Dalhousie; 11% and 12% in that of the specialized universities, whereas these sources accounted for only 17% and 2% of the total budgets of the undergraduate universities.

While Table 5 demonstrates that in 1992-93 government grants were the primary source of university funding, as they have been since the 1950s, what it does not show is the steady decline of government support, a decline that is accelerating sharply as a result of the replacement of the Established Programs Financing (henceforth EPF) and Canada Assistance Plan (CAP) transfers with the less generous Canada Health and Social Transfer (henceforth CHST) which rolls into one lump sum payment transfers for health, post-secondary education and social welfare. The CHST transfers for Nova Scotia are projected to decrease from $625 million in 1996-97 to $376 million in 2002-03 before rising to $377 million in 2003-04. Clearly, this continuous decline well into the next century will mean that there will be increasingly much less money available from the federal government for universities than the $90.3 million the province

received as the cash component of the transfer for post-secondary education under the old, more generous, EPF scheme in 1992-93. This decline presents universities with a stark choice: they must either reduce their expenditures to meet their diminished resources, or they must make up the shortfall from other sources. Leaving aside, for the moment, the possibility that universities should reduce expenditures, let us look at their prospects of raising a comparable amount of money from either:

- offsetting government grants;
- donations;
- contract teaching, mission-oriented research, consulting fees and other non-traditional sources;
- research grants;
- fees.

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Given government preoccupation with deficit cutting, the only prospect of additional funding from government is found in the possibility that the federal government will revise its research grants policy. Throughout the period of EPF cash transfers, the federal government refused to pay the overhead costs associated with research grants, maintaining that they were covered by the EPF grants themselves. With gradual federal withdrawal from the funding of post-secondary education, and especially as the CHST transfers continue to diminish rapidly, this position becomes untenable. The need for Ottawa to accede to university requests to pay overhead costs will therefore become increasingly urgent. Such a change in policy would benefit the research-oriented universities.[15] This is the one bright spot in an otherwise bleak picture.

The need for Ottawa to accede to university requests to pay overhead costs will therefore become increasingly urgent.

Private giving to the universities presents a sharp and welcome contrast.

Private giving to the universities presents a sharp and welcome contrast. For many years, Canadian universities received only token support from corporate donors and individuals.[16] Recently, however, donations have expanded considerably, largely in response to more sophisticated appeals from the universities. In 1992-93, as we have seen in Table 5, they received an average of

6% of total revenue from donations, with King's receiving the largest proportion (18%) and NSCAD the smallest (2%).

These successes, however, have to be evaluated in perspective. The 1992-93 revenues from donations reported in Table 5 amounted to only $29 million, considerably less than the cut in government funding anticipated by 1998-99. Furthermore, the improvement in the level of donations has not come cheaply. Thus, in order to achieve an increase in personal donations of 21% between 1990 and 1994, and an Annual Fund increase of 238%, Dalhousie had to make a major investment in infrastructure, beginning in 1983 with the establishment of a Development Office.[17] Finally, it has to be remembered that benefactions frequently come with strings attached: individual donors have specific purchases or scholarships in mind; corporations want to support activities that reflect well on them. Their donations consequently may not be targeted at the areas of greatest need and may actually add to the cost of running the university.

Research grants and attempts to derive revenue from non-traditional sources are equally uncertain. As we have noted, research grants from the major government agencies add to universities' costs, because they do not include charges for overhead expenses. Contract research, contract teaching and consultancies can be more cost-effective, but generally entail start-up costs and significant risks stemming from the difficulty of accurately forecasting various costs. Where research is genuinely "leading edge", it can be very expensive indeed. It should also be recognized that this is a highly competitive field in which Nova Scotia universities are pitted not only against other universities in Canada and abroad, but against the private sector. Finally, it has to be remembered that increased revenue from non-traditional services and from research grants would not translate into a dollar-for-dollar improvement in university balance sheets. They would bring in a small surplus, an ability to hire or retain expertise that would otherwise be unobtainable, and a similar ability to buy up-to-date equipment.

In the final analysis, then, the only real source of new money for Nova Scotia's universities are their primary clients, the students. This reality has been recognized by students themselves and by the media, but it is instructive to try to estimate precisely how great an impact cuts in government funding could have on fees, if the universities concluded that fee increases represent their only realistic hope of achieving balanced budgets.

Table 6 is an attempt to estimate the increase that is likely to occur in the fees of a full-time student, on average, at each of Nova Scotia's post-secondary institutions if the reduction in government funding -- before it bottoms out early in the next century -- is a hypothetical $90.3 million from its 1992-93 level, and were to be made up entirely from student fees.[18] The table assumes: (1) that there will be no change in total enrollment or in the distribution of students across the universities; (2) that the revenue and expenditure pattern of the universities will remain the same, and (3) that all other components of university revenues will also remain the same. These are very sweeping assumptions and in some respects rather unrealistic. However, as we cannot know what policies will ultimately be adopted, we believe that it is useful to treat the assumptions we have described as a basis for discussing and identifying the maximum level of tuition fee increases that would be needed at each institution to offset cuts in government funding. Here, of course, we are assuming that fees are to be the only vehicle used and that all other factors will remain constant.

Thus Dalhousie and the specialized universities, with their strong research orientation and specialized teaching programs, will be affected to a far greater degree than the undergraduate universities.

It is evident that the degree to which each university will be affected is dependent upon the size of the student population and the current level of grants received. Specifically, the more each university depends on government grants, the more it must increase fees. Thus Dalhousie and the specialized universities, with their strong research orientation and specialized teaching programs, will be affected to a far greater degree than the undergraduate universities. Some of the specialized institutions such as the Agricultural College and the College of Art and

127

Design will be hit particularly hard. In the case of the former, fees would have to go up by over $9,000 per full-time student.

It is extremely unlikely that such draconian decisions would actually be taken. There are two reasons for this: one is political and the other economic. Politically, such steps would be extremely unpopular and the Nova Scotia government could conceivably exercise its remaining financial authority to force a rollback. It is unlikely, however, that our politicians would have to deal with such an issue, because an unregulated market in fees would do the job for them.

We have to remember the assumption that underlies Table 6, that is, that the table shows the fee increases that would be required at each university if all other conditions were to remain unchanged. In a free market, however, other conditions would not remain unchanged. In particular, one could no longer assume -- as we did in Table 6 -- that either total enrollment or the distribution of enrollment would remain the same. Fee differentials of the order suggested by the table would encourage students in basic undergraduate programs to gravitate toward the less expensive institutions. Some would be prepared to pay a premium to study at a research-oriented university, but it is doubtful that the numbers prepared to pay a differential of $2,500 or more would offset the loss of students prepared to shop around. Fee differentials would enlarge as enrollments shifted to the undergraduate universities. Nor would specialization necessarily serve to protect enrollments. Economies of scale at specialized universities in other provinces might enable them to compete successfully for the students who would otherwise attend NSCAC, NSCAD and TUNS (which becomes part of Dalhousie in 1997).

Critical Choices

As we have suggested, the above estimates present in stark terms the unpalatable choices facing a number of Nova Scotia's universities, and, we believe, the people and government of the province. These choices are:

- a number of universities could cut certain programs that the government could redistribute such that all universities had a more equal proportion of high-cost and low-cost programs;

- the government could enforce a degree of consolidation on the universities.

The first approach has, in effect, been used for some years. It simply requires each university to cope with steadily diminishing resources in its own way. Their responses have ranged from across-the-board cuts, to attempts to expand revenue from other sources, to program cuts. Over a period of some fifteen years, a considerable degree of adaptation has been arrived at, although many in the university community believe that it has been achieved at the cost of significant deterioration in the quality of post-secondary education. The problem posed by the cuts we are discussing here, however, is that they are massive and imminent. There is no time to adapt. Consequently, the universities faced with the largest reductions in revenue will have to eliminate programs.

Over a period of some fifteen years, a considerable degree of adaptation has been arrived at, although many in the university community believe that it has been achieved at the cost of significant deterioration in the quality of post-secondary education.

It is at this point that the issue becomes a matter of concern to the general public. This is because program cuts are most likely to affect high-cost, limited-enrollment programs. Such programs have two publicly-important characteristics. First, they play a small but vital part in maintaining and extending the province's human capital. Second, those teaching in them are often the most likely to be doing the kind of research, especially in areas such as fisheries, engineering, health professions and bio-technology, which helps business and government adapt to the future.

Program cuts, in other words, have to be evaluated not only from the perspective of their impact on the university, but also from the point of view of their impact on the province's capacity to keep its labour force up to date and its economy competitive.

Nova Scotians have also had some exposure to the second possible response to the financial crisis. Through the Nova Scotia Council on Higher Education (NSCHE), the government conducted a number of program reviews in 1993 and 1994. In the case of education, all degree programs have now been consolidated at four universities in the province with the result that Dalhousie and St. Mary's have lost their teacher training programs. These proposals have been controversial. Those universities losing programs have charged that the review process was flawed and have argued that loss of the programs will entail loss of revenue and that the departure of faculty members teaching in them will deprive related programs of teaching and research support. From a broader public perspective, too, the proposals have questionable merit. First, on purely academic grounds, while there is some value in consolidation such as ensuring that a critical mass of professors and researchers continue to work at each of the units in those universities where program consolidation has occurred, care has to be taken to ensure that the consolidated program can be adequately supported by libraries, computers and other facilities and that communication with cognate disciplines is easy and flexible. Second, from a financial point of view, it is important to ensure that removal of low-cost, high-enrollment programs does not further weaken the capacity of the affected universities to sustain their research activities and specialized programs. The weakness in the rationalization process, as it has unfolded so far, is that it appears to be having precisely this effect. Here, too, then, Dalhousie and the specialized universities face the prospect of losing the financial resources needed to sustain research and limited-enrollment programs. However, it now appears that with the creation of the Metro Halifax Universities Consortium and the amalgamation of Dalhousie and TUNS in 1997, drastic changes without the support of the affected universities, such as

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the consolidation of the programs in education at selected universities, appear to be less likely.[19]

The NSCHE's Green Paper on post-secondary education, perhaps in response to the concern of certain universities to sustain research and specialized programs in the face of dwindling resources, brings Nova Scotians to a discussion of the second option facing the university system: institutional consolidation. It puts forward three options:

- Maintaining the status quo, in the form of institutional autonomy with greater co-operation;

- Consolidating all universities into a single University of Nova Scotia;

- Consolidating the metro universities.

In essence the first option has been chosen. The idea of a provincial university has been considered administratively and politically infeasible.

In essence the first option has been chosen. The idea of a provincial university has been considered administratively and politically infeasible. Dalhousie embraced the proposal for a metro university while her sister universities argued strongly in favour of maintaining the status quo. The operational negotiations which took place in 1995 and early 1996 led to increased cooperation between the universities in Halifax through the creation of the Metro Halifax Universities Consortium and the amalgamation of Dalhousie and TUNS as noted above. The Dal-TUNS merger will exacerbate, not ameliorate, Dalhousie's difficulties in providing a very wide range of programs to an unusually small student base, despite the infusion of some additional provincial funding and the savings that the consortium is expected to generate. This means that the difficult question of university funding -- both its overall level and its distribution -- will have to be debated yet again.

The distribution of funding among Nova Scotia's universities is currently being reviewed by NSCHE to arrive at a revised funding formula that will give greater rewards for research. Changes in the distribution of government support for

universities could act as a catalyst to bring institutions together, albeit with great reluctance on the part of several, or could see the continual decline, as universities, of institutions from which government support is gradually withdrawn.

How should this debate be addressed by Nova Scotians who are not immediately involved and affected?

From the outset, they should bear in mind that they will ultimately be affected. As we have pointed out, the province's universities make a significant contribution to maintaining and enhancing the skills of its labour force; its human capital. They make a less easily observed, but arguably increasingly significant, contribution to Nova Scotia's economy and to economic development generally. All the universities make these contributions, but Dalhousie and the specialized universities have a vital role to play because they carry out the larger share of research and offer most of the limited-enrollment programs. Because they do these things they are most at risk. It follows, then, that the long-term health of the province's economy would be adversely affected by a deterioration of their capacity to mount these programs.

Put in these terms, the university rationalization issue becomes a debate over the conflict between two sets of values: institutional autonomy and the long-term economic health of the Province.

Put in these terms, the university rationalization issue becomes a debate over the conflict between two sets of values: institutional autonomy and the long-term economic health of the Province. Inevitably in such a debate, the larger Provincial interest must prevail. Does this mean then, that consolidation is the only solution to the present impasse?

Consolidation would certainly address the funding issue. It would ensure that the specialized programs and the research carried out in metro universities would be adequately supported. That support would cost metro students a fee increase even if we assume a saving of $9 million annually as Dalhousie has claimed will be the result of consolidation. However, it would in many disciplines create a critical mass comparable to that found in major universities elsewhere. A university in Halifax enrolling the 22,320 students registered in metro in 1992-93 would be

comparable in size to McGill, Waterloo and Western. It would be larger than Calgary, Carleton, Manitoba, McMaster, Queen's and Saskatchewan, but smaller than Alberta, British Columbia, Laval, Montreal and York, and about one-half the size of Toronto. A university of this size would be well placed to compete with other full-service universities in the country. It would be able to offer a wider range of specialized classes at the senior undergraduate and graduate levels than can currently be offered by the metro universities. This in turn would help maintain Nova Scotia's capacity to keep its labour force up-to-date.

Consolidation is not the only solution to the present difficulty.

However, consolidation is not the only solution to the present difficulty. If the province's post-secondary institutions prize autonomy as highly as they claim, they might be willing to pay directly for it. For example, they might agree on standard fees, set at levels that would meet the reasonable budgetary needs of all institutions; pay all fees into a common fund, then reimburse individual universities according to need.

A third alternative is to search for a compromise between full consolidation and today's pattern of autonomy.

A third alternative is to search for a compromise between full consolidation and today's pattern of autonomy. There seems to be some agreement that certain institutions should continue to offer specialized programs. There is also agreement that it would be desirable to engage all the province's universities in advanced teaching and research at the graduate level. The NSCHE has noted the need for a common centre for promoting research directly related to economic development. Finally, even many who are bitterly opposed to the consolidation of specific programs may be prepared to agree that consolidation in and of itself might enhance both teaching and research in those programs.

These considerations lead us to suggest that a viable compromise position would see the creation of a major university in Halifax -- a University of Halifax -- which would offer undergraduate programs in arts and science through a series of colleges: Dalhousie, St. Mary's, Mount St. Vincent and King's.[20] It would

offer specialized degrees through Schools of Medicine, Law, Art and Design, Commerce and Management, Education, Health Professions, Engineering, Architecture and Computer Science. A single School of Graduate Studies would be established to oversee and coordinate all graduate programs and related research. Mission-oriented research and other non-traditional activities in support of economic development would be carried out through a specialized institute that would pool the resources of the currently competing groups in the metro area. At the undergraduate level the relationship between the Colleges and the university would be similar to the relationship currently enjoyed by Dalhousie and King's. Each would have a Principal and local governing body. Each would determine the curriculum supporting its own programs. Each would give its own undergraduate degrees, though most students would also be eligible for a university degree, just as most King's students are eligible for Dalhousie degrees. Students would be able to take classes across the university. Faculty would have appointments in a College and a School. Schools, like the Colleges, would be recognized as having a certain degree of autonomy to establish curriculum and to recommend to the University the awarding of degrees, but they, and the Colleges, would have to participate in a university-wide governing body and take part in a common system of financial management. For purposes of advanced research and in order to generally sustain research and teaching, there would be core facilities such as a central library and computer centre.

Such a system would not offer the undergraduate universities in metro the degree of autonomy they have today and certainly not the degree of autonomy that might be promised if the scenario suggested by Table 6 were to become reality. However, it would ensure their continued identity as institutions, enabling them to relate to their particular communities in very much the same way that they do today. From the perspective of the specialized institutions and Dalhousie, such a solution would address the financial crisis caused by the attempt to maintain research and to offer limited-enrollment programs. From the point of view of

Nova Scotians in general, it would ensure that they had in place a university system that could help them meet the economic challenges that lie ahead. In our view, this is its most attractive feature.

TABLE 1

Income Generated from Universities' Operating Expenditure, 1992-93 ($'000)

University	Total Operating Expenditures •	Multipliers		
		1.43	1.73	2.21
TUNS	24,295	34,742	42,030	53,692
SMU	41,900	59,917	72,487	92,599
ST. FX	25,699	36,750	44,459	56,795
U ST. ANNE	5,705	8,158	9,870	12,608
NSCAD	8,506	12,164	14,715	18,798
NSAC	13,407	19,172	23,194	29,629
MSVU	25,528	36,505	44,163	56,417
KING'S	5,438	7,776	9,408	12,018
DAL	135,942	194,397	235,180	300,432
UCCB	20,342	2,908	35,192	44,956
ACADIA	38,034	54,389	65,799	84,055
TOTAL	344,796	493,058	596,497	761,999

•Source: Canadian Association of Universities Business and Officers (CAUBO)

TABLE 2

Income Generated from Universities' Total Expenditures, 1992-93 ($'000)

University	Total Expenditure **	Multipliers		
		1.43	1.73	2.21
TUNS	29,065	41,563	50,283	64,234
SMU	47,845	68,418	82,771	105,736
ST. FX	31,782	45,448	54,983	70,238
U ST. ANNE	8,851	12,657	15,312	19,560
NSCAD	8,395	12,005	14,523	18,553
NSAC	16,909	24,179	29,253	37,368
MSVU	28,363	40,559	49,068	62,682
KING'S	6,245	8,931	10,805	13,802
DAL	189,701	271,273	328,183	419,240
UCCB	21,872	31,278	37,839	48,338
ACADIA	45,910	65,652	79,425	101,462
TOTAL	434,939	621,963	752,445	961,215

*Source: Canadian Association of Universities Business and Officers (CAUBO)

**The expenditure on out-of-province purchases for universities in Nova Scotia is relatively small. According to the O'Sullivan's study, Dalhousie spent 6.38% of its budget on purchases outside the province in 1989-90. Applying this uniformly to all universities in Nova Scotia may lead to an underestimation of the impact of their expenditures on the economy as some of the smaller universities may not purchase as much outside the provincial economy.

TABLE 3

The Human Capital Impact of Universities on Output in Nova Scotia

Characteristic	Total
Total Number in the labour Force	419,000
Total Number in the labour force with a University degree	73,470
Average Employment Income for those in the labour force ($)	27,471
Average differential for University degree holders	0.3705 [*]
Average Employment Income for those with a high school diploma/certificate ($)	25,795
Average Employment Income for University graduates ($)	35,352
Average differential ($)	9,557
Total Contribution by the University system to output per annum by improving human capital ($ '000)	702,153 [**]

[*]This figure was calculated as a simple average using the estimated earnings differentials for males (0.299) and females (0.442). See Osberg (1994, Table 4A, p. 15) for details.

[**]This was calculated by multiplying the average differential earned by those with a university degree by the total number of individuals in the labour force who hold a university degree, not considering where they earned their degree.

TABLE 4

Age Distribution of the Nova Scotia
and Canadian Population
20 Years Old and Above to have Attended University

(All figures are in percentages)

AGE GROUP	N.S.	CANADA
ALL > 20	24.6	24.4
20 -- 24	34.7	33.0
25 -- 34	27.1	26.3
35 -- 44	26.8	27.9
45 -- 54	19.1	21.7
55 -- 64	13.1	13.3
65 +	10.1	9.8

Source: Table 2, Osberg (1994).

TABLE 5

Total Income By Source and by University, 1992-93
(in thousands of dollars)

UNIVERSITY I	GOV'T II	FEES III	DONA-TIONS IV	TOTAL OP-ERATING V	NON-TRAD VI	RESEARCH GRANTS VII	TOTAL REVENUE VIII
TUNS	18103 (75%) (58%)	4375 (18%) (14%)	1817 (7%) (6%)	24295 (100%) (78%)	1359 (4%)	5392 (17%)	31046 (100%)
SMU	24178 (58%) (47%)	15314 (37%) (30%)	2408 (6%) (5%)	41900 (100%) (82%)	8131 (16%)	1074 (2%)	51105 (100%)
ST. FX	15809 (62%) (47%)	8222 (32%) (24%)	1668 (6%) (5%)	25699 (100%) (76%)	7235 (21%)	1014 (3%)	33948 (100%)
U STE. ANNE	3377 (60%) (36%)	1653 (29%) (17%)	675 (11%) (7%)	5705 (100%) (60%)	3749 (40%)	0 (0%)	9454 (100%)
NSCAD	6618 (78%) (74%)	1736 (20%) (19%)	152 (2%) (2%)	8506 (100%) (95%)	461 (5%)	0 (0%)	8967 (100%)
NSAC	11598 (87%) (64%)	(1288) (9%) (7%)	521 (4%) (3%)	13407 (100%) (74%)	1873 (10%)	2781 (15%)	18061 (100%)
MSVU	16595 (65%) (55%)	6141 (24%) (20%)	2792 (11%) (9%)	25528 (100%) (84%)	3612 (12%)	1156 (4%)	30296 (100%)
KING'S	2528 (46%) (38%)	1733 (32%) (26%)	1177 (22%) (18%)	5438 (100%) (82%)	1233 (18%)	0 (0%)	6671 (100%)
DAL	95680 (70%) (47%)	27822 (20%) (14%)	12440 (10%) (6%)	135942 (100%) (67%)	32125 (16%)	34562 (17%)	202629 (100%)

UNIVERSITY I	GOV'T II	FEES III	DONA- TIONS IV	TOTAL OP- ERATING V	NON- TRAD VI	RESEARCH GRANTS VII	TOTAL REVENUE VIII
UCCB	13211 (65%) (57%)	6437 (32%) (28%)	694 (3%) (3%)	20342 (100%) (87%)	2889 (12%)	132 (1%)	23363 (100%)
ACADIA	22244 (58%) (45%)	11274 (30%) (23%)	4516 (12%) (9%)	38034 (100%) (78%)	9816 (20%)	1189 (2%)	49039 (100%)
TOTAL	229941 (67%) (49%)	85995 (25%) (19%)	28860 (8%) (6%)	344796 (100%) (74%)	72483 (16%)	47300 (10%)	464579 (100%)

* Source: Canadian Association of Universities Business and Officers (CAUBO)

TABLE 5 NOTES

1. Government sources of income include revenue generated from federal, provincial and municipal government grants. Of this amount, the provincial contribution (including EPF transfers from the federal government) totalled 219 million.
2. Fees include sources of income that are generated from credit courses, non-credit courses and miscellaneous fees.
3. Donations include annual flows of income from one time gifts such as bequests, personal donations, and non-governmental grants, as well as multi-year contributions from investment income.
4. Total operating income is the sum of government (grants), fees and donations.
5. Non-traditional income is defined as those sources of research funding which do not come from research grants such as MRC, NSERC or SSHRCC, for example. These sources include sale of services and products, miscellaneous income, contract research and international development funds.
6. Research grants include those sources of research funding that are derived from MRC, NSERC or SSHRCC, for example.
7. Total revenue is the sum of total operating, non-traditional income sources, and research grants.
8. The first set of parentheses in columns II to V expresses each income category as a percentage of the operating budget of the universities. The second set of parentheses in columns II to V expresses each of the income categories as a percentage of the total revenue budget of the universities. The parentheses in columns VI to VIII expresses these particular income sources as a percentage of total revenue.

•Due to rounding some of the percentages may not add up to 100%.

TABLE 6

Impact on Tuition Fees if Government Funding is Reduced
by $90.3 million from its 1992-93 Level
(All dollar figures are in thousands)

University	Total Government Transfers in 1992-93	Estimated Reduction	Total University FTE in 1992-93	Estimated Increase in Fees per FTE
Technical University of N.S.	18,103	7,109.2	1,384.1	5.136
Saint Mary's	24,178	9,494.9	6,643.0	1.429
St. Francis Xavier	15,809	6,208.3	3,525.8	1.761
Universite Sainte-Anne	3,377	1,326.1	527.6	2.514
N.S. College of Art and Design	6,618	2,599.0	692.1	3.755
N.S. Agricultural College	11,598	4,554.6	493.4	9.231
Mount Saint Vincent	16,595	6,517.0	2,778.7	2.345
University of King's College	2,528	992.8	690.3	1.438
Dalhousie	95,680	37,574.4	10,131.3	3.709
University College of Cape Breton	13,211	5,188.1	2,402.8	2.159
Acadia	22,244	8,735.4	4,135.2	2.112
Metro Universities only	163,702	64,287.3	22,319.3	2.880
Non-Metro Universities	66,239	26,012.5	11,084.8	2.347
All Universities	**229,941**	**90,300.0**	**33,404.1**	**2.703**

Data Source: MPHEC Annual Report, 1993-94

TABLE 6 NOTES

1. Total government transfers include all grants that are disbursed by federal, provincial and municipal governments. It does not, however, include research grants that are awarded by granting agencies such as NSERC, MRC or SSHRCC.

2. This hypothetical reduction in government funding of $90.3 million, equal to the cash component of the EPF transfer for post-secondary education in Nova Scotia in 1992-93, works out to 39.27% of the total 1992-93 "all-governments" allocation of $229.9 million. Thus the estimated reduction in government grants for each university was obtained by multiplying its 1992-93 allocation by a factor of 0.3927.

3. Since each university's proportionate share of non-EPF government grants was not exactly the same, the impact of the EPF-equivalent reduction will not be spread uniformly across the universities. Hence the reduction for each individual university may not necessarily be 39.27% of the total 1993-94 transfer. However, whatever discrepancies that might occur are not likely to be significant.

ENDNOTES

1. Cathy Shaw, "The Courtship: Halifax Universities Play Hard to Get in Face of Dalhousie's Merger Proposal," Chronicle Herald January 14, 1995.

2. Unless otherwise noted, enrollment figures are derived from the 1993-94 Annual Report of the Maritime Provinces Higher Education Commission and refer to full-time equivalents (FTEs).

3. With fewer than 100 full-time equivalent (FTE) students and a total revenue of less than $1.5 million, the Atlantic School of Theology (AST), established in 1971 in Halifax, prepares candidates, both ordained and lay, for Ministry. The AST, partly because of its small size and its significantly different

mandate from the other post-secondary institutions in the province, is not a member of the Canadian Association of Universities Business and Officers (CAUBO) -- the principal source of data for this study -- and was therefore not included as part of this analysis. It offers three graduate-level degree programs, but none at the undergraduate level.

4. Both TUNS and NSAC have regional mandates, supported by inter-provincial agreements, which encourage candidates from all three of the maritime provinces to attend these institutions.

5. Ministry of State for Science and Technology Canada. University Research in Canada: A Background Paper for the National Forum on Post-Secondary Education (Ottawa: 1987), p. 19.

6. See, for example, "New CBR Study Reveals Economic Impact of ASU," by Timothy D. Hogan, Director, Center for Business Research, in Arizona Business, May 1992, Vol. 39 No. 5. Our discussion uses an input-output approach to estimate the effects of university spending on the provincial economy. The advantage of this approach is that it is able to capture the direct, indirect and induced effects that result from the production of goods and services directly purchased by the universities. The effects of spending by students, as well as effects of research spending may also be captured by using this approach.

    We note the following limitations: The assumption that input requirements do not change even if final demand or relative prices change is not plausible. Indeed, industries do substitute inputs. However, if the analysis is to evaluate the impact at a point in time then fixed input requirements can be justified. The assumption that inputs change in the same proportion as outputs ignores the effect of technological efficiency and inventories on inputs demanded. For example, some universities in Nova Scotia may wish to utilise their equipment more efficiently than others. The assumption may, however, be justified on the basis that industries will revert to their historical levels of utilisation of factors of production.

7.   Most economic impact studies calculate the value of the multiplier based on the concept of the community economic base whose increase in income generates further rounds of additional spending.   See A. Spears The Impact of the University of Prince Edward Island on the Provincial Economy (Charlottetown: University of Prince Edward Island, Unpublished Manuscript, Department of Economics, 1994). In this paper, she utilises a differential value-added multiplier to estimate the economic impact of a university on its local environment.

8.   For example, a conservative calculation that each student spent $2,000 outside the universities in 1993-94 suggests that the provincial economy benefitted by $66.8 million. Visitors to the universities, particularly those attending major conferences, can be a significant source of tourist dollars.

9.   The universities studied and the multipliers applied to their expenditures were: Universite de Moncton (2.50); McGill University (2.21); Universite de Sherbrooke (2.15); Brock University (2.10); University of Windsor (2.00); University of Prince Edward Island (1.73); University of Western Ontario (1.71): Queen's University (1.70) and Dalhousie University (1.43). See Spears (UPEI, 1994).

10.   Sceptics doubt that a university education confers an advantage on an individual, either in terms of increased earnings or ability to secure a job. However, evidence from both developed and developing countries shows that the university-educated have an advantage in being hired and in obtaining higher wages over those who have not attended university. See G. Psacharopoulos, Return to Education: An International Comparison (Amsterdam: Elsevier, 1973); G. Psacharopoulos and M. Woodhall, Education for Development: An Analysis of Investment Choices (Washington, D.C.: OUP, 1985) and R. J. Willis "Wage Determinants: A Survey and Reinterpretation of Human Capital Earnings Functions" in O. Ashenfelter and R. Layard (eds.) Handbook of Labour Economics (Amsterdam: Elsevier, 1986), Vol. 1.

11.   Lars Osberg, <u>The Economic Role of Education -- With Special Reference to Atlantic Canada</u>, Department of Economics Mimeo, Dalhousie University, January 25, 1994.

12.   We note that these figures are more expansive that those generated in preliminary results from a study conducted by the Nova Scotia Confederation of University Faculty Associations (NSCUFA). It suggests a lower average earnings differential of about $8,834. (Details as to how this differential was computed are not yet available). Using this lower differential, we would estimate that human capital acquired through a university education contributes $649 million in additional output to the provincial economy. It is also important to bear in mind that investment in human capital will have the effect of enhancing productivity, leading to higher lifetime earnings and higher levels of output in the future.

13.   Spears, 1994.

14.   Ministry of State for Science and Technology Canada. <u>University Research in Canada: A Background Paper for the National Forum on Post-Secondary Education</u> (Ottawa, 1987), p. 23.

15.   The Association of Universities and Colleges of Canada (AUCC) suggests that overhead can be as high as 104% of actual research costs. It estimates that on average overhead costs amount to 60% of the costs of research. Estimates of the extent to which Nova Scotia universities would benefit from inclusion of overhead costs in research grants range from $13.5 to $26 million. <u>Strengthening Canada's Research and Knowledge Infrastructure: A Proposal by the AUCC</u> (Ottawa: 1994).

        There is a down-side to the prospect of a change in policy: if the federal government simply orders the funding councils to incorporate overheads in research grants, but does not provide a corresponding increase in funds, there will be a substantial reduction in the amount of research actually funded. In other words, those doing the research will be better supported, but there will be fewer of them.

16. The Corporate Higher Education Forum. <u>From Patrons to Partners: The Report of the Task Force on Funding Higher Education -- Corporate Support for Universities</u> (Montreal, 1987).

17. Dalhousie University. Vice-President, Development. "Memo", 1994.

18. As mentioned earlier in the text, the cash component of the EPF transfers for post-secondary education in Nova Scotia in 1992-93 was $90.3 million. This figure has therefore been used deliberately as a way of demonstrating the potential impact on student fees if it becomes entirely unavailable, as a result of the declining CHST transfer, in the future and the province is unwilling to offset this impact in any way.

19. The mission of the Metro Halifax Universities Consortium is to " ... secure potential cost savings and new resources of revenues for the Metro Universities, and promote the enhancement of teaching, research and graduate studies, through co-operative initiatives among partner institutions". See <u>Business Plan</u>, Metro Halifax Universities Consortium, December 1995, for details on the mandate, structure and organization of the consortium.

20. The emergence of the Metro Halifax Universities Consortium could be construed as a small first step in the creation of a single university in Halifax. However, it is still far too early to predict whether this might in fact lead to an amalgamation of all the universities in Halifax.

PART III

THE ENVIRONMENT
AND REGIONAL DEVELOPMENT

PART III

THE ENVIRONMENT AND REGIONAL DEVELOPMENT

Economic growth is often viewed as the scourge of a healthy natural environment. Yet, with its huge land mass and vast lakes and coastlines, there has historically been a sense that Canada's small population can have little impact on the integrity of its environmental heritage - that its sprawling urban and industrial expansion represents but a minuscule dent on relatively unspoiled ecosystems, and that Canada is immune from the problems of its more congested neighbours to the South. Events are harshly reminding Canadians that such is far from the reality: not only are domestic developments creating long-term problems (for example the Sydney tar-sands), but no nation - even one as large as Canada - is an island. The thinning ozone layer, the demise of a once vast fisheries (in part by offshore fleets) and the effects of (in part) U.S. generated acid rain are but three illustrations of the widespread impacts of globally generated pollution and poor international resource management practices.

The three papers in Part III approach the interface of environmental conservation and regional development from quite different experiences. But the message is substantially the same: individuals and small groups can indeed make a difference for the better - but, even within a university setting, their work is readily marginalized.

Martin Willison takes a refreshingly interdisciplinary approach to the reconciliation of nature conservation and regional development - drawing insights from four case experiences - Sable Island and the Ipswich Sparrow, the preservation of a bog, The Gully and the bottlenose whale, and George's Bank and its scallop fisheries.

David Scott and Franco Medioli, in a paper on palaeontology and industry, provide insights from a cross-section of science-based project linkages, including Sable Island drilling and the location of sources of drinking water. The value of appropriate university-private sector connections is illustrated, whereby each community can benefit and improved projects be an outcome.

Raymond Côté, in the third paper in this part, effectively draws together the findings of some 80 student theses, written as part of the Master of Environmental Studies programme at Dalhousie University. Fisheries and aquaculture, coastal zone management, pollution and aquatic life, forests and habitat conservation, industry and waste management, energy, land use planning and education, society and the environment are among themes that have been addressed by an impressive range of research undertakings.

Côté's conclusion warrants attention: "Research undertaken by students in universities is often disregarded unless it has been done at the request of a particular individual, agency or company ... thesis research should be seen ... as a valuable regional resource." This, of course, is true not only of students' research. In part, a solution is to place more emphasis on developing links with potential users before the research is started. In part it is to 'market' the output more aggressively. Côté's paper, of itself, is an excellent start in that direction.

6

NATURE CONSERVATION AND REGIONAL DEVELOPMENT

by J.H. Martin Willison

Introduction

In popular thinking, "the land developer" and "the environmentalist" are intrinsically at odds.

In popular thinking, "the land developer" and "the environmentalist" are intrinsically at odds, ready to face off in battle. In this view, regional development is akin to frontier development. On one side of the frontier the developer is domesticating the landscape, ploughing fields and building homes; on the other side of the frontier the environmentalist is living in harmony with nature, eating berries and befriending wild animals. Even if we replace "western culture" for "the land developer" and "aboriginal forest dwellers" for "the environmentalist", this view is a myth. Despite this, popular culture as reflected in the popular press continues to paint development in terms of the dominance of humans over all that is alien to human; that development is progression toward domestication of the globe and regional development is just a piece of this pie. The concept of sustainable development shatters this myth.

At the end of the Eighteenth Century, Thomas Malthus warned that there was a limit to the capacity of Earth to support humans.

At the end of the Eighteenth Century, Thomas Malthus warned that there was a limit to the capacity of Earth to support humans; that unlimited population growth was not possible. Living in densely populated Europe and surrounded by the explosive growth associated with the Industrial Revolution, he was convinced that the limit would soon be reached. Since the time of Malthus, it has been easy to dub those who raise the issue of limits to growth as neo-Malthusians and to dismiss them. Malthus was clearly wrong, after all, in claiming that it would not be long before Earth would be filled with people and more could not be fed. If we return to the conventional view of

151

development described above, for the past two hundred years "the developers" have continued to push back the frontier and "the environmentalists" have continued to fall back or to flow across the frontier as converts. "There should be no more people in a country than could enjoy a glass of wine or a piece of beef with their dinner", had written Malthus. The proportion of the world's population who enjoy this fortunate state is probably not lower now than then, so is it not reasonable to expect that our current pattern of development will continue forever?

Biology is the science of life.

Biology is the science of life. One of the sub-disciplines of biology is ecology, a science which was conceived more than a hundred years ago. Early ecologists concentrated on understanding the fundamental relationships among living organisms and their environments. Because human interference complicated interpretation of data, most ecologists kept away from places which were being disturbed by humans, and examined disturbance only when it was "natural". More recently, various environmental sciences, such as environmental ecology (Freedman, 1995), have been born and ecologists have turned their attention to human influences on complex living systems. Despite the fact that we sometimes claim that humans are super- natural ("made in the image of God"), to a scientist it is undeniable that humans are natural and that natural laws apply just as much to human social systems as to the social systems of other organisms.

Many biologists have been profoundly disturbed by the implications of the application of ecology to human-dominated natural systems.

Many biologists have been profoundly disturbed by the implications of the application of ecology to human-dominated natural systems, because the vision of Thomas Malthus keeps reappearing. Global photosynthetic capacity - the fundamental measure of biological productivity - appears to be declining and the human share of this ephemeral natural production is constantly increasing (Vitousek et al., 1986). To biologists, the works of Donella Meadows and her colleagues (1972, 1992) on the limits to growth of the global economy using cybernetic modelling are brave attempts to under-stand the human

ecology of the modern world. Even though fallible because the global system is so complex, these models consistently suggest that some limits to growth have been reached and others will soon tumble upon us as a result of feed back effects. In support of this theoretical modelling, the stream of human ecological data maintained by organizations like the Worldwatch Institute (e.g. Brown, 1995) point consistently to degradation of the global life support system. The most recent models and data (Meadows et al., 1992; Brown, 1995) show that human food security may be the most pressing global environmental issue for coming decades. Desperate people will take desperate measures, including knowingly destroying the very environment which supports them, in the hope that they, as individuals, will be among the survivors. This is simply the principle of "survival of the fittest" applied to an environment under stress - a notion not at all alien to the core thinking of a biologist. So Thomas Malthus may not have understood the transformation of society which the Industrial Revolution was to bring; he may simply have mistimed his warning by a couple of hundred years - only a minor error in the fullness of time.

The most recent models and data show that human food security may be the most pressing global environmental issue for coming decades.

For these reasons, it is easy for biologists to embrace the concepts of sustainable development embedded in *Our Common Future* (World Commission on Environment and Development, 1987). In this view, "development" is seen not as movement toward the domination of Earth by humans but as movement toward ways of living which can truly be maintained in the long term. This means not doing those things which will so upset the complex natural relationships within the real world which supports us that Earth becomes unable to sustain us. Deep ecologists (e.g. Naess, 1989) have complained that this is still an anthropocentric view, and therefore flawed. Nevertheless, if the concept of sustainable development is applied rigorously and honestly, using time horizons which are sufficiently great, the effect should be as beneficial to non-humans as to humans. This is because, as Norman Myers (1991) has argued vociferously, we do not know which elements of the natural world are essential to its functioning.

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He likens Earth to an airplane and the species of living organisms to rivets holding the airplane together. Looking out of the window, a human passenger sees a rivet pop out of the wing (a species becoming extinct). A passenger next to him is reassuring, "don't worry there are lots of rivets; one less won't make a difference". Myers responds that we do not know which are the rivets (species) which, once lost, will finally doom the whole system to catastrophe.

In the 1990s there is growing awareness that the "biodiversity crisis" is indeed a threat to the comfort and security of humans.

In the 1990s there is growing awareness that the "biodiversity crisis" is indeed a threat to the comfort and security of humans. In the conventional view of land development with which I opened this essay, concern over extinction of an obscure species belongs on the other side of the wild frontier - a concern for the environmentalist but not for the developer. "Sustainable development" brings this concern into the heart of the developer. Environmentalists, once seen as foes of development, have become developers themselves. This is not limited to starting businesses in alternative technologies and ecotourism. In sustainable development, the ecological educator and the conservation advocate are also "developers", and it is about this aspect of sustainable development that this essay is concerned.

The Conservation Biologist as Educator and Advocate for Sustainable Development

The discipline of conservation biology was founded by a visionary scientist, Michael Soulé. In the introductory chapter of his book *Conservation Biology* (Soulé, 1986), Soulé wrote passionately about the need for scientists to become involved in real world issues and not to remain as theoreticians watching the rivets pop out of Norman Myers' airplane:

"Who is more capable than biologists to spread the word that it is wrong to terminate evolutionary lines, and that it is wrong to wipe out entire communities? It is often tempting to leave speeches to the politicians,

154

to leave morality to the priests, and to leave ethics to philosophers; however, few of them can speak with authority and familiarity about the exquisite detail and amazing diversity of life ......it is approaching"high noon", and we should use every (ethical) tool at our disposal to minimize the damage to this planet."

He goes on to acknowledge that the culture of science is one which extolls objectivity and tends to denigrate the scientist who steps across the line to subjectivity and advocacy, "the planetary tragedy is also a personal tragedy to those scientists who feel compelled to devote themselves to the rescue effort."

Despite the disincentives in the scientific culture to getting involved in real world conservation, many biologists do get drawn in and admit their passion for "the exquisite detail and amazing diversity of life". In earlier decades, scientists often divided their passion from their science by using the division between their professional and private lives. In their private lives, they founded naturalists clubs and conservation societies and used these as vehicles for "the rescue effort". In the 1990s it is more acceptable than previously to be a nature conservationist. In part as a result of Soulé's efforts, there are now scientific journals devoted to conservation biology and first-year university textbooks have a chapter on the subject. As a result, professional biologists are less fearsome that colleagues will whisper that "they have gone soft and are not doing real science". In addition, the concept of sustainable development has helped to bring applied human ecology into the mainstream of applied science; it has added respectability to a discipline which in the 1960s was almost exclusively the territory of environmental groups like Friends of the Earth, who consistently found themselves excluded from government counsel.

The concept of sustainable development has helped to bring applied human ecology into the mainstream of applied science.

It is fundamental to conservation biology that humans develop a culture which is more kind to Earth than that which is currently dominant. A huge education effort will be required to

achieve this. Because we are already in the midst of the extinction spasm with which conservation biology is concerned, this will require fundamental shifts which go beyond those obtained through normal adjustments to school curricula. The significance and urgency of this cultural shift is much greater than that associated with the "information technology revolution" of the 1990s, yet there is little commercial venture capital which is likely to be available for the necessary advocacy campaign. By consequence, the work of conservation educators needs to be understood and appreciated. This work is often done as unconventional education, outside the formal education system. It is done through articles in popular magazines, stories in news media, lectures to community organizations and so on.

The line between education and advocacy is never clear.

The line between education and advocacy is never clear. I often see the parallel between public health advocacy and conservation advocacy. In public health, there is public education about the importance of vaccination, for example. Few people would see this as advocacy or that the public health agent is promoting the interests of a particular group. Sometimes public health issues are site-specific; a leaky sewer for example. The public health advocate in this case will be seen as working in the interest of the general public, not the interests of a special group. Similarly, speaking out for the protection of the habitat of a rare species may involve advocating the protection of a particular site. Many people are unaware of the importance of protecting biodiversity to the whole picture of the future security of their descendants. As a result, those involved in site-specific habitat protection are often described as "an interest group", although it is rare for the interest to be identified. In practice, such people are usually defending the interests of numerous non-human species and countless future generations of people. To me, this is fundamental education and it is thoroughly within the professional mandate of the university educator.

Many people are unaware of the importance of protecting biodiversity to the whole picture of the future security of their descendants.

In the following, I present some examples of the way in which some of my colleagues and myself have been involved in this form of sustainable development education. The examples are intended as sketches which illustrate the concept that work toward nature conservation is work on regional development within the context of sustainable development. All of the people involved do a lot more in their nature conservation work than these sketches portray. It remains an unfortunate truth, however, that "saving the planet" (Soulé, 1986) is a marginal task for which the rewards are predominantly spiritual.

Sable Island and the Ipswich Sparrow: Discovery and Understanding are a Cornerstone of Sustainable Development

Sable Island may be the most extraordinary place in the Maritime region of Canada.

Sable Island may be the most extraordinary place in the Maritime region of Canada. It is a narrow sand island about 35km in length located about 150km from the nearest part of mainland Nova Scotia. Being a desolate environment, it is has been home to very few people - keepers of the lighthouse and the weather station for the most part. For some other creatures, however, it is a special place. Desolate places are sometimes treated carelessly - as "wasteland", although this is an impossible concept in a society which has developed sustainably. Careless treatment of a place is less likely if society understands that while the place may have little value for humans it is invaluable for another creature. Even though so few people have lived on Sable Island, its unstable dunes have suffered from carelessness.

The Ipswich Sparrow is a rare subspecies of the Savannah Sparrow.

Through the effort of biology professor Ian McLaren of Dalhousie University, the dependency of a species (or, more correctly, sub-species) on the special habitat offered by Sable Island was confirmed and there is now greater awareness of the need to be careful to preserve the integrity of the delicate natural system which has developed on the island. The Ipswich Sparrow is a rare subspecies of the Savannah Sparrow, with a

Damage to their fragile dune habitat is therefore a serious matter for the subspecies as a whole.

total population between 2000 and 3000 at the end of the winter. While many of the population spend winter on the eastern seaboard of the United States, all return to Sable Island for the summer breeding season. For successful nesting they need the dense mixed vegetation of a stable dune (Stobo and McLaren, 1975); damage to their fragile dune habitat is therefore a serious matter for the subspecies as a whole. As an avid "birder", McLaren has long mixed his rigorous interest in science with his passion for animals in the wild. He has kept an eye on the Ipswich Sparrow for nearly thirty years since his first trip to Sable Island in 1967 - often gently reminding authorities responsible for the island that what is desolate for us is far from desolate for other occupants. The Wall Street Journal of November 8th 1971, in an article titled "Rich Wasteland? Storied Sable Island May Undergo Oil Boom", had the following to say:

....."There is also growing concern about Sable's ecology in the face of possibly wide-scale oil development. Ian McLaren, a professor of biology at Dalhousie University in Halifax, says Sable is the "last remnant" of a chain of sandy isles that stretched from New Jersey to Newfoundland at the end of the last ice age and as such is a "valuable natural laboratory for the study of flora and fauna in an almost primeval setting." The star resident of the island is the tiny Ipswich sparrow, which breeds only in the Sable dunes, and is on the list of rare and endangered species. "I don't say the existence of the sparrow has any deep significance for the future of mankind," says Mr. McLaren, "but I think we're sufficiently civilized that we can't allow things like this to be destroyed." Mr. McLaren has nothing but praise for the way Mobil Oil has handled itself on the island so far. But he and several conservation groups still think that Sable should be made some sort of protected preserve and that work should begin immediately to stop the erosion of the dunes.

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In our knowledge-dependent modern society, we will not be able to maintain Norman Myers' biodiversity airplane without information about habitat dependency. If we wait for all the information to be available, it will be too late. The proverbial baby will have been washed down the sink with the bath water. Scraps of information, such as the dependency of the Ipswich Sparrow on the stable dunes of Sable Island, are critical to our understanding of the functioning of the natural world upon which we too depend.

The Swaines Road Bog: Science Preserves the Habitat of a Rare Plant

In 1991, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed the thread-leaved sundew (*Drosera filiformis*) as an endangered plant species. At about the same time, "A developer wanted to mine Swaines Road bog, a locale that has been identified by botanists as the most important of the four known sites of *Drosera filiformis* in Canada." (Freedman, 1992). There were good short-term economic reasons for supporting the proposal to mine the peat bog, but in 1992 the Nova Scotia Minister of the Environment ruled against the mining application under the Environmental Assessment Act. This ruling was based on the recommendation of studies commissioned by the environment department; the last and most detailed of which was a risk assessment conducted by Bill Freedman and colleagues (Freedman et al., 1992). Bill Freedman is a professor of biology and environmental studies at Dalhousie University. He is also a member of the Board of the Nature Conservancy of Canada, the most important non-government conservancy in Canada.

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The proponents of the peat mine had offered to dig up the thread-leaved sundews and transport them to an alternative site, but this was not approved. For biogeographic reasons it was clear that the species had probably occupied this site for as much as 10,000 years - it was not clear that they would be suited to an alternative site. That the Minister, John Leefe, was

also moved to consider that the sundew had first right to claim this bog as its home is suggested by the words of a spokesperson for the environment department as reported by the popular science magazine Equinox (July/August, 1992) ".... transplanting is not an option. 'It's dickering with nature ... it's like raising endangered animals and plants in the zoo and saying: see, we saved them.'"

This progressive government action is an excellent example of sustainable development.

This progressive government action is an excellent example of sustainable development. In frontier development terms, mining the bog would clearly be an act of "development", but in terms of sustainable development, not mining the bog is development because this is in the best long-term interests of the whole and is therefore a step toward the development of a truly sustainable economy. Furthermore, the cost of saving endangered species *in situ* is a lot less than saving them *ex situ*.

As a practical conservation biologist, Freedman made sure that this environmental assessment exercise was publicized for its educational value by writing popular reports (e.g., Freedman, 1992) as well as preparing a formal scientific report (Freedman et al., 1992). In the formal scientific report, he recommended that the province of Nova Scotia develop a formal policy for the protection of the Atlantic Coastal Plain flora (the biogeographic group of plants to which the thread-leaved sundew belongs):

Because of its special ecological legacy of sites with rare coastal-plain plants, Nova Scotia should have a comprehensive strategy in place for the sustainable protection of the habitat of this flora.

Because of its special ecological legacy of sites with rare coastal-plain plants, Nova Scotia should have a comprehensive strategy in place for the sustainable protection of the habitat of this flora. Specific strategies for the protection of the habitat of *Drosera filiformis* should be integrated within that broader provincial policy, once it is developed.

The Gully for the Bottlenose Whale: Proactive Planning is the Key to Sustainable Development

While it is easy to consider that the region in regional development stops at the coast, this is a false perception in sustainable develop-ment. We are familiar with the devastating effects of erosion of farmland, for example, and of the need for erosion control as a key element of sustainable development. In fact the ocean environment is just as vulnerable to over exploitation as the land, but we tend to be unaware of our effects on this environment because it is far away from most people, an alien place hidden from view by the surface of the water. In the sustainable development view of development, all parts of the whole system are part of the development picture.

In the sustainable development view of development, all parts of the whole system are part of the development picture.

Just north of Sable Island is a submarine canyon called The Gully. Probably for oceanographic reasons, the canyon region is richly productive of a wide range of ocean organisms. Among the creatures at the top of the food chain is a fascinating population of bottlenose whales (*Hyperoodon ampullatus*) which belong to a poorly understood group known as beaked whales. Dalhousie University whale biology professor Hal Whitehead and his students have taken an interest in this population of bottlenose whales (Faucher and Weilgart 1992, Faucher and Whitehead 1995). They found that, unlike many of their relatives, the animals live year round in The Gully as a resident group. As recently as the 1960s, Canadian whalers working from Blandford in Nova Scotia took 87 of these whales from The Gully. It was not until 1976 that the species was listed as "vulnerable" by the World Conservation Union (the U.N. organization responsible for biodiversity conservation), although of course the species was more vulnerable while being actively whaled.

There is now a Canadian moratorium on commercial whaling, but this alone is not enough to protect the bottlenose whales of The Gully.

There is now a Canadian moratorium on commercial whaling, but this alone is not enough to protect the bottlenose whales of The Gully. Professor Hal Whitehead, with his wife Linda

While stronger regulation is still required, far-sighted forethought of this sort will make sustainable development possible because conservation measures can be built into plans rather than being forced into the development process by reactive environmental impact assessments.

Weilgart and student Annick Faucher, have recognized that future marine traffic and oilfield development threaten this site and have pressed, with some success, for regulation. This proactive approach to conservation is critical to sustainable development. At some future time, ocean vessels carrying liquid natural gas (LNG) are expected to use the region north of Sable Island as oil and gas fields around Sable Island are developed. Being air breathing mammals, whales must surface regularly to breathe and they are vulnerable to collision with shipping and to pollution of the ocean surface by oil. By drawing attention to the presence of rare resident whales in The Gully, Professor Whitehead's group have successfully encouraged the Canadian Department of Fisheries and Oceans to issue requests that marine traffic avoid the area and the oil company Lasmo has established a tanker exclusion zone around The Gully. While stronger regulation is still required, far-sighted forethought of this sort will make sustainable development possible because conservation measures can be built into plans rather than being forced into the development process by reactive environmental impact assessments.

A Marine Protected Area for a Sustainable Fishery: Sustainable Development for George's Bank Scallops and Scallopers

In 1988 I decided to move the focus of my academic life toward nature conservation. Being in the midst of a career as a cell physiologist, this was not something to achieve overnight. I took six months of a sabbatical leave in New Zealand and began the realignment. New Zealanders are mostly well aware of the enormous impact they have had on these unique islands and they have been typically innovative in their response. While there, by lucky accident, I attended a lecture given by Bill Ballantine, Director of the Leigh Marine Laboratory of the University of Auckland. Ballantine is well known as an advocate of marine reserves, having been a key figure in obtaining protection for a small marine sanctuary next to the

laboratory. Ballantine's lecture was generally inspiring, but there was one aspect which was seminal for me. He described the effect of protecting this patch of the ocean on the regional productivity of crayfish (an animal similar to the Atlantic lobster). Within the reserve area the crayfish were a lot larger and more numerous after a few years of protection. Of special interest to me was that the local crayfishers, who had initially vigorously opposed the establishment of the reserve, were now mostly in favour. The reason for this change of heart was that their crayfish catches, taken from outside the reserve area, had increased. This increase in productivity could be explained by the greater fecundity of the larger crayfish within the reserve leading to greater numbers of larval crayfish floating out of the reserve area and into the fished zones.

Could the production of a local fishery be enhanced by protecting a part of the habitat of the exploited organism?

Inspired by this knowledge, I began to ask questions about Nova Scotia fisheries when I returned home. Could the production of a local fishery be enhanced by protecting a part of the habitat of the exploited organism? Ballantine is insistent that a policy of "one out; all out" is the only one that works i.e. that all forms of exploitation must be prohibited within a protected area, otherwise favouritism and its counterpart jealousy destroy the effectiveness of the venture). Thus the partial fishery closures employed in the northwest Atlantic are not comparable with his approach. After asking a lot of people, many of whom thought I had gone soft in the head, I met an enthusiastic graduate student, Rick McGarvey, who said "you know, it might work for scallops on Georges Bank!"

Being largely sedentary, we did not have to worry that protected scallops would simply swim away to nets towed outside the protected area.

He explained that scallop larvae tended to be held on the bank by its ocean current gyre. Furthermore, the strong logarithmic relationship between scallop size and fecundity was well established. Being largely sedentary, we did not have to worry that protected scallops would simply swim away to nets towed outside the protected area. Finally, he explained that this was a boom-and-bust fishery which would benefit from the stabilizing effect of having part of the resource protected against fishing.

The main problem was how to decide where to put a protected area, and how to ensure that the protective intent would be respected. For us, this was intellectually exciting but we needed a good idea about where to put a protected area. Making a poor choice could damage the idea because fishermen are protective of their independence and distrustful of outside interference. It was again a matter of luck that I ran into a fisherman, Kirk Munro, who suggested that the international boundary in the Gulf of Maine known as the Hague Line might be a good place for a protected area. I had found that fishermen, whose "traditional ecological knowledge" (Neis, 1995) is often excellent, generally agreed that the principle of protected areas for fisheries enhancement was a good one. The problem was that no fisherman wanted the protected area to be where he fished. The Hague Line, however, is a source of ire for fishers, so widening it could help to resolve boundary disputes.

Armed with a location, Rick McGarvey modelled the effect of a protected area on the Georges Bank scallop population. He was surprised to find that egg production could be enhanced by at least twenty times if scalloping was eliminated. This means that half of all scallops on Georges Bank could potentially be recruited from only one twentieth of the productive area. Even better, the Hague Line ran right through the most productive part of the bank, making this an effective region for the placement of a reserve which would enhance the fishery. In this regard, it is important to remember the British lesson about one pitfall of trying to protect a marine area. In attempting to protect the marine area around Lundy Island, fishermen only voluntarily agreed to have areas protected from fishing that were not used for fishing because there were no fish there (Gubbay, 1995).

This sketch illustrates the relationship between nature con-servation and long-term economic benefits within a sustainable development strategy. It is easy to think of nature reserves as having value for the common good because of the intrinsic value of biodiversity; it is less easy to appreciate that

immediate benefits to humans can be obtained through management of "the commons" in a manner which also benefits other species.

The idea of placing a protected area along the Hague Line in the Gulf of Maine has been published in the proceedings of a conference held at Dalhousie University in May, 1994 (McGarvey and Willison, 1995). The symposium on Marine Protected Areas and Sustainable Fisheries was organized by the Science and Management of Protected Areas Association. This non-governmental organization, which is now a publisher and organizer of international conferences, was established by a small group of enthusiasts from Dalhousie University, Acadia University and the Canadian Parks Service. The process of setting up organizations which help to facilitate interactions among different social sectors is an important part of sustainable development. A fractured society, unable to communicate effectively as result of institutional barriers, is inevitably prone to unsustainability as a result of social tensions.

The process of setting up organizations which help to facilitate interactions among different social sectors is an important part of sustainable development.

Conclusion

These four sketches have been chosen to illustrate the way in which a university community is involved in making the connection between nature conservation and sustainable development. In each case, I have tried to show that there is a necessary knowledge base upon which decision-making for sustainable development should be made. This is a scientific base. There will have to be more than the orderly progression of science, however, if real benefits are to be obtained. In each of the cases I have illustrated, the people involved feel passionately about the issues with which they have been dealing. While some of the work has been funded by government agencies, much of what has really counted has been done without funding. No agency funded my work on the proposal for a protected area on Georges Bank, for example. Hal Whitehead's research on the bottlenose whales of The

Gully was funded by World Wildlife Fund, but the group's work to persuade industry and government of the urgency of the matter was funded only by passion. This passion comes more than anything else from a deep feeling for "the exquisite detail and amazing diversity of life" to which Soulé referred. It was the birder in Ian McLaren which kept returning him to Sable Island and ensured that his knowledgeable voice was among those who pressed for care in the treatment of the island. It was the field naturalist in Bill Freedman which ultimately saved (for now) the bog at Swaines Road.

The nature conservation ethic which springs naturally for many biologists needs to be spread more widely.

I have not described a unique or even unusual set of biologists and ecologists; most of my colleagues are involved in community-level work toward sustainable development. Some do so as ecologists, some as environmentalists, some as community educators (e.g. on television and radio), and some as social activists. In order to develop sustainably, this deep-seated community conscience needs to be respected and the nature conservation ethic which springs naturally for many biologists needs to be spread more widely. There is much to be done!

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7

PALEONTOLOGY AND INDUSTRY

by David Scott and Franco Medioli

Introduction

Most people would not associate paleontology and industry very closely.

Most people would not associate paleontology and industry very closely. However, the type of organisms that we study provide us with information about today's environment and, since these also fossilize, they give a record of environmental change in small diameter cores that has many applications with several industrial groups. Petroleum companies find them useful in terms of locating stable areas to place subsea structures, as do many government agencies that are concerned with climate and/or sea-level change, coastal developments (such as aquaculture) that are concerned with environmental damage, and tidal power projects that require information on the alteration of sediment patterns - to name but a few examples.

Our methods provide a cost effective means of determining environmental change on a short to long term scale from small core samples.

Our methods provide a cost effective means of determining environmental change on a short to long term scale from small core samples. The organisms we use (benthicforaminifera) are one-celled rhizopods that are similar to amoebas, but they have a shell (or test) made either of sediment particles that they pick up from the seafloor and glue together, or of calcium carbonate (the same as clam shells) that they secrete themselves. The forms that glue particles together are resistant to dissolving in low pH (high acid), are usually found in low oxygen, fresher and colder water, and are often indicators of high organic loading. The calcareous species prefer less impacted areas.

The key to our successful application of assemblages or species groups to environmental problems is knowing what each of these groups represents in terms of a specific environment now. That information can then be used in a time series, to show how the environment has changed over a given time frame - whether it be

related to climate change, pollution, or just natural evolution of an environment.

We have investigated recent environments from the Great Lakes to the deepest parts of the ocean.

We have investigated recent environments from the Great Lakes to the deepest parts of the ocean, so we have a reasonably good understanding of what to expect in a given set of environmental conditions. Using this expertise, we have been able to interact with several types of private and public agencies to address many kinds of problems having to do with environmental change. The past literally becomes the key to understanding the present and future conditions.

In 1985, by way of example, we were involved in a large project offshore to drill a continuous hole on Sable Island for the purposes of determining sea-level, climatic, and depositional history of that area over the past few hundred thousand years. This project involved Mobil Oil and its Venture partners, Jacques-McClelland Geosciences, Atlantic Geoscience Centre, and NSERC who provided major funding. We have been involved locally and globally with relative changes in sea level which we can measure accurately with foraminiferal assemblages. Several government agencies, many universities, and UNESCO have been involved with methods developed by us. Recently we worked with the Aquaculture Industry in the maritimes to study benthic impacts beneath their finfish and shellfish operations; this involved cooperation with local growers, federal and provincial fisheries and the OPEN Centre of Excellence at Dalhousie. Again major funding came from NSERC. We have been involved in some small but promising projects with Northern Aboriginal groups, helping them to locate the best sites for freshwater intakes. Some other smaller projects have been done as contracts with the Nova Scotia Tidal Power Corporation, the Atlantic Geoscience Centre and Geomarine Associates.

We have been involved in some small but promising projects with Northern Aboriginal groups, helping them to locate the best sites for freshwater intakes.

Individual Project Details

Sable Island Drilling: This opportunity came about by taking advantage of NSERC's industry-university programme. Since

Mobil and its Venture partners were already drilling on the Venture Gas Field, we thought that placing a small drill rig on their larger rig would make economic sense - effectively our project would piggy-back on their one (drawing upon their energy sources, power drilling facilities and transport support). This could imply little cost to them and would make it possible for us to cover the actual drilling cost with a grant from NSERC. Mobil initially agreed but then saw little actual benefit to them, given that we were interested only in the upper few hundred metres of section which the oil companies generally blast through. However, the Venture gas blow-out that occurred in late 1984 and continued into 1985 changed their perspective completely, because suddenly gas was escaping into the upper few hundred meters and they knew nothing about the properties of these sediments. At that point, we could no longer drill from the large rig for safety reasons but Mobil offered us ship and helicopter time, plus cash to drill on Sable Island itself. The Atlantic Geoscience Centre and the Office of Energy Research Development (OERD) finally became interested and paid for the geotechnical onsite testing. With this backing, NSERC provided us with the major funding to pay for the drill rig and crew needed for a 400 m deep hole.

With the funding in place, the engineering company, Jacques McClelland, could assemble all the necessary drilling equipment and laboratory supplies. A cook was hired who assembled all the food 12 people would need for 35 days on Sable Island. Housing was provided on Sable Island through the Bedford Institute of Oceanography and permission was obtained for the drilling operation from the Coast Guard. Finally, arrangements were made with MT&T to have a satellite telephone. Once all the gear was assembled, it had to be packaged on pallets for transport on an oil rig supply boat. Later the pallets were airlifted by helicopter to our drill site on Sable Island. This was the most risky part of the operation and two accidents almost ended the project before it got started. Two pallet loads broke off under the helicopter and fell into the ocean. Fortunately, one of the loads landed in shallow water and we were able to retrieve the

specialized tools that were in the load. We suspended lifting upon the realization that the slings we were using were not adequate to handle the 4000-50000 pound loads on the pallets. To add to our complications a tropical depression hit the island later that day and just about washed away what equipment we did have on the island. After these initial difficulties, we did eventually get everything on the drill site and commenced drilling. We operated on the basis of 12-hour shifts, drilling 24 hours a day until completion. Our target depth was 300 m but technical difficulties stopped progress at 150 m. A standard drilling rig was used that was fitted with a blow-out preventer, in the event we hit shallow gas. Geotechnical tests and photography were performed on the core as it was brought up. The core was split, described, and stored on site; then shipped back in parts by airplane to our laboratory at Dalhousie University.

Our methods were different from previous petroleum company efforts in that we obtained high quality, continuous cores that showed substantial changes over short intervals.

Our methods were different from previous petroleum company efforts in that we obtained high quality, continuous cores that showed substantial changes over short intervals. Most previous cores were low quality, discontinuous samples. We also performed on-site descriptions and tests not done previously, as well as analyses of microfossils that told us Paleohistory.

As a result of the drilling programme, Mobil Oil also supplied our group with valuable subsurface seismic records that allowed us to extrapolate the results of one drill hole far past its boundaries. The Venture partners were very satisfied with the results, while the engineering company learned new techniques and also things to avoid in the future. For our part, we gained two major publications, one in the journal <u>Nature</u> (Boyd *et al.*, 1988; Scott *et al.*, 1989). There is a lot of possible further work to be done; albeit right after we had finished this hole, the petroleum industry on the East Coast (Hibernia excepted) collapsed. Without assistance from offshore industry it will be impossible to repeat this type of drilling.

Without assistance from offshore industry it will be impossible to repeat this type of drilling.

Sea-level Determination: This is a field we have been involved in for over 20 years. It started when Scott was

working on coastal zone problems in San Diego, California, and needed some kind of indicator to relocate where sea level (higher high water in this case) was at California Statehood (1856). The most accurate indicators of former sea levels are salt marsh deposits. The microfossil assemblages in these deposits can relocate a former sea level to within $\pm$ 10 cm vertically. We developed and used this method for several years before there was much interest. It eventually came in the form of concern for global warming, rapid sea-level rise, and being able to detect swift vertical movements of water level. Methods developed by us are now the standard for determining sea levels worldwide. We have subsequently been involved with numerous government and private concerns to relocate sea levels. Scott is presently the Project Leader of a UNESCO project to study rapid coastal events; this project will operate for 5 years and, by the end, will probably have 500-600 participants from 60-70 countries. Possible future work is almost unlimited, and we have been involved in the guidelines of **LOICZ** (Land Ocean Interation in the Coastal Zone), a large international body which may provide us with major funding. The UNESCO project has several meetings planned in the future, the next one in Chile. The UNESCO projects themselves provide limited funding but contacts developed through these projects often lead to large cooperative efforts.

Methods developed by us are now the standard for determining sea levels worldwide.

Aquaculture Impacts: This is an activity we became interested in as a result of our work in estuaries. Most aquaculture operations are contained in estuaries, and we know something about what lives in the estuary sediments. A few years ago, aquaculture was in the news since some people claimed that these operations were detrimental to the environment because of the high amount of organic matter being dumped underneath the fish cages. It occurred to us that we could help determine if this was the case with the use of microfossils. We put a proposal to NSERC for a large project that had the backing of the aquaculturists as well as the federal fisheries department. This project was funded by NSERC for three years. Our methods were unique because, with fossils in cores under the cages, we

A few years ago, aquaculture was in the news since some people claimed that these operations were detrimental to the environment because of the high amount of organic matter being dumped underneath the fish cages.

173

could determine environmental conditions before the cages were emplaced and decide if, indeed, the aquaculture operations had a deleterious effect on the benthic environment. In all cases, no baseline data was available from before the cage emplacement - so microfossils were the only way of making the paleo-environmental determination. We took many cores from under a variety of sites using SCUBA divers and did numerous analyses. What we showed was that the organic loading from aquaculture operations had little lasting effect on the benthic environment, at least for New Brunswick operations. For future work, we would like to go to areas where we know there are problems, like Norway or Japan, to study benthic changes.

Location of Drinking Water Sources: This is a rather small side-line at the moment but does hold some future promise. We were contacted by Burnside Engineering in Ontario about a water quality problem - where to locate a freshwater intake source for a new Native peoples' settlement in Hudson-James Bay. The problem was that the river was tidally influenced, but they did not know how far sea-water could penetrate up-river. Again microfossils, or microfauna in this case, provided an answer. The microfauna live there 365 days a year and if a completely freshwater fauna was present in the sediments that assured that no sea-water had ever penetrated to that point. Individual measurements cannot tell you this because the sea-water may only get there infrequently, kill the bugs but not show up with spot measurements. We have done two such studies, one in Hudson-James Bay and one in Labrador. The study in Labrador showed that sea-water did get much farther than they thought and probably saved them much money in relocation costs had they placed the intake in its original planned location. We see a great future in this field because microfossils provide a cost-effective and reliable way to determine freshwater/marine transitions.

Microfossils provide a cost-effective and reliable way to determine freshwater/marine transitions.

Other Small Projects: We have done small contracts for the Tidal Power Corporation to help determine sedimentation rates in the head pond at Annapolis, paleoenvironmental studies of offshore borings with Geomarine and Mobil, and several

contracts with Atlantic Geoscience Centre personnel for stable isotope and microfossil analyses.

Conclusion

There is not too much we would have done differently, except maybe being more aggressive in pushing our particular capabilities with various agencies and private concerns. However, the many years of research are now starting to pay off in terms of numbers of contracts to examine environmental geological problems. The main industrial use of microfossils had been to locate petroleum; this is now a dying field and the environmental geology field is really opening up because we can provide cost-effective answers that no one else can. We are already forming alliances with private companies to do combined survey studies where we have both an industrial and university component. The clients appreciate this because they know that university people will hopefully be there if they need help in the future, and the companies benefit because we provide expertise they cannot buy anywhere else.

We are already forming alliances with private companies to do combined survey studies where we have both an industrial and university component.

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8

MES THESES: A REGIONAL RESOURCE

by Raymond P. Côté

Introduction

The theses represent a substantial contribution to policy development, the management of human uses of the environment and its resources as well as an understanding of the impacts of resource development and environmental management initiatives.

Eighty of the 100 theses completed by students enrolled in the Master of Environmental Studies and Interdisciplinary Ph.D. programs at Dalhousie University have addressed topics of relevance to this region of Canada and Nova Scotia in particular. Though most of the research was done in Nova Scotia, some of the information gathered, conclusions drawn and recommendations made, may also be relevant to the other Atlantic Provinces. Extrapolation of the findings and recommendations should be carefully considered rather than discounted out of hand. The theses represent a substantial contribution to policy development, the management of human uses of the environment and its resources as well as an understanding of the impacts of resource development and environmental management initiatives.

Many of the theses are well grounded in the communities they studied. In a significant number of cases, the students entered into extensive dialogues with affected parties or stakeholders. In a few instances, students lived with the people they were studying.

This chapter could have categorized the theses in many different ways. Fisheries management was one of the first topics addressed by students and because of its prominence as both a resource and environmental issue in the region, it is discussed first. The initial section includes aquaculture due to the increasingly important role it is playing in the supply of fish and shellfish. Coastal zone management theses are then described in section 3 in part because of its importance to the maintenance of both the commercial fishery and aquaculture. Section 4 describes studies on water pollution, water quality and aquatic life.

The next section emphasizes theses on forests, wildlife and habitat conservation. The number of studies undertaken in this category underlines the long standing interest of the School in the conservation of resources and protected areas. Section 6 discusses contributions to environmental policies and processes largely of government.

The concern over wastes and their impacts on health and the environment is addressed by theses described in Section 7. Section 8 discusses studies undertaken on energy and energy sources. The next section describes research related to land use planning and development. Section 10 lists a number of theses in the general category of education, society and the environment. This has also been an important area of research by students in the program. Section 11 describes the research of students on indigenous people and their environment. This work has been done in northern Canada.

The author wishes to thank all of the students and their supervisory committees for creating this wealth of information and allowing it to be utilized in this fashion.

Fisheries and Aquaculture

She concluded the uncertainty and flexibility had to be incorporated in the fisheries planning process to reduce hazard and risk.

In 1981, Lamson completed a thesis on Newfoundland fishermen's perceptions of the sources of occupational hazards and risks which face them. On the basis of her study, she concluded the uncertainty and flexibility had to be incorporated in the fisheries planning process to reduce hazard and risk. These recommendations could not ring more true today. Gray (1983) studied the small boat fishery in southwest Nova Scotia and concluded that there was misreporting of offshore fishing activity by inshore boats. He noted that this misreporting had implications for a number of marine management issues including, of course, management of fish stocks, the Georges Bank boundary, and assessments of offshore oil and gas development.

Kearney (1983) looked at the relationship between harvesters, processors and the government in the Bay of Fundy herring fisheries. For a time there had been co-management among the key players but this collapsed by 1980. The result was risk sharing agreements between individual fishermen and processors and the marginalization of independent, small capital, herring fishers.

Fraser (1985) proposed the concept of property rights or individual enterprise allocations as a possible solution to the over capitalization of the ground fishery in southwest Nova Scotia. She recommended an approach to the implementation of such a system that would involve improvements in the database on landings and eventually changes to the allocations.

In 1986, Sinclair finished his study of technological interactions with catches on the Scotian Shelf offshore fisheries. He argued that fisheries defined on a fine spatial scale and on the basis of homogeneity of catch composition would be suitable for developing allocation regimes.

Three theses have studied aquaculture in the region.

Three theses have studied aquaculture in the region. On the basis of some of the first initiatives in aquaculture in Nova Scotia, Day (1987) argued that there was a need to consider social, legal and economic as well as ecological aspects. He described the interaction of these factors in decision-making processes on policies as well as operations. Parent (1990) went on to describe the ecological risks and their impacts in greater detail. She noted that there are various options for managing risks to aquaculture but a long-term perspective must be used. Parent recommended that government and industry give high priority to planning in the siting of facilities and regulating polluters.

Dowd (1991) assessed some models for predicting bivalve growth at an aquaculture site. On the basis of his assessment, a box model was developed which permitted some consideration of carrying capacity. He concluded, however, that the model

required further assessment before it could be applied on a regular basis.

There was a time when the School was more active in fisheries management research and some studies were initiated to better understand certain species such as Irish moss (Chondus cirpus) and the Atlantic Squid (Illex illecebrosus). The information gathered was designed to be useful in the management of harvesting practices of these species (Bhattacharya 1984, Hirtle 1981, Young 1986).

Coastal Zone Management

Coastal zone management has been one of the major areas of research by students in the program.

Coastal zone management has been one of the major areas of research by students in the program. D'Entremont (1983) considered the increases in vessel traffic in the seventies and early eighties in the Bay of Fundy and consequently the increasing risk of marine accidents and especially oil spills. His thesis noted that such spills could have serious consequences for five spatially sensitive areas in the Bay. He urged improvements in the navigational competence of fishers and alterations to the vessel traffic management system to reduce risks.

Kriwoken (1985) considered a regional approach to an ecologically distinct marine and coastal area, notably the Bay of Fundy, Gulf of Maine, Georges Bank (otherwise known as FMG) region. He developed a bilateral marine conservation plan which would include parks, protected areas and a biosphere reserve. Such a plan has yet to be adopted although a bilateral Gulf of Maine program addressing both protection and conservation was initiated in the early nineties.

Hildebrand (1988) described efforts to establish a formal and integrated coastal zone management in Canada. These have not been successful (as of 1994) although management of coastal activities and areas continues to occur in various forms. Recommendations were made by Hildebrand to integrate these initiatives in a more organized manner.

Boyle (1990) reduced the coastal area under consideration to that of a harbour. She recommended that setting goals, especially for desired water use objectives, is important for planning and regulating activities in the coastal zone. Boyle developed a process for identifying use objectives. Davies (1993) also looked at a specific area, the West Isles region of the Bay of Fundy in New Brunswick. His thesis investigated resource use conflicts and conservation in a complex marine environment. On the basis of his research, he suggested that geographic information systems provide a useful tool for analyzing existing and potential conflicts on a spatial basis. The process developed in the thesis allows the user to incorporate conservation and resource management concerns, expert as well as traditional information, and the inclusion of more stakeholders in an integrated fashion.

The process developed in the thesis allows the user to incorporate conservation and resource management concerns, expert as well as traditional information, and the inclusion of more stakeholders in an integrated fashion.

Meeuwig (1993) studied the role that coastal provincial parks could play in facilitating coastal zone management in Nova Scotia. She argued for incorporating environmental management considerations into land use planning to protect areas of ecological, economic and social importance in the coastal zone. In Meeuwig's view, provincial parks could take on a more central role using a variation on the biosphere reserve concept and involving greater links to communities. Her new model is called Community Cooperative Management for Environment and Development.

The analysis and recommendations in these theses on coastal zone management warrant serious consideration by municipal, provincial and federal agencies involved in promoting an integrated approach to the coastal areas.

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Pollution, Water Quality and Aquatic Life

Effects of pollutants have been investigated by a number of students. These have involved both fresh water and marine environments. The School has paid some attention to major sources of contaminants as well as polluted harbours such as Halifax and Sydney. Efforts have also been devoted to assessing

effective monitoring techniques. Ernst (1981) investigated the lethal response and tissue accumulation of vanadium in brook trout (Salvelinus fontinalis). Odense (1982) studied the mutagenicity in mussels from two polluted harbours in Nova Scotia: Halifax and Sydney. Extracts of mussels were shown not to be mutagenic in the Ames Salmonella test. A study undertaken by Rochefort-Johnson (1984) examined the distribution and clearance of phenyl xylylethene in the shale (Raja radiata). The concern was the potential bio-accumulation of a chemical proposed for use in the electronics industry. Biotransformation of the phenyl-xylylethane in the liver was such that accumulation should not have a serious problem for skates.

The tissue concentrations of copper, lead and zinc in mussels of Halifax Harbour were studied by Ward (1989). In addition, an assessment of the health status of the mussels was also attempted. A relationship was noted between tissue and sediment concentrations, on the one hand, and tissue concentrations and outfalls, on the other. Recommendations were offered for design of similar biomonitoring studies. Sunoko (1993) researched the effect of pulp mill wastes on the "scope for growth" of the mussel (Mytulis edulis). Relatively high levels of filtered pulp mill waste were required to influence oxygen consumption, feeding rates, food absorption efficiencies and "scope for growth."

Yet another significant source of contaminants, geological formations containing pyrite, has been investigated.

Yet another significant source of contaminants, geological formations containing pyrite, has been investigated. When disturbed, these rock formations are exposed to oxygen and bacteria act to produce acid and release metals to aquatic environments. Roberts (1989) investigated the use of peat, a potentially cost effective means of removing the metals from the acid drainage. The conclusion was that peat would probably only be effective in lower flow rates and concentration and perhaps as a secondary or polishing mechanism. Because construction in these geological formations continues to be problematic in several parts of Nova Scotia, Samostie (1994) used a geographic information system to assess the risk of acid drainage. A

qualitative predictive model based on source characteristics was developed.

Students have investigated water quality issues.

Students have investigated water quality issues from many different perspectives. With acidification of waterways in part from acidic precipitation, there was increasing concern for the mobilization of heavy metals from home wellwater distribution systems in rural areas of Nova Scotia. Maessen (1984) found that metal mobilization was occurring at that time but it was not possible to correlate chemical and physical parameters of the water and the nature of the piping in the system to the degree of mobilization.

Parker (1992) researched the fate and effects of elevated levels of fluoride downstream from a tin mine in southwestern Nova Scotia. Although now closed, the mine in question was the largest open pit tin mine in the world. Tailings from the mine will have to continue to be treated for fifteen to twenty years. Parker was able to make some recommendations to improve the existing environmental management strategy.

Water quality management in Canada, as elsewhere, has been approached from two main perspectives. One is a technology-based approach focussing on the effluent pipe and the other is a water-quality based approach, emphasizing the needs of the receiving environment.

Water quality management in Canada, as elsewhere, has been approached from two main perspectives. One is a technology-based approach focussing on the effluent pipe and the other is a water-quality based approach, emphasizing the needs of the receiving environment. Smith (1993) concluded that a reliance on elements of both approaches is required but that in any event, setting water quality and ecosystem objectives was critical to the success of a management program.

Models of many types have been developed for various purposes by students in the conduct of the thesis research. One such model was an attempt to predict brook trout habitats as unsuitable, marginal, good and excellent. Such a model could be used in land use planning as well as trout fishery management. Although further refinements were recommended, the model was demonstrated as being able to predict habitat for adult spawning and juvenile growth.

Limited effort has been made by the School to understand the nature and scope of sea level rise and attendant effects such as salt-water intrusion. Subsidence of the land, combined with sea level rise associated with predicted global warming, could have significant impacts on coastal areas of Nova Scotia. At least one thesis, by Smith (1984), has investigated the historical research of salt water intrusion in the Porters Lake area of Nova Scotia's eastern shore. Two previous intrusions were identified, resulting from the opening of a channel and the breaching of a sill.

Forests, Wildlife, and Habitat Conservation

The forests of Nova Scotia, New Brunswick, and Newfoundland and Labrador, although intensively harvested for pulpwood, firewood and lumber, remain important economically and ecologically.

The forests of Nova Scotia, New Brunswick, and Newfoundland and Labrador, although intensively harvested for pulpwood, firewood and lumber, remain important economically and ecologically. Research has been undertaken since the establishment of the Master's program on matters related to the sustainability of the forests.

Duinker (1981) studied biomass in ten tree species to develop prediction equations for merchantable and unmerchantable tree components. Species were the balsam fir, white spruce, black spruce, red spruce, red maple, sugar maple, yellow birch, white birch, large tooth aspen and the trembling aspen. Henry (1981) investigated the use of excess merchantable hardwood of low quality - as biomass for energy production in Nova Scotia. He concluded that there was such a capacity and it would provide economic incentives for better management of the hardwood forests while also having other environmental and social benefits. Because much of Nova Scotia's forest land is privately held, some studies have been done on the role of private woodlot owners.

The survey revealed that group ventures could play a positive role.

Also in 1981, Blair reported on the role of private woodlots in the supply of firewood and developed recommendations to facilitate organization of the fuelwood market in the province. Hundert (1987) studied the socio-economic impact of group ventures as a tool for improving private woodlot management in Nova Scotia. The survey revealed that group ventures could play a positive role.

Toner (1985) attempted to use the pollen record to assess whether the quality of the Nova Scotia forests had deteriorated over time as a result of forest management practices. Although anecdotal and descriptive information suggests there has been a reduction in quality, the technique used could not detect the anticipated change.

Herbicide use in the forests has been a volatile issue in the Atlantic Provinces.

Herbicide use in the forests has been a volatile issue in the Atlantic Provinces. One thesis by Poirier (1985) researched the responses of small mammals to clearcutting and silvicultural herbiciding. The herbicide was 2,4,5-T, a very contentious chemical. Trapping of small mammals on unsprayed and sprayed clearcuts indicated no significant differences in abundance between them. Nor were species' compositions affected by spraying.

Wildlife and natural areas have not been forgotten. In fact, this has been an important area of research for students at the School. Rutherford (1984) considered the effects of winter feeding on bird populations in Halifax. He found that two species of birds, the Evening Grosbeak and the Mourning Dove experienced significant population increases over the period 1956 to 1982. On the one hand, feeding increases over winter survival while on the other, it increases the potential for winter kills and injuries. Hykle (1988) took a much broader national perspective involving an evaluation of Canada's implementation of the enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). He found that Canada rated poorly in part because of a lack of cooperation and coordination between federal and provincial agencies responsible for the implementation of the Convention. Recommendations were made to improve the situation.

In 1980, Reeves proposed a framework for the protection of environmentally significant areas in Prince Edward Island.

In 1980, Reeves proposed a framework for the protection of environmentally significant areas in Prince Edward Island. The framework includes site selection, site classification, site evaluation and priority ranking, acquisition of site and site management and monitoring. The framework was then modified

with site selection criteria, classification and evaluation schemes appropriate for Prince Edward Island.

Gilbertson (1986) studied management plans for wilderness reserves in Newfoundland and Labrador.

Gilbertson (1986) studied management plans for wilderness reserves in Newfoundland and Labrador. Using the Bay du Nord Wilderness Reserve as a model, he developed a management plan structure to assist planners. Wilderness reserves are large natural areas set up for the protection of animals, flora and their habitat, and for the benefit and education of people.

Another conservation approach, the biosphere reserve, was assessed by Roots (1989). She considered the benefits of biosphere reserve designation and noted that there were five such reserves in Canada at the time. In her view, reserves could become a more effective tool for conservation, sustain resource use and introduce a stronger environmental ethic. Suggestions were made to overcome obstacles to the establishment of additional biosphere reserves. Vines (1994) considered the relationship between protected areas and adjacent lands using Kejimkujik National Park as a case study. There are often conflicts between parks and local land owners which continue for years, if not decades, if they are not properly handled at the beginning of the definition of boundaries of the park. As there has been some discussion of establishing a biosphere reserve with the park as its centre piece, a number of issues identified in the thesis research would have to be addressed.

As there has been some discussion of establishing a biosphere reserve with the park as its centre piece, a number of issues identified in the thesis research would have to be addressed.

Ogilvie (1993) described a decision-making process for ecological reserves in Nova Scotia, which considered human demands, set conservation objectives, derived measurable attributes, developed methodologies and a set of evaluation criteria. The criteria were then used to evaluate 16 sites in the provinces as case studies. In his thesis, Keith (1993) recognized the need for greater voluntary and private sector involvement in implementing the protected areas system in Nova Scotia. This is in part because of the extent of private land ownership in the province. He recommended that a land or nature trust might be

186

able to succeed where governments have failed or are inappropriate.

Two theses have addressed wetlands, another important ecosystem in the Atlantic Provinces. Walters (1990) developed a cost-effectiveness framework to evaluate scenarios for wetland conservation of coastal dykelands around the Minudie Marsh at the head of the Bay of Fundy. Criteria were identified against which to evaluate each scenario: species richness, muskrat productivity, waterfowl productivity, waterfowl use, marine fish productivity, rare or special interest species, shorebird use, historic value, landscape aesthetics and sustainability. He argues that the use of these criteria would link financial and conservation benefits. In her Ph.D. dissertation, Manuel (1992) proposed a landscape approach to the interpretation, evaluation and management of wetlands. A five part methodology was developed emphasizing wetland function in the broader landscape. She argued that the interpretation which results supports a conservative "no-net loss" orientation to wetland management and preserves the resource attributes of a region.

Outdoor recreation is an important activity in the Atlantic Provinces and all-terrain or off-road vehicles are utilized increasingly. Among other areas, these vehicles can impact on special and protected areas. Johnson (1987) studied the use of recreational off-road vehicles in Nova Scotia, particularly their environmental impacts and land use conflicts. Dunes and wetlands were two of the areas identified as suffering impacts. In his thesis, he concluded that proposed legislation would not adequately address the impacts and conflicts noted in his study. Johnson concluded that a multi-faceted management approach was required, encompassing education and training, legislation with enforcement, recreation planning and alternative institutional arrangements. The impact of all-terrain vehicles on bogs and barrens in the Cape Breton Highlands near the National Park was the subject of a study by Ross (1991). He concluded that the intensity of the impacts had increased from 1975 to 1990, and on the basis of further experimentation, that bogs and

wetlands were unsuitable for all-terrain vehicle use. As in the case of Johnson, he recommended an integrated management plan with a greater role played by snowmobile and all-terrain vehicle clubs.

Rousseau (1990) considered some recent events on Briar Island, Nova Scotia, in which a conservation organization was given title to a significant proportion of the land mass. To prevent the conflict which has occurred with other protected areas in the region, the Nature Conservancy of Canada was looking for ways of involving the community in the management of the ecologically sensitive property. Rousseau was able to make recommendations to reduce resource use conflicts between conservation agencies and local communities.

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Environmental Policies and Processes

Many of the theses undertaken by students while at the School have emphasized the development or evaluation of environmental policies or management processes which are designed to assist in the implementation of policy.

Filyk (1991) assessed the influence of governmental and non-governmental advisory groups on environmental policy in this country. Federal and provincial jurisdictions have an extensive number of such groups. He investigated two different types of groups in particular: the Canadian Environmental Advisory Council (now defunct) which provided wide ranging advice on many issues and the Inquiry on Federal Water Policy which had a narrower task and time frame. Isnor (1992) was somewhat ahead of his time in attempting to prepare the foundation for an environmental biotechnology policy for Nova Scotia. He envisioned the need for such a policy if the province was to take advantage of opportunities in this rapidly emerging area. Isnor prepared policy recommendations and recommended a consultative process and an action plan for the development of a final policy.

Environmental impact assessment (EIA) is a management process which has received considerable attention by industry, interest groups and the media. Four theses have been written on the topic. In 1984, Walsh completed an investigation of the use and role of baseline studies in environmental impact assessment. She proposed a more effective approach based on an extensive review of the literature, of guidelines for previous EIAs and of specific assessments. Hydroelectric development in Labrador was used as a case study to assess the approach. The costs of environmental impacts have been debated since they were first undertaken. Peltier (1984) investigated the potential application of cost benefit analysis (CBA) to environmental impact assessment. She found that environmental effects were difficult to quantify which led to further difficulties in attaching costs for the purpose of comparison with project benefits. She suggested that greater use of sensitivity analyses and attention to the distribution of costs and benefits might make CBA more useful in EIA.

Hickman (1987) investigated the matter of cost from a different point of view. Using several prior assessments, he assessed the effectiveness of different EIA processes in Canada including Newfoundland's process as it was at that time, in relation particularly to project costs and concerns addressed. Depending on the measures emphasized, different processes were more or less effective.

Scott (1992) attempted to make sense of an issue which has proved elusive in the EIA field: policy assessment. In her view, environmental impact assessments of policies will require the elaboration of environmental quality goals against which the policy in question can be assessed. These goals need to be explicit.

Zhizhong Si (1993) completed a Ph.D. dissertation which investigated changes in quality of life resulting from relocation when the Mactaquac dam was built on the Saint John River north of Fredericton. Over 1,100 residents were displaced between

1965 and 1968. From his study, he developed an integrative approach which provides for determining the relative contributions from social, economic and environmental factors and incorporating the possibility that impacts could be differentially distributed as occurred in this case. The approach should assist in future EIAs involving relocation of people.

Industry, Waste, and the Environment

The disposal of chemicals and other wastes has become a major public policy issue in the Atlantic Provinces and especially Nova Scotia. More attention to the theses written by a number of the MES students might have prevented some of the difficulties that have been encountered.

The disposal of chemicals and other wastes has become a major public policy issue in the Atlantic Provinces and especially Nova Scotia. More attention to the theses written by a number of the MES students might have prevented some of the difficulties that have been encountered. Wallace (1985) developed a tiered assessment scheme which could be incorporated into the permitting process of the Nova Scotia Department of the Environment. In her view, use of the scheme would have resulted in a more efficient, predictive and comprehensive assessment of chemical risks. In 1988, Yap had already advocated a low waste pollution control policy, well ahead of Canadian environmental agencies. She developed a decision model and assessed the waste management practices of three manufacturing firms in Nova Scotia. Financial data from the three firms was used to demonstrate the cost-effectiveness of low-waste technologies. These studies have been supported by many studies by others around the world. Having described the benefits, she prepared a policy framework to assist with the design and implementation of a new policy.

Hinch (1990) reminded us that with societal preoccupation about industries as sources of pollution, we often forget small businesses, institutions and homes. Although any individual source might be small, the cumulative totals are underestimated. She recommended that more attention be paid by governments and communities to this issue in order to reduce the overall threats posed by hazardous chemicals.

It is often forgotten that some cities and towns in the Atlantic Provinces were heavily industrialized in the late 1800s and early 1900s.

On the basis of her study, Soltan described an approach to inform gathering to create inventories of these historically contaminated sites.

It is often forgotten that some cities and towns in the Atlantic Provinces were heavily industrialized in the late 1800s and early 1900s. Places such as Halifax, Truro, Pictou, Sydney, Amherst and Saint John had a wide range of businesses and industries. Although it is generally accepted that environmental problems began with the rapid increase in the chemical industry following the Second World War, Soltan (1992) investigated the hazards and risks associated with historical contamination in Amherst. Primary and secondary manufacturing was substantial before the First World War and chemical residues of various types could remain in abandoned waste sites, old buildings, buried sewer lines, stream sediments and potentially wetlands and groundwater. On the basis of her study, Soltan described an approach to inform gathering to create inventories of these historically contaminated sites.

As is the case with environmental impact assessment, the costs of sewage treatment is often questioned in relation to the benefits gained from it. This certainly has been the case in the clean-up of the Halifax Harbour. Sutherland (1992) identified the variables which must be considered as benefit components of a cost-benefit analysis of sewage treatment in the case of Bridgewater. These variables include human health, recreation, tourism, shellfisheries, aesthetics, property value, ecological change and sludge use. Future water supply, option value, and general development planning were also important. In the case of Bridgewater, these benefits were thought to be significant.

Materials discharged by first industries, farming and fish processing operations can be considered as waste or as misused or misplaced resources. LaRue (1993) began from the latter premise and investigated the compostability of wood waste from the pulp and paper industry. Combined with waste milk from another industry, woody waste can be composted and utilized in replenishing biomass and nutrients removed from land through harvesting.

Industry and Energy Sources

Offshore oil and gas has been viewed by some as the industry which will transform the economy of at least two of the provinces, if not the region.

Offshore oil and gas has been viewed by some as the industry which will transform the economy of at least two of the provinces, if not the region. Two theses have considered the impacts of this industry on other sectors. Heber (1981) studied the potential social environmental impacts of the hydrocarbon exploitation resulting from the normal "boom and bust" cycle of the industry. He argued for early and comprehensive social assessment and policy design to reduce social disruption based on case studies from the Aberdeen and Shetland Islands areas of Scotland.

Moon (1993) took a different approach to the energy topic. Rather than looking at the potential impacts of the supply side of the equation, he considered demand-side management. He suggested that integrated resource planning and additional incentives could move Nova Scotia Power toward a balanced objective of reducing environmental impacts and minimizing energy costs.

Land Use Planning and Development

The relationship between land use planning and development and environmental assessment and management is often not as strong as it should be.

The relationship between land use planning and development and environmental assessment and management is often not as strong as it should be. Davidson-Stewart (1981) considered the application of environmental performance standards in planning controls. She found that the majority of environmental problems in rural areas were amenable to the application of performance standards although the Planning Act needed to be amended to give municipalities clear authority to use such standards. It is interesting to note that there are international initiatives currently under way to develop environmental performance systems and standards for industry.

Maxwell (1989) considered the case of agricultural land abandonment in Cumberland County, Nova Scotia, because of a

concern that the area of improved agricultural land had been in decline in the county for over fifty years. He identified a number of variables which could influence this situation and argued that rural land resource policy should take these into account.

Since the construction of highway 101 through the Annapolis Valley in the late 1970s, land use conflicts over highway routing have been significant public issues.

Since the construction of highway 101 through the Annapolis Valley in the late 1970s, land use conflicts over highway routing have been significant public issues. Schnare (1982) investigated the decision-making surrounding the design and construction of highway 101 in Annapolis County, Nova Scotia. She noted that at that time, the Department of Highways (now Transportation and Communications) restricted public access to information, inadequately considered the requirements of other government agencies and discouraged public participation in the planning process. Schnare made recommendations for improving the process. There have since been improvements made with the department itself and as a result of the province's environmental impact assessment process.

Wiebe (1993) was also concerned about agriculture but from the organic farmer's point of view. He investigated obstacles and opportunities to organic farmers as they were perceived by a farmer in each of the Maritime Provinces. In summary, the farmers believe that this type of farming is sustainable but government is less interested than the public. Financial returns to the farms remain a problem, but the farmers studied believe that opportunities outweigh the obstacles.

Research of a more fundamental biological nature has also been conducted by students at the School.

Research of a more fundamental biological nature has also been conducted by students at the School. For example, Alexander (1986) was interested in the resistance of potato cultivars to drought. Through research undertaken at the Nova Scotia Agricultural College, he attempted to develop a technique involving ethylene glycol. The underlying purpose of the study was the development of a rapid screening method for detecting drought resistance in potatoes to assist in selecting the most appropriate cultivars for use in countries with water shortages.

Education, Society, and the Environment

In a philosophical analysis of the root causes of our resource management problems, Willett (1983) argues that common sense is inadequate. He argues that woodlot owners and government agencies should use "vital reason" as a basis for managing natural resources. In his view, vital reason is reasoning which includes the person within their environment.

Environmental action and education initiatives and programs have expanded rapidly during the past decade. These have been established by the school system, interest groups and industries.

Environmental action and education initiatives and programs have expanded rapidly during the past decade. These have been established by the school system, interest groups and industries. Hutcheson (1987) undertook a study to investigate the attitudes, behaviour and knowledge of rural and urban students in Nova Scotia. Using grade 10 students, she found that rural students were more concerned and emotional about environmental issues and considered their behaviour more environmentally responsible than urban students. The level of knowledge of the two groups did not differ significantly. Hutcheson recommended that an ecological perspective be integrated in all disciplines in school curriculum.

Maass (1990) looked at the role of community groups in environmental stewardship. His analysis was based on case studies of the Saint Mary's River Association and the Tusket River Environmental Protection Association. As community-based approaches to enhancement of environmental quality and resource conservation increase, the findings on group and institutional characteristics which impede and facilitate the initiatives of such groups may be helpful to others.

Strickland (1991) produced a thesis on the role of the residential summer camp in promoting responsible environmental behaviour. Her study suggested that this had in fact occurred as a result of direct experience with the outdoors and the environmental education efforts at the camp. The result suggested an increase in political activism on the part of students, a greater degree of

awareness of issues and a greater sense of ownership in the program itself by those involved in its delivery.

VanWissen (1992) looked at environmental summer camps specifically. Her case studies were Sunship Earth and Earthkeepers, both developed by the Institute for Earth Education and run in Nova Scotia. She found that the camps promoted a strong environmental ethic among the children attending the camps and follow-up indicated that children had changed one or more of their habits.

Butler (1991) considered quite a different approach to environmental education: the aquarium. He questioned the ethics of aquaria in which creatures are kept in captivity, their educational impact and their conservation value. His assessment of aquaria is that alternative approaches to the current use of larger expensive institutions are required to meet the needs of communities.

The role of community-based groups in water quality monitoring was studied by Lukasik (1993).

The role of community-based groups in water quality monitoring was studied by Lukasik (1993). She looked at five such groups around the Gulf of Maine. Because such groups were often discounted in the past because of a perceived lack of quality control, Lukasik paid particular attention to group relations with government agencies. She concluded that there can be mutual benefits in which collection can occur at low cost with high quality to assist government agencies in managing environmental problems.

As environmental education summer camps have emerged, so have ecologically-oriented communities. At least one exists in Nova Scotia.

As environmental education summer camps have emerged, so have ecologically-oriented communities. At least one exists in Nova Scotia. McGregor (1992) compared three such communities in different parts of North America to evaluate whether there was any similarity in the ethics and practices. She found that members share common values such as self-sufficiency, simpler lifestyles, cooperation and their interest in social change. McGregor suggested that such communities are

an important component of an ecologically-based social change movement.

Guinchard (1992) considered lifestyle issues from a very different perspective. Her thesis examined local, regional and global issues associated with the life cycle of cloth and disposable diapers. A children's hospital was the consumer used as a case study.

Indigenous People and their Environment

In Atlantic Canada, there are likely to continue to be development projects that impact on the lands of native people.

The thesis by Wright (1986) focusses on EIA and native people in northern Australia and northern Canada. His general finding was that there are compelling reasons for modifying EIA procedures to enable native people's issues to be more recognized. In Atlantic Canada, there are likely to continue to be development projects that impact on the lands of native people.

Indeed, one of the more contentious issues involving indigenous people in this region has been low level flying by military planes over lands used by the Sheshatshiu Innu in Labrador. Hill (1989) examined the perceived effects of the flying thorough an extensive survey of people in the community. Concerns were expressed about harm to health, disturbance of sleep, and relaxation, as well as harm to birds and caribou.

The Inuit see themselves as a link in the continuous cycle of life and therefore there is conflict over the degree of government control imposed and who defines conservation needs for the Beluga.

Sweeney (1992) investigated the potential for community management of Beluga hunting in the area around Pangnirtung on Baffin Island. The Inuit see themselves as a link in the continuous cycle of life and therefore there is conflict over the degree of government control imposed and who defines conservation needs for the Beluga. In considering community based management, she described the predator/prey relationship of the Inuit and the Beluga, the role of government scientists and regulators, and the broader conservation and aboriginal legal regime.

Conclusion

Research undertaken by students in universities is often disregarded unless it has been done at the request of a particular individual, agency or company.

Thesis research should be seen by policy makers, regulators, industries and communities as a valuable regional resource.

Research undertaken by students in universities is often disregarded unless it has been done at the request of a particular individual, agency or company. This is unfortunate because the information base indicates that the School and the Master's students have addressed many key resource and environmental issues affecting the region. Their theses represent an exhaustive analysis of the issue, the literature pertaining to that issue and often the views of stakeholders. As such, thesis research should be seen by policy makers, regulators, industries and communities as a valuable regional resource.

PART IV

BUSINESS AND COMMUNITY LINKAGES

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University impacts on development processes are often viewed as primarily linked with business. While this is a very narrow and incomplete impression, even university-business connections are often far more complex than may be widely appreciated.

The opening paper, by Michael Bradfield, examines the theme of technology transfer between the university and business, emphatically a two-way process. He concludes that 'technology transfer does not come automatically or easily to the university. Nonetheless, it is important that universities develop a more applied approach to their research and teaching.' 'Academics need to be more aware of the potential for commercialization, working in an environment which encourages, supports, recognizes, and rewards applied work. The changes necessary are not just with the individual, but at the level of the department, the faculty, and the university'.

The next two papers suggest that, at least in parts of Dalhousie, some of these changes have been occurring.

The paper by Douglas Myers records pioneering efforts by Henson College in fostering self-employment through micro-enterprises, an experience which he effectively relates to 'the turbulence of the economic and social transition this region and its communities are experiencing'.

That is followed by a review, by Janet Lord and Donald Patton, of a 'partnering project', successfully run from the Business School. As an outcome of close cooperation between business, government and Dalhousie University, MBA students have been working with Nova Scotian companies on the design of strategic international marketing strategies and then setting out on missions to test them in selected international market places. More than 80 Nova Scotian companies have thus far (1996) participated in this enterprising programme.

9

TECHNOLOGY TRANSFER AND THE UNIVERSITY

by Michael Bradfield [1]

The teaching and research functions of universities obviously represent a critical resource to the local economy in both material and cultural terms. In addition, the expenditures by universities, their employees, and their students provide an important addition to demand in their communities.

Universities can - and should - promote "technology transfer".

The impact of universities can be enhanced significantly by seeing their role as not just the expansion and preservation of knowledge; universities can - and should - promote "technology transfer", the use of the university's expertise and knowledge, its conversion to technology, to social and commercial applications. The abilities and expertise of university employees and students and even the library and laboratory facilities (Bania et al., 1992: 216) of the university could add to the capacity of the economy, especially the local economy. While this potential has been developed in some universities, many are just beginning to recognize this role and to make the necessary institutional steps toward fulfilling it.

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What is Preventing Technology Transfer?

To talk of how universities could encourage technology transfer is to assume that it does not happen automatically, that it is not inherent in the teaching and research of a university. Some universities have defined technology transfer as central to their function - e.g., the land grant colleges of the United States and some institutes of technology. Many, however, have adopted an

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institutional posture and culture in which teaching and basic research (and often, just research) are seen as their primary functions, with no sense of need or responsibility to do more. The changing fiscal environment is one of the factors which have forced many universities to rethink this position.

While there are exceptions to the rule, academics tend to have neither the inclination nor the motivation to be entrepreneurial or even to be applied in their teaching and research.

While there are exceptions to the rule, academics tend to have neither the inclination nor the motivation to be entrepreneurial or even to be applied in their teaching and research. One of the advantages of the academic life is its freedom from the strictures of the commercial world. The ivory tower provides a much different environment than the towers of Mammon. The differences notwithstanding, it is not a corollary that the ivory tower should not have windows. Can those windows provide a clear view and allow communications in both directions?

Another factor militating against the commercial- ization of university research is the contradictory imperatives in the reward systems.

Another factor militating against the commercialization of university research is the contradictory imperatives in the reward systems of research and commercial applications of research. Academic success is largely determined by publications; the imperative is to publish insights quickly and to present them to peers to get feedback. However, commercial success often relies on secrecy or patent protection. Once a discovery has been published it is in the public domain and cannot be patented; its commercial potential cannot be limited to the inventor.

Finally, pure research appears inherently inimical to innovation. It is abstract and unfocussed (at least in the sense of payoff); it often takes a very long time to gain initial insights, let alone to develop applications. Significant insights, by their nature, raise more questions than they answer, questions which beg for still more basic research.

What Can Be Done?

How can universities, as individuals and as institutions, increase their capacity to promote technology transfer, in terms of teaching and research and of the use of university expertise to solve problems identified by the business community? There are a number of steps: placing more emphasis (including recognition and rewards) on the ultimate applications and implications of theory and research, developing an entrepreneurial environment in which those applications are more often identified and more readily pursued, providing structures to protect and commercialize intellectual property, and increasing the university's capacity for (and credibility of) applied research.

The first step is to encourage more attention to the applications of our activities, even if those activities themselves do not change. Faculty should be encouraged to step back occasionally from their research and teaching and ask themselves about their work's implications for the real world. By doing so, they may see potential applications and spinoffs from their work which would otherwise be ignored. Even if they have no inclination to pursue these possibilities themselves, once identified they could be drawn to the attention of students or others who would investigate their potential.

One mechanism for drawing attention to possible applications would be a periodic - perhaps annual - audit or inventory of the implications of the theory, techniques, and equipment[2] and facilities being worked on. This might be part of a department's annual report process or of reports to deans. It need not be a public document, although it should be circulated widely to increase the probability of being read by someone who could identify possible commercial applications. Even if the audit or inventory is strictly private, the act of preparing it would provide

205

a different focus which would lead the author to become more conscious of applications.

And what about teaching? Can we not teach, even at the graduate level, by making the links between our theories and the issues confronting our society? Surely even the most abstract concepts can be introduced by making connections, however tentative or speculative, with the real world. This does not make for bad theory but rather for good pedagogy. Students are more likely to understand and investigate theoretical concepts or the techniques developed to examine them if the students can see interesting practical implications as well as the intellectual challenges involved in research. Faculty who do a regular "applications audit" are more likely to present theories in the context of their wider meaning.

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Student learning and research can also be enhanced by writing papers, projects, and theses on applied topics. Again, greater relevance adds interest. At the undergraduate level, this research will usually be initiated by the student or professor but even here there may be community or business organizations which have issues which could be dealt with by properly supervised students. Graduate students may well be able to be part of contract research and their contribution could also satisfy university thesis or dissertation requirements.

Student learning and research can also be enhanced by writing papers, projects, and theses on applied topics.

Such applied projects may well increase job prospects upon graduation or may lead graduates to set up their own businesses to pursue opportunities identified in their research. Some universities have programmes to provide facilities and seed capital to graduates to form such spin-off businesses. Co-op education programmes obviously can have similar results.

Some universities have programmes to provide facilities and seed capital to graduates to form such spin-off businesses.

Another forum to encourage a more practical assessment of activities is to have a sabbatical lecture presenting either the intended research or the actual results of sabbatical leaves. These should be public with faculty presenting their research in terms which would be understandable to intelligent, non-expert members of the public. This would provide an opportunity for colleagues from across campus, as well as the public, to appreciate the research generated within the university. It would also give an incentive to researchers to think of the implications of their work.

Entrepreneurial Environment

It is not clear that we need "new" academics who, having seen the applications of their work, would immediately attempt to commercialize them. Rather, academics need to be more aware of the potential for commercialization, working in an environment which encourages, supports, recognizes, and rewards applied work. The changes necessary are not just with the individual, but at the level of the department, the faculty, and the university.

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Once individuals focus more on the broader applications of their work, they need an environment which encourages them to think of ways of pursuing applications, through their own work or that of students, colleagues, or university agencies. While this will often involve changes in individual attitudes, many more changes - formal and informal - are necessary at the institutional level.

One of the basic requirements is that the university culture recognize and promote applied activities.

One of the basic requirements is that the university culture recognize and promote applied activities. The obvious starting point is that the considerations for promotion and tenure include, in a meaningful way, patents and other measures of relevant

commercial activities such as funding received for applied research.

Departments and faculties must be supportive. New faculty should be encouraged to be conscious of applications in their teaching and research. They should be informed of the importance of protecting their intellectual property - and of ways to do so without restricting their ability to publish. All faculty need to be aware of the dangers of secrecy clauses which may restrict not only their right to publish research results achieved under commercial or government contracts but also their right to subsequent independent extensions of earlier contract-generated results.

Department and faculty support may take many forms. Chairs and deans may include commercial research, patents, and consulting as categories in annual reports. Short term leaves, teaching or administrative release time, and teaching buyouts should be available for faculty members involved in commercial research related to their specialities. Seminars, workshops, and informal discussions facilitate the sharing of ideas and of experiences and the assessment of potential. This is crucial for a supportive environment and for establishing links with others to realize potential synergies. Of course, tenure and promotion committees must give clear credit for applied activities; department and faculty annual reports should give them recognition.

Support for applied work must also come from the senior administration.

Support for applied work must also come from the senior administration. Applied work and results should be recognized and publicly applauded. University publications should feature university employees whose work has had commercial success, both to affirm individual effort and to provide examples and incentives to others. As with teaching, applied work must be

given full weight in the tenure and promotion decisions of senior administrators. This will make it clear that an entrepreneurial environment is consistent with the academic culture.

Institutional Support

Creating an entre-preneurial environment is a necessary, but not a sufficient, condition for effective use of university resources for technology transfer.

Creating an entrepreneurial environment is a necessary, but not a sufficient, condition for effective use of university resources for technology transfer. Mechanisms are needed to facilitate the process, either by assisting the entrepreneurial academic or by performing entrepreneurial activities for researchers who prefer to do the research but not the work to promote or commercialize the research applications. These support functions are normally performed by a university body - often a separately incorporated company - with a variety of possible designations such as the technology transfer, business liaison, or commercialization office. It is the bridge between the research-oriented inventors and the business people who need the fruits of the research. For convenience, we will refer to this body as the TTO - the technology transfer office.[3]

The functions of the TTO span the range of entrepreneurial activities from identifying potential applications to finding a commercial partner and ensuring the legal work is done to protect the interests of the university and its researchers.

Universities can do more than wait for employees to approach their TTO with an idea they think has potential. The project officers of the TTO spend most of their time administering existing contracts but they can also be looking for new ideas as they deal with academics. This will be more successful if project officers are physically located in the particular faculty with which they work. Proximity will increase personal contact and enhance communications, increasing the probability of identifying

potential ideas. It also provides the project officers with a better sense of the interests and capacities of faculty members. Thus, it is easier for the TTO to link businesses with the university expertise which can help them.

Once identified, an idea needs to be supported. This involves a number of activities including expanding the basic research, developing a prototype, and protecting the intellectual property through patents and contracts. Often the TTO will have to fund this initial work since the idea may not be well enough developed to be of interest to a commercial partner. Nonetheless, the TTO will begin to assess the market and to look for commercial partners.

Usually the development work is carried out by the inventor, perhaps assisted by others to take the project in new directions. Indeed, it is conventional wisdom that commercial partners are interested as much in the inventor as in the invention, since s/he may well be crucial to successful development and may be the source of additional inventions in the future. Many TTOs will not take on a project unless the inventor is prepared to commit the considerable time and energy necessary for its development, including working with a commercial partner. Nonetheless, a TTO should be prepared to follow up an idea even if its inventor has no interest in commercialization, preferring to continue to do basic research.

Whatever the extent of the involvement of the inventor in subsequent commercialization, the TTO should see that the inventor receives due protection, recognition, and reward. The basic protection is a patent, to protect the inventor's and university's rights to commercial potential. The patent needs to be taken out expeditiously to enable the researcher to publish the research and get feedback from colleagues as part of the normal

academic research process. If a patent delayed is publication denied, commercialization may be too costly for many academics.

Although it may play no role in basic research, financial return becomes important in commercialization. In many jurisdictions, intellectual property rights are held by the university, as employer. However, to stimulate and reward research, the revenues generated by commercialization are usually shared between the researcher, their faculty, and the university (through its general funds or as part of the revenues of the TTO). The allocation of funds may be a simple 1/3:1/3:1/3 split but some universities have a staged process where the researcher receives a much larger share in the earlier stages; in subsequent stages, the university's share rises. The sharing arrangements should be designed to give individuals, faculties, and the university generally a vested interest in the successful commercialization of university research.

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One of the crucial functions of the TTO is to bridge the gap between academia and the business community. It can seek commercial partners, although often academics know which companies are interested in their work. The TTO prepares or vets contracts or licensing agreements. Where a contract is for research to assist a business, the TTO must ensure that there is a reasonable allocation of intellectual property rights and that the researcher's rights to publish are not restricted unnecessarily, in terms of both content and time. To ensure the credibility of academic research, the TTO must attempt to find the most appropriate expertise on campus and to ensure that contract research is carried out in a timely fashion.

To ensure the credibility of academic research, the TTO must attempt to find the most appropriate expertise on campus and to ensure that contract research is carried out in a timely fashion.

Beyond the formal and legal contacts with business, the TTO should stimulate informal contacts between researchers and businesses to facilitate potential partnerships. The TTO needs to

help both sides to understand the interests and concerns of the other. Personal contacts in informal settings are useful to establish the confidence levels necessary for formal links. Effectively administered contracts give both sides confidence in the other - and in the TTO itself. All of this is important to promote effective continuing relations.

Should a university expect its TTO to run a commercial research/industrial park? While it is generally accepted that many research-oriented businesses and industries need access to universities (cf. Bania et al., 1992), it is not clear that this is a two-way street. R&D parks may be "cathedrals in the desert" (Hansen 1992:103) with virtually no local linkages. Proximity to an industrial park may provide very few links for academics. Thus, a university-related industrial park is likely to be useful for technology transfer primarily in providing space and facilities for development work without taking up university laboratory space. Given the random nature of invention, it is unlikely that an industrial park would be populated by businesses which could be identified, in advance, as having a high probability of linkage, in either direction, with the university.

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Conclusion

Effective technology transfer by universities can enhance both their teaching and research functions. It may also generate revenue flows, but this cannot be the primary reason for an increasing focus on the application of university activities. In some cases it has had spectacular success in stimulating the local economy - both Cambridge and Gothenburg are examples of significant spin-offs. For instance, "At Chalmers University at Gothenburg, over 450 companies have spun out directly from courses and programs within the University. The employment base of those companies is almost as big as Volvo in

Effective technology transfer by universities can enhance both their teaching and research functions.

Gothenburg" (Cole, 1995: 35) The University of Cambridge has spun off more than 1,000 companies, with an average of 27 employees, in the last two decades (Hickman, 1995: 34). In other areas, such as Perth, Australia, results are less dramatic but still important in the local economy, with considerable potential for growth.

Technology transfer does not come automatically or easily to the university.

Technology transfer does not come automatically or easily to the university. Nonetheless, it is important that universities develop a more applied approach to their research and teaching. This will make them more effective at these traditional functions and a still greater resource to the economy.

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Endnotes

1.   A part of my sabbatical research, while a visiting scholar at Monash University in 1995-96, was to examine the activities of technology transfer offices at several universities in Australia and New Zealand. This paper reflects many of the issues raised in the course of that analysis.

2.   Note that the discussion is in terms of faculty members, but commercial applications may also develop out of the work of other university employees, such as technicians who may adapt equipment or develop new equipment.

3.   The TTO is usually a separate entity from the university research office which is concerned with administering grants for basic research. These grants are usually provided by public funding agencies. The research is normally pure research with no obvious or immediate commercial application or goals.

10

SELF-EMPLOYMENT AND MICRO ENTERPRISE DEVELOPMENT

by Douglas Myers

The Individuals

Jennifer Isnor worked on the assembly line in the electronics industry for over a decade. *I got tired of working for others*, she says. *Companies make big promises and then don't keep them.* She worked as crew on her husband's fishing boat for a couple of years and, at the same time, began to help out a few seniors - on a part-time basis - who needed assistance with errands and household chores. An adjustment program for the downturn in the fisheries gave her the opportunity to develop that side-line into a full-time occupation.

Jenny's Homecare provides light housekeeping and cooking as well as banking, shopping and mail services for seniors and working couples in the Hackett's Cove area of the South Shore. Her 10 or 11 clients - about half seniors and half working couples - now keep her busy on a full-time, five-days-a week. She is not interested, at this stage, in expanding her business beyond its current scale because that would involve hiring and managing others. She has only advertised twice; word-of-mouth maintains her clientele.

You have to like people and housekeeping and, be willing to work hard. You have to be very honest - people trust you. Now the government wants older people to stay in their homes as long as possible - and the seniors themselves want to keep their independence and are willing and able to pay for my help. I contribute to the family income and I make twice what I could make at a check-out counter. Most of all, I love having a job I want to get up and go to every morning.

When he was laid off, with a bad back, from his job as a licensed auto mechanic, **Irving Harnish** was in his late thirties, with a family to support, some high school education and a welding ticket. He had noticed that the muffler shop where he worked had used portable advertising signs from time to time. He thought that would be a good business to be in.

He has been building and renting signs for a year now. It has not been easy - the bureaucratic complexity of sign by-laws and permits has been daunting - but he remains optimistic about the prospects for *Pegasus Signs* and has just received a new contract from a chain of stores. His advice to others thinking about setting up their own business; *Don't give up so easy!*.

<p align="center">★★★</p>

Jeanette Babin had a *bit* of university - *which wasn't for me* - when she started a string of skilled woodworking craft jobs, interspersed with periods of specialist training, 18 years ago. She and a partner had a cabinet making business in the 1970's which did well until housing starts fell off badly. She then worked in furniture restoring and framing jobs.

When I was in partnership before, she says, *I only knew about a piece of the operation, not the whole thing. When I worked for somebody else, I always found there were limits on what I could do or how far I could go. So when I got laid off from my last framing job, I marched into my nearest Unemployment Office and told them I wanted to start my own business.*

Artistic Picture Framing has been in operation for two years in Bedford and is planning to extend its lease.

<p align="center">★★★</p>

Mark Windsor runs a micro enterprise called **DiagnosTECH Technical Services**, which provides technical assistance for computers and communications/network systems. Until three

years ago, when he was laid-off in a company cutback, he had *expected to grow old* at the national news service where he had worked for seven years. Initially, he was *crushed* by this experience - he and his wife had just bought a home - and he found very few jobs available in his field.

At the same time, he began to discover that the same firms that were laying off their technical staff, continued to need support service for their systems on a short-term contract basis. He says he was *lucky* to have had an established network of contacts in his field and a good reputation. He now gets steady work from a couple of large companies and a variety of jobs from other sources.

If a good full-time employment opportunity came along he would consider it, because *the security and the fringe benefits are very nice.* But he doesn't think about it much - *we're in a groove now and don't worry about it anymore.* He has all the work he can handle now and he is confident about his prospects.

<div align="center">***</div>

Gale Acker graduated from Acadia University with a degree in Recreational Management. After five years of working in seniors' homes, however, she was ready for a change. Although she liked her work, there were no opportunities for advancement or development. In what she hoped would be a *step up* she embarked on a series of jobs in the municipal recreation field. Because of funding pressures, however, there were no long-term positions opening up.

As a result of her experience, she began to think about ways to use her knowledge and skills to provide people with convenient and customized services that would deal with all aspects of wellness - their work, their health, their fitness. **Lifestyles Consulting** has been in business for six months. Things are a bit slow over the summer, but there is a waiting list for her First Aid and CPR training in the fall. She is using these initial offerings

as a means to establish the contacts and credibility necessary to introduce broader services for *workplace wellness, active living, leisure in retirement and leadership development.* She is confident about her prospects and looks forward to the day when she will be able to employ contract assistance to carry on the basic program, while she develops further specialized offerings for corporate and individual clients.

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These five individuals have several things in common.

These five individuals have several things in common. They all put very long hours and a great deal of energy into their micro enterprises. They all have 'war stories' about their difficulties, mistakes and triumphs. They all exude confidence and optimism about their prospects. And they all regard the training and support they received at Henson College as a crucial component of their transition from working for someone else - or not working at all - to self employed micro enterprise.

Self Employment and Micro Enterprise; What are they?

Ten years ago, these were not common terms in economic development discussions, nor was this regarded as a significant sector of the labour market. Of course, there were people who ran corner stores or who worked at 'odd jobs' or did building and maintenance work 'on the side'. But *enterprise,* surely, was something that the 'captains of industry' or big-time 'entrepreneurs' did.

Ninety per cent of the rest of us grew up in the expectation of working for someone else in a firm or a plant or an institution. That was what we were trained to do; that was what we did. 'Enterprise' was what was required to find a job, not to make one.

By the mid-1980's, however, it was becoming clear that a process of basic economic and political change was having a

profound impact on these conventional employment patterns and social attitudes. In the past, Dalhousie's Henson College of Public Affairs and Continuing Education - and its predecessor, the Institute of Public Affairs - had pioneered efforts to address community development problems, improve labour- management relations and provide training and development support for middle and senior private and public sector managers.

Yet these were the very sectors that were coming under such severe pressure, as the result of forces with which we are now all too familiar - global competition, technology, resource depletion, downsizing and restructuring. How, in these new circumstances, could the College make a relevant and effective contribution?

It was during the course of a study project, in 1987-88, that we began to 'discover' European examples of something that looked both innovative and relevant to current economic and labour market trends. These examples included training and support programs to assist immigrant Asian women in London, England, to establish small home-based enterprises in food services and textiles. Similar programs were assisting Finnish farm families to diversify into crafts, tourism and specialist services in order to continue to survive on the land.

These were not the sort of groups generally regarded as 'entrepreneurial'. Yet the enterprises that resulted seemed viable and sustainable.

These were not the sort of groups generally regarded as 'entrepreneurial'. Yet the enterprises that resulted seemed viable and sustainable. They reduced social assistance dependence, created employment, and sometimes led to even bigger things. What was especially intriguing about these initiatives was not only that they seemed relevant to current economic and social problems. They also seemed to connect back to some deep roots of community-based, self-reliant and independent initiative in the Maritimes and Newfoundland.

The hunch that the College might be on the right track was soon strengthened by the further 'discovery' that there was a good deal of activity in this field much closer to home. Through a program called Innovations Canada, the federal government was funding

219

a number of self employment projects across the country. The YMCA had established Youth Enterprise Centres - including several in this region - to provide training and service support to help young people create their own jobs.

Similarly, an organization in Ontario called the Self Employment Development Initiative (SEDI) was conducting pilot training projects with displaced factory workers, women and First Nations' communities. SEDI was also working closely with Martin Connell's Calmeadow Foundation which was supporting initiatives to establish peer-lending mechanisms to provide capital for micro enterprise development.[1]

The Policy and Funding Struggle

Despite the diversity, creativity and apparent success of these initiatives, the mainstream political and public policy response was first to ignore and then to dismiss indications that self employment/micro enterprise could be a significant part of a strategy for economic, social and labour market renewal. It simply was not big and glitzy enough to count as economic development. It did not fit the existing bureaucratic compartments where things were **either** *economic development* **or** *social development,* not **both**!

Similarly, many private sector leaders doubted that 'these people' could really be independent micro enterprisers or that, in aggregate, those engaged in self employment activity would ever constitute a significant economic sector. For their part, union representatives and community development workers feared that the labour movement and/or the community would be undermined by such 'individualistic' initiatives.

In the context of regional development efforts, conventional strategy still focussed largely on major capital investments and the attraction of industry from elsewhere. Serious interest in human resource investment and grassroots community economic development were not yet on the agenda.

In the context of regional development efforts, conventional strategy still focussed largely on major capital investments and the attraction of industry from elsewhere. Serious interest in human resource investment and grassroots community economic development were not yet on the agenda.[2]

Nonetheless, it seemed to Henson College that self employment and micro enterprise development was precisely the sort of innovative development challenge in which it should engage. The saga upon which we then embarked, over the next seven years, illuminated much about the economic and social transformation that was occurring and the complexities of public policy and institutional response. We also learned a great deal about the emerging human resource development and training agenda.

The highlights of this saga included the following;

- participating in the planning and presentation of the first major North American conference on the subject - *The Self Employment Strategy: Building the New Economy* - in Toronto in October 1989.

- participating, through 1990-91, on an advisory task force to the Minister of Employment and Immigration (now HRDC) to design the Self Employment Assistance Program (SEA) which altered many of the previous unemployment insurance regulatory and funding arrangements so as to encourage - rather than prohibit - self employment and micro enterprise development for those on Unemployment Insurance and Social Assistance.

- organizing, in cooperation with SEDI and the extension departments of the University College of Cape Breton and Saint Francis Xavier University, the first major conference on the subject in this region - *Self-Employment: A Viable Option in Atlantic Canada* - in November 1990.

- chairing the research committee of a SEDI national study - funded by the **Levi Strauss Corporation** - and producing the regional report of the self employment initiatives in the **Sheet Harbour** area of Nova Scotia's **Eastern Shore** (see *The Spirit of Enterprise: a*

221

Review of Five Canadian Self Employment Programs, December 1993).

In addition to these highlights, there were an apparently endless series of meeting, briefings and lobbying activities through the period. The experience demonstrated all the false starts, set-backs, untidiness and frustrations that serious, long-term development work always involves, especially during a period of turbulent change.

In this region, for example, the ground was well prepared for a major initiative in self employment/micro enterprise by 1991. The Community Futures Program (the successor to Innovations Canada) had demonstrated the viability of self employment and micro enterprise in many small towns and rural settings in the Atlantic region. It had also established the elements of a basic training and support service infrastructure. Moreover, demand for such an alternative was growing in urban centres as resource decline, industrial closures and work force downsizing continued.

Ironically, it was not until the plunge of the Ontario economy - in particular in Metro Toronto - in the early 1990's, that the federal and provincial governments were prompted to extend support for self employment development to major urban areas. In 1993, when those programs were finally extended to the Atlantic region, Henson College was selected to design and deliver self employment and micro enterprise training in Halifax. When the program was announced, there were over **600** inquiries for the **21** places available.

The Current State of Play

The College had already established an outstanding record in providing entrepreneurial training and support for women reentering the workforce and for other groups encountering barriers to participation in the labour market. It was this base upon which the new *Self Employment Assistance (SEA) Program* was established. Since 1993, more than 100

participants have participated in this program and have established micro enterprises.

A bulletin board at the College proudly displays their business cards in such fields as education, professional and business services, clothing, housing, automotive and food services. The names of these businesses convey the creativity and energy involved: *Computertots* (computer fun, and training, for young children), *Theatrelink* (personal development through drama and play), *Virtual Homes* (using computer systems for planning, modelling and managing), *Legalese Discovery Services* (court reporting expertise), *Breathe Easy Duct Services,* the *Guitar Doctor*, and *The Nurse Next Door*.

Nor are these simply off-the-top-of-the-head business notions; rather, each is a carefully thought-through venture, the product of an intensive market research and detailed business planning process. Applicants to the program are carefully interviewed about their experience, interests, commitment and the feasibility of their business idea. The program emphasizes the value of mixing small group seminar instruction and discussion, practical work experience, and individual initiative and study. A great deal of attention is given to each participant through frequent one-on-one contact, mentoring support through an established business advisor, close monitoring and assessment, and 'aftercare' and 'incubation' support.[3]

The program emphasizes the value of mixing small group seminar instruction and discussion, practical work experience, and individual initiative and study.

In addition to the SEA Program, the *Entrepreneurial Practice Group* at the College has also designed and carried out pilot projects providing micro enterprise training and support services for individuals and communities directly affected by the downturn of the fishery, for individuals from the African Canadian community in Nova Scotia and for persons with disabilities.

The growing involvement of the College in this field, reflects a more general trend as well. From a scattering of spontaneous responses to increasing levels of unemployment in many of the

223

industrialized nations, through a variety of 'pilot' innovations and tests in the early 1980s, there are now more than 500 self employment/micro enterprise programs across Canada, upwards of 800 in the US and a similar scale of activity in Europe and Australia. They provide a route into active and independent participation in the economy for a small but significant proportion of those previously excluded or displaced by structural change.

As a second major conference in Toronto in 1995 demonstrated, an impressive network of practitioners and development advocates has emerged.[4] Standards for 'best practice' have been established.

It is also evident that more policy makers now see this sector as significant.

It is also evident that more policy makers now see this sector as significant and are beginning to foster its further development. In the U.S. a number of states have taken major initiatives in the field and recent legislation is encouraging more to do so.[5] Despite major shifts in the Canadian unemployment insurance and social support systems, self employment remains one of the top priorities for Human Resources Development Canada. Provinces, too, are increasingly identifying self employment and micro enterprise development as a key component of the community economic development strategies.

Lending institutions are becoming more interested in finding ways to provide more effective access to capital for micro enterprises.

Lending institutions are becoming more interested in finding ways to provide more effective access to capital for micro enterprises. The labour movement is less hostile and in some cases has begun to explore ways to provide services and benefits to self employed workers. Community development workers are increasingly recognizing the positive benefits of individual community-based enterprises to the vitality and viability of those communities.

A particularly striking example of such benefits was provided by Jeanette Arsenault, one of the micro entrepreneurs who participated in the 1990 Halifax conference on self employment. Ms. Arsenault and her business partner, Don Maxfield, had just

established Cavendish Figurines in Summerside, Prince Edward Island. Summerside was going through a very difficult period due to the closure of the military base there. Jeanette commented on the fact that many members of her community supported her initiative and saw it as a sign of hope for the future.

Despite the fact that they had no previous experience in this field, their company has had remarkable success in manufacturing fine figurines - in the $200-$300 price range - of the *Anne of Green Gables* characters. Cavendish Figurines has increased its sales five-fold, employs eight artisans at peak production periods, and earns 40% of its sales through export, including a significant market in Japan.[6] The positive impact of other micro enterprises on community morale and self confidence was also noted in the Levis Strauss study.

Finally, there are signs that the economic and more general research community has begun to take a more serious interest in this economic sector.

Finally, there are signs that the economic and more general research community has begun to take a more serious interest in this economic sector. This is in part due to the fact that more traditional patterns are simply not working and in part due to the promising results of the programs that have been put in place to date. Media attention and general public awareness of this sector and its signficance are also growing.[7]

A forthcoming major research report from HRDC, for example, is based on a survey of almost 1500 participants who had completed the *Self Employment Assistance (SEA) Program*. It found that 83% of the business created by the program were still in operation after about a year. The authors predict - on the basis of similar Irish and French studies - that the sustainability rate will drop off to between 60 and 50% after the second and third years of operation - although an American study found that 80% of micro enterprises were still in business after **five** years.

At any rate, these results compare very favourably with other employment creation and economic development approaches. The HRDC study also found that these micro enterprises created an average of 1.5 jobs each. Altogether, they generated about $188

million in net economic benefit to the communities in which they were located. As a result, the authors conclude, *SEA begins to produce a positive return to society 6 to 10 months after program completion.*[8]

Contrary to conventional belief, the fact that many of those who have become self employed micro enterprisers did so from economic necessity rather than from choice, seems to have little or no effect on their performance or sustainability. A recent British study of about 2000 small and medium firms concluded that *the notion that firms established by unemployed founders are likely to be inferior is a myth.* It went on to speculate that *as there is no significant difference in performance between the two groups of surviving firms this suggests that there may additionally be no difference in death rates.*[9]

Concerns have also been raised about the so-called *deadweight* factor; that is, about those who would have established micro enterprises, even had there been no financial or training support available. Why, the question is asked, should these individuals be assisted to what they would have done anyway.

This factor, however, seems more than outweighed by the number of self-employed who report that, without the initial financial support they received through unemployment insurance, they could never have taken the risk. Furthermore, they add, without the training and support services provided, they would never have mustered the self-confidence required. *I would have established this business anyway*, was one typical comment, *but the program made a huge difference in it being viable much more quickly - I knew very little about accounting, business planning or marketing.* Compared with the array of direct and indirect 'incentives' commonly available to conventional forms of business start-ups - not to mention the 'drag' of conventional welfare costs - these provisions certainly seem legitimate forms of economic and social investment.

Contrary to conventional belief, the fact that many of those who have become self employed micro enterprisers did so from economic necessity rather than from choice, seems to have little or no effect on their performance or sustainability.

Self employment and micro enterprise was initially targeted at those deemed least likely to succeed at it - that is, the unemployed and the traditionally excluded. It was seen by many as a long-shot, last-resort option used only because of a wider economic and social crisis.

The poor are limited by opportunity rather than by capacity.

It has, however, demonstrated that, in the words of one American proponent, Robert Friedman, *the poor are limited by opportunity rather than by capacity.*[10] Moreover, its implications go well beyond this group.

Future Prospects

It has been a long and winding trail that has led Henson College from its initial search for innovative approaches to the growing economic and social crises in the mid 1980s, to its current role as a major provider of self employment and micro enterprise training and support services. It is, however, precisely the sort of exploration that a college of public affairs and continuing education at a leading university ought to be engaged upon. The College has gained a rich diversity of experience and expertise. It has developed an array of high-quality training and support services. It has also played an effective leadership and advocacy role. This, in turn, has made Dalhousie a leading university centre in an economic development approach of growing significance in the region and beyond.

The point is not, of course, that self employment/micro enterprise is a panacea for the economic and social challenges we face (only the critics, never the advocates of this approach, ever claimed that it was being represented as such). But it was certainly the case that, in our previous economic circumstances, self employment/ micro enterprise was an ignored and undervalued form of economic participation.

Nor is the concept new. Sixty years ago the self employed constituted a quarter of the Canadian labour force; it was still a fifth in the early 1950s. By 1971, however, that proportion had

declined to a tenth of the labour force, a level where it remained for the next two decades. Over the past five years, however, self employment has risen from 10% to involve about 15% of the labour market, with women's participation growing at a faster rate than men's. In fact, according to a recent report from the Canadian Labour Congress, self employment has accounted for 75% of new jobs created since 1991.[11]

As we can see in the mix of Henson SEA participants, no longer are those most interested in self employment and micro enterprise work confined to 'blue collar' workers who have been displaced by economic transition or those from groups that have never had full participation in the labour market. More and more women have seen this as a viable option for them. Now, as job loss from downsizing and restructuring continues apace, a growing number of 'white collar' professionals - male and female - are turning to such possibilities.

Indeed, as we begin to confront the implications of a transformation that some claim will mean *the end of work,* new forms of independent, self sufficient, individual and cooperative micro enterprise ventures seem increasingly viable options. In an important sense, these harken back to regional traditions of the small independent resource producers, merchants and crafts-people of the Maritime and Newfoundland past. At the same time, the technological, corporate and global setting in which we now live will provide a quite different set of opportunities and barriers. At any rate, far from being a marginal, fringe activity or merely a transition tool for economic change, self employment and micro enterprise development seem likely to be matters of sustained mainstream interest and attention over the next decade.

For Henson College the immediate challenge will be to build on its experience of public policy formulation and its base of program and service practice in at least three ways. First, the role of self employment/micro enterprise in the context of a community economic development strategy needs to be articulated and fostered more explicitly than at present. As

responsibility for human resource development and labour market training shifts from the federal to the provincial levels it will be important that what has been learned about and achieved in this sector not be lost in the shuffle.

Secondly, there are in Nova Scotia and across the country a host of individuals, agencies and institutions now providing self employment/micro enterprise programs and services. It is important that the 'best practices' progress highlighted by the 1995 Toronto conference be maintained and strengthened.

One way to achieve this is by provision for professional development and designation opportunities for these practitioners. The College is already involved in exploring such possibilities and should make an active and effective contribution to these capacity-building initiatives.

Most business schools have traditionally devoted more attention to the training of managers for large firms and organizations than to fostering entrepreneurship. This is beginning to change.

Finally, there are obvious implications for linkages to the rest of the university both in terms of programs and research.[12] Most business schools have traditionally devoted more attention to the training of managers for large firms and organizations than to fostering entrepreneurship. This is beginning to change.

The Dalhousie School of Business Administration, for example, is now exploring opportunities to establish a greater emphasis on entrepreneurship and micro enterprise in the School's undergraduate and graduate curriculum. It is consulting with the College in this effort and, together, the two units are also looking for ways to develop training and services to foster micro enterprise activity and expertise more widely.[13]

The College is also engaged in discussions with other faculties about the need to provide undergraduates and graduates in all areas with some of the skills and ways of thinking involved in self employment/micro enterprise. It is true, that the latest figures continue to indicate that university graduates have much better job prospects than those with other types of education and training.

At the same time, it seems certain that an increasing proportion of graduates will be faced with the necessity of creating, rather than finding an already made job for themselves. While their general educational background should stand them in good stead in the 'new economy', there are enterprise skills and approaches that will significantly enhance their options and prospects.

Conclusion

The Henson College saga in the self employment/micro enterprise field is not so very different from the experience that the College has had in many other areas. University continuing education is a barometer of social and economic change because those changes are reflected directly in the behaviour of the adults who come for personal and professional development. The self employment/micro enterprise field has been particularly significant in this regard because it illustrates, so vividly, the turbulence of the economic and social transition this region and its communities are experiencing.

The self employment/micro enterprise case also illuminates key issues at every level. It has revealed the limitations of much conventional thinking about economic and social development.

The self employment/micro enterprise case also illuminates key issues at every level. It has revealed the limitations of much conventional thinking about economic and social development. It has provided a dramatic case study of the political, bureaucratic and jurisdictional hazards of policy change. Finally, it has taught us a great deal - in practical and concrete terms - about what individuals need to make the transition to and survive in self employment.

Over the past decade the College has experienced major shifts in its programming array and in how it responds to community and learner needs. It has had to restructure its own operations and to forge new relationships both outside and inside the University. Nor can Dalhousie itself hope to stand aside from the turbulence that is affecting individuals, their communities and the region as a whole. Indeed, the extent to which the University can engage in new ways with the community and the region to fashion innovative and effective responses to this turbulence, will do

much to determine the role and influence of the institution in the future.

Endnotes

1. Since its inception in 1986, SEDI has developed a broad national network of interested players - including Henson College - and has provided leadership in the field across Canada.

2. The Atlantic Canada Opportunities Agency was itself a prime example of such reservations. Although it had financed the study that sparked interest of the College in self employment/micro enterprise, it never could bring itself to fund a major initiative that would have made Nova Scotia a national leader in this regard. ACOA's recent initiatives in fostering entrepreneurship education and training are welcome - if belated - moves in the right direction.

3. The work of the Self Employment Assistance core program team of Marlene Sampson (Director of the Entrepreneurial Practice Group), Andrew Cochrane and Dawne Walker and Chris Cameron - together with the network of instructors and business advisors they have developed - is very highly regarded by both participants and funders. Participants comment about the practical relevance of the program, the gaps it fills and the new skills and approaches it develops. *I could call anytime and get advice and support,* was a typical remark. *Getting into the program gave me a big boost just when I needed it,* was another. *The program was absolutely 200% helpful!*

4. *Self Employment in Canada: Best Policies, Best Practices* (Toronto, April 1995). This conference was co-sponsored by SEDI and Calmeadow. Their executive directors - Peter Nares and Mary Coyle - are recognized leaders in this field nationally and internationally and have worked closely with the College.

5. The Department of Labour and the Organization of Economic Cooperation and Development sponsored a symposium in Washington, in June 1995, on *Self Employment Programs for the Unemployed.* Secretary Robert Reich pointed to the value of encouraging and supporting self-confidence, self-sufficiency, and diverse forms of economic participation through self employment/micro enterprise.

6. See *Self Employment: A Viable Option,* 1990 and *Atlantic Lifestyle Business* (Vol. 7, # 3, 1996, p.35).

7. In its July 1996 issue, the *Report on Business Magazine* ran a major piece on employment and used SEDI and the SEA Program as an example of an effective and innovative approach (see Margaret Cannon, *The New World Economy: Working Capital*). Similarly the cover story of *Canadian Business* in August focussed on self employment/micro enterprise using the Henson program and one of its graduates as an example (see Katrina Onstad, *No job? No problem!*)

8. See Frank Graves & Benoit Gauthier, *Evaluation of the Self-Employment Assistance Program, HRDC, 1996.*

9. See M. Kitson, *Seedcorn or Chaff? Unemployment and Small Firm Performance,* Centre for Business Research, University of Cambridge, February 1995.

10. See *Self Employment in Canada: Best Policies, Best Practices: Identifying Challenges for the Future,* (Toronto, April 1995, p. 79). An indication of the continuing intensity of the policy and research debate in this field, is provided by *the firestorm of reaction* to an article in the April 1996 issue of Inc. magazine, *Why Loans Won't Save the Poor,* by Timothy Bates and Lisa Servon (see *Inc. Online, June 24, 1996)*

11. Shawn, McCarthy, *Canadians turning to self-employment* (**Toronto Star**, August 3, 1996) The CLC, with some justification, sees this phenomenon more as evidence of the overall economy's failure to create jobs, rather than as a reflection of the strength and vitality of the self employment/micro enterprise sector. Even in a more buoyant labour market, however, self employment seems likely to remain a viable option for many and a key component of economic renewal.

12. There are many issues related to self employment/micro enterprise worthy of research from the perspective of economics, public policy and the social sciences. The *Canadian Employment Research Forum (CERF)* has devoted a good deal of attention to this field. International conferences such as the one sponsored by the World Bank and OECD on *SMEs: Employment, Innovation and Growth* (Washington, June 1995), are devoting increasing attention to the micro enterprise field, as well as the more conventional categories of small and medium sized firms.

13. The School of Business Administration has also worked closely with Henson College experience in developing an innovative, distance-delivered MBA program in financial services for the Canadian banking industry.

11

THE EUROPEAN MARKET GROUP

by Donald J. Patton and Janet Lord

Background

Academic partnering is a cooperative effort among Dalhousie University, sponsoring companies and government to promote international marketing of Nova Scotia goods and services. Company participants are teamed with MBA students from Dalhousie University. The students perform initial market research and establish foreign business contacts. Subsequently, students travel abroad with a company representative to assist in the further exploration of the foreign market. In its present form, the project is called the **European Business Program**.

Objectives

The objectives of the European Business Program are:

- to assist Nova Scotia businesses to expand existing or develop new international markets for their products through the development of intelligence on specific opportunities and requirements;

- to provide graduate business students with practical "hands on" experience in marketing Nova Scotian products and services internationally; and

- to gain an appreciation of the current economic, political and social developments in Europe and to understand better how Canadian companies can strengthen their competitive advantage in the European Union.

Benefits

The Program provides immediate benefits to firms in terms of market evaluation and potential sales. This will result in a better trained workforce with experience in international marketing, and businesses better prepared for international trade.

The Program serves the longer term purpose of linking the business and academic communities more closely. The Dalhousie Academic Partnering Project is a four-way win situation—for students, businesses, universities, and government. Benefits flow from business and government to the students and the university, and back into the community to complete the cycle.

Classroom theories, concepts and techniques often come to life only when the business situation involves an actual company facing real decisions.

For the MBA students, the practical, hands-on experience that is an inherent part of the European Business Mission is an important part of their business education while at Dalhousie University. Classroom theories, concepts and techniques often come to life only when the business situation involves an actual company facing real decisions, in this case international marketing decisions. The widely-recognized benefits of co-operative education reflects this, combining as it does classroom study with actual business experience. Co-operative education is a required part of the Dalhousie undergraduate business education.

The Nova Scotia business community benefits as well.

The Nova Scotia business community benefits as well. The graduate business students provide cooperating companies with valuable information on foreign markets at very low cost. The full process starts with the students visiting their companies to learn about their products, services and operations. At the beginning, the flow of information and benefits is largely from the company to the student, but before long the student begins to make a net contribution to the company and its international business activities.

The Scenario

The Program best serves those Nova Scotia companies which have little or no experience in Europe and are export-ready or close-to-ready. In the fall and winter, ten companies are recruited to be partners in the European Business Program. A team consisting of one member from Dalhousie University, one from the International Trade Centre and one from the Province of Nova Scotia determines companies to be approached. From the list of interested companies, participant companies are selected on the basis of their export readiness and experience, and their objectives for the Program. Each company must commit to working cooperatively with an MBA student on the development of the company's strategic international marketing plan, and must contribute funds in support of the student's efforts on its behalf.

Over the years, the format of the Program has changed in response to requests from the major funding agency and from businesses. In the first several years, each of five companies was represented by a team of two students who travelled in Europe on the company's behalf; the company representative did not travel. Since 1994, each of ten companies has been represented by one student, with the student and company representative travelling together.

Each December, MBA students who have completed their first term are eligible to apply for the Program. Each candidate is interviewed by a team of two international business faculty (including the faculty advisor for the project) and one person from the International Trade Centre. The students are informed of the decision in early January and assigned to work with a particular company. From February through April, each student assists his or her company in refining the goals and objectives for the overseas Program, and develops a market visit plan in consultation with the Dalhousie Faculty Advisor and the identified International Trade Centre staff member.

In the weeks leading up to the mission itself the student "consultants" work with government documents and databases as well as published sources to provide their companies with information on the foreign markets to be visited. In addition to the actual research for companies, a lot of preparation time is involved, including formal classes, guest speakers, and background reports on countries and companies to be visited in Europe. The Dalhousie business professor leading the mission also contributes his or her knowledge and experience to this process, which also benefits the companies.

In May the students travel for a total of two weeks and are accompanied for one of those weeks by a faculty advisor. The academic portion of the students' travel is organized for that week by the University and consists of business and embassy briefings and presentations by CEOs or senior staff of Canadian or other multinational companies and their partners in Europe. These have included McCain Foods, Moore-Lithorex, Coopers & Lybrand, Bank of Nova Scotia, Northern Telecom, CAE Electronics, British Aerospace, KLM, IBM and Volvo.

The company representatives travel for the other week with their student. Each company's visit plan is organized by the student and may include, as appropriate, potential customers, agents, distributors and strategic partners, and other activities such as attending appropriate trade shows. The company representatives are also invited to join the group for the "academic" week at their own expense.

The business mission is planned by the students themselves working closely with the Canadian trade commissioners in the various countries.

The business mission is planned by the students themselves working closely with the Canadian trade commissioners in the various countries. The Centre for International Business Studies provides all of the travel arrangements and required logistical support. This time-consuming task is lifted from the shoulders of the companies on the mission.

On the mission itself the MBA students help the company representatives by attending meetings with them and providing

another set of eyes and ears. In some cases they meet on their own with host country business people, government officials and industry representatives, effectively doubling the company's reach in the foreign market concerned.

The tangible result of the student's work is a report to company executives delivered in a formal boardroom setting shortly after their return.

The tangible result of the student's work is a report to company executives delivered in a formal boardroom setting shortly after their return. The report identifies market opportunities and makes recommendations to the company as to how best to penetrate these markets. Much additional information of value is included in the often lengthy appendices to the report. The faculty advisor comments on the first drafts of these reports and vets each of the final documents.

Financing and Support

The costs of the Program are airfares and intracontinental transportation, hotels, per diem, project coordinator salary, local briefings, receptions, group ground transportation, and student travel to Nova Scotia companies. Under the present plan, companies receive a rebate equal to one-half of their airfare, inter-city train travel and hotel costs.

Dalhousie University has responsibility for the financial management of this project. Funding is provided by the Atlantic Canada Opportunities Agency (ACOA), the participating companies, Dalhousie University's Centre for International Business Studies, and the students themselves. Industry Canada's International Trade Centre in Halifax selects the participating Nova Scotia companies and also provides valuable support with overseas contacts, both in business and government.

Participating Companies

The predominant view is that the value received was worth many times the actual out-of-pocket cost to the company.

Almost without exception the over 80 companies (see Table 1) that have participated on the European Business Programs have been enthusiastic about the value to them of working with the students and the university. The experience has provided

239

significant business value and working closely with the students has been enjoyable as well. The predominant view is that the value received was worth many times the actual out-of-pocket cost to the company.

Government too is enthusiastic about the European Business Program. Encouraging and supporting Atlantic Canadian companies in foreign markets is one of the main roles of the regional offices of the Department of Foreign Affairs and of Industry Canada. Working through the university and the MBA students allows additional resources – people and money – to be applied to supporting Canada's foreign trade efforts.

There are other important but less measurable community benefits that result from the mission. One of these is the prospect of employment for new graduates. While it may be difficult to be specific about the number of success stories in this area, it is highly likely that some have found rewarding employment in the region. In a related vein it seems probable that the publicity surrounding the European Business Program has made other companies aware of the international business skills and capabilities of Dalhousie MBA graduates and has increased the likelihood of their finding employment in the region.

In all ten Academic Partnering Projects, the market research undertaken has focused on various countries in Europe (see Table 2). This geographic emphasis builds on Dalhousie University's existing expertise and capabilities. More than 80 Nova Scotia companies have participated in the Dalhousie program over the years, and many have been successful in finding the customers, distributors or strategic partners they were determined to identify. The following comments illustrate companies' views on the Program:

> "... *[the students] have opened doors for us in Europe"*
>   *"We'd do it again gladly!"*
> "... *rare opportunity I might have missed otherwise."*
> *"Well planned and organized."*

"We were delighted with the work... it accelerated our European marketing activity by many months."
"The students were keen, innovative and thorough..."
"...a marriage of university training and real world experience that is essential and long overdue."

TABLE 1

Some of the companies that have participated:

ABCO Industries Limited, Lunenburg
Acadian Seaplants Ltd., Dartmouth
Applied Microelectronics Institute, Halifax
Ariel Geomatics Inc., Dartmouth
Ballastronix inc., Amherst
Bay Industrial & Mine Tech, Inc., Halifax
Chem Tech Services, Head of Chezzetcook
Correpro Atlantic, Head of Chezzetcook
Dominion Diving International, Dartmouth
Earth Information Technologies, Halifax
Eastern Lumber Kilns, Sydney
Enco-Tec Environmental Technology Systems Ltd.
Global Marine Products, Dartmouth
Inland Technologies Inc.
Iotek Ltd., Halifax
J. J. MacKay Limited, New Glasgow
MacLaren Plansearch Ltd., Halifax
Martec Limited, Halifax
Minas Seed Co-op, Canning
Poly Cello, Amherst
Provident Development Inc., Dartmouth
Reinforced Plastic Systems Inc., Mahone Bay
Saint John Naval Systems, Halifax
Seimac Limited, Dartmouth
Sirius Solutions Ltd., Dartmouth
Survival Systems Ltd., Dartmouth
Trihedral Engineering, Bedford
Vemco Limited
Vertex Systems Limited, Bedford
Wm. Murphy Fisheries Ltd, Arcadia

TABLE 2
Destinations
1990   UK, France, Belgium, Netherlands, Germany
1991   UK, Belgium, Netherlands, Germany
1992   UK, France, Belgium, Netherlands, Germany
1992   Trade Mission to Birmingham, UK
1993   Software Mission to Ireland
1993   Scotland, Netherlands, Belgium, Denmark
1994   UK & CeBIT Trade Fair, Hannover, Germany
1994   Northern Italy & Southern France
1995   Southern Germany, Hungary, Czech Republic
1996   UK, France, Netherlands, Belgium, Germany

Other Outreach Initiatives

International Business Internships

Useful lessons have been learned and inter-organizational friendships formed to the benefit of the larger community.

The "Strategic Alliance" that has evolved to run the European Business Program has brought the university into close working relationships with government and business. Each of the alliance partners now better understands the others' goals, policies and ways of operating and doing business. Useful lessons have been learned and interorganizational friendships formed to the benefit of the larger community. Good working relationships already established meant that when in the government wished to start the internship program an acceptable proposal could be quickly put together and the program launched without delay.

The International Business Internship Program introduced in the summer of 1994 is a modified reincarnation of an earlier program that ran from 1976 through the early 1980s. That program saw almost 50 Dalhousie MBA students spend the summer months working in Canadian embassies, high commissions and consulates in the United States and abroad.

Concept

Under this initiative, MBA students from five Atlantic Canadian universities are selected for a three-month summer internship at a Canadian embassy, high commission or consulate. It began in 1994 with four students, expanded to six in 1995 and included ten MBAs in 1996.

Objectives

The objectives of the program are:

- To prepare more Atlantic Canadians for doing business internationally.

- To expose Atlantic Canadian students to international trade.

- To perform market research for a specific product or sector group in identified target areas.

Each student is assigned a portfolio of four Atlantic Canadian companies, for which they conduct research into markets, competition, government regulations and opportunities.

Like its predecessor, the current International Business Internship Program provides ten MBA students from Atlantic Canada with the opportunity to work for the summer months in Canadian embassies, high commissions and consulates around the world. The program is run by Dalhousie's Centre for International Business Studies but this time includes students from each of the other Atlantic Canadian universities with MBA programs, namely Saint Mary's University, University of New Brunswick, Memorial University of Newfoundland and Université de Moncton.

Before leaving for his or her post, each student intern visits and becomes familiar with a set of Atlantic Canadian companies

identified for the intern by Industry Canada and others in the relevant province. When established at their posts abroad, the student interns investigate market opportunities for their client firms, reporting back to them regularly. They often assist with a company representative's visit to the market, where appropriate, and can aid in identifying potential representatives and joint venture partners.

While overseas, the interns also prepare a comprehensive and timely report on foreign market opportunities and requirements in a business sector of interest to Atlantic Canadian companies in their respective areas. Following their return to Canada interns submit these reports to ACOA for distribution by the International Trade Centres in the Atlantic Region to companies in the relevant sector. In 1996 these sectors include: information technology, forest products, agrifood, seed potatoes, seafood, multimedia, environmental services, ship repair, consumer products and international financial institutions. Interns use the rest of their time abroad to assist the post as required.

In the summer of 1996 interns are serving at Canadian diplomatic posts in Washington DC, Boston, Chicago, Los Angeles, London, Hong Kong, Manila, Jakarta, Port of Spain and Sao Paulo.

Overall Conclusion

Academic Partnering harnesses student energy, skills, and motivation, together with the capabilities of faculty members and the resources of government to help business in the Atlantic Region.

Academic Partnering harnesses student energy, skills, and motivation, together with the capabilities of faculty members and the resources of government to help business in the Atlantic Region.

The Region benefits greatly from this innovative partnership. First, companies receive high-quality international market intelligence and assistance at a very low cost. Second, Academic Partnering provides an unparalleled opportunity to work with and evaluate individuals who upon graduation might well make future company employees. Third, indirect but important regional

benefits include the intangible lift that entrepreneurs and managers receive from the infectious enthusiasm that students usually bring to the meeting of "real world" business challenges. Business also has the opportunity to gain an appreciation of the contribution that government officials and the university can make to their future international business success.

Government benefits through closer links with the community and at the university, learning and teaching are enriched.

Government benefits through closer links with the community and at the university, learning and teaching are enriched. For all, horizons are expanded when teams work to solve problems and seize opportunities.

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PART V

WORKING WITH THE COMMUNITY

PART V

WORKING WITH THE COMMUNITY

The papers in Part V focus on university services which extend into the communities of Atlantic Canada. They might not ordinarily be considered 'developmental', in a conventional economic way, yet in practice they are important underpinnings to the sustained viability of the communities. Such services make the region attractive to investors and tourists, re-inforce the health and cultural amenities of the region and provide important support in the sharing of the benefits of rapidly changing information technology.

It must be emphasized that these are but a sample: legal aid services, many additional medical and social work services, many aspects of adult education, the theatre and public policy consulting services are not included. A second edition will no doubt broaden the range. Yet, as these stand, some sense of the variety of contributions does clearly emerge.

The first of these chapters, by William Birdsall and Nancy Minard, emphasises the role of the university libraries in support of life-long learning. The proactive role that is increasingly played by the libraries, whereby research resources are combined with a commitment to promote information seeking skills, is of significant value to many facets of regional development. Many business groups, consultants, professional organizations, the scientific community and community action groups draw heavily upon the Dalhousie library network. Over the past few years, the Dalhousie libraries/Novanet system has 'become a critical regional node in the rapidly expanding world of electronic resources and networking.'

The next paper, by Walter Kemp, illustrates the manner Dalhousie's music programmes have both responded to changing philosophies and, in an extraordinary way (given very limited financial resources), made their mark on the schools, local community and wider realms of professional music. The intangible benefits to individuals and the spirit and culture of the communities should not be downplayed - simply because they cannot readily be measured in terms of gross provincial product or by the yardsticks employed in conventional social impact studies.

The paper by Donald Langille and Richard Beazley 'serves to demonstrate how universities and faculty can become involved in, contribute to, and learn from, community and interdisciplinary approaches to understanding, and doing something about, community health problems'.

The theme conveniently connects with the next paper, by Ruth Martin-Misener, on outpost nursing. This remarkable programme has made an enormous contribution to communities in Northern Canada and pioneered nursing training that integrates cross-cultural awareness with modern medical practices. It is clearly experience which could be further extended in the Canadian context and also internationally.

Fred Wien's chapter on working with Mi'kmaq communities indicates not only significant contributions made from a university base, but - of major importance - elements of the major challenges still to be collectively worked on. The Mi'kmaq peoples have, for a complex of reasons, encountered racist and other forms of intolerance that are far from adequately being responded to by many of the institutions in this region. Both Bernard Smith, long-time Treasurer of the City of Halifax, in a provocative background working-paper to this series (in which he challenged the university community to change their 'mind sets' and be more responsive to community needs), and Fred Wien indicate far more needs both to be understood and then tackled in a genuinely participatory manner. Smith further suggested that the metropolitan area of Halifax provides an excellent 'test-base' for imaginative and cooperative joint university community actions to help minority and disadvantaged groups. These might be shared more widely.

The final paper in this part, by Robert Bérard, usefully identifies four areas that he believes should be addressed by universities in their education programmes: private schools, home schooling, adult and continuing education, and educational foundations and policy studies. His paper is a reminder of the continuity and relevance of the debates generated by Dalhousie University's controversial founding president, Thomas McCulloch, after he had established Pictou Academy in the nineteenth century and served as a lightening-rod for re-assessments of alternative educational systems in the region. (This point is drawn from an unpublished paper by Anne Wood, which also served as a useful background document to the seminar series that preceded this book).

12

DALHOUSIE UNIVERSITY LIBRARIES: REGIONAL NETWORKS

by William F. Birdsall and Nancy Minard

Introduction

While the Libraries are geared to play a part in regional development -- and already do contribute in many ways to the growth of the region -- the potential contribution they can make as part of a University commitment to regional development had not been considered until recently.

If a "centre" to Dalhousie University were to be located, the University Libraries would be it. Serving students and researchers in virtually every discipline, the Libraries provide instructional services, make available rich research materials, act as regional resources for professionals in many fields, and promote and record the cultural pulse of the region. However, while the Libraries are geared to play a part in regional development -- and already do contribute in many ways to the growth of the region -- the potential contribution they can make as part of a University commitment to regional development had not been considered until recently.

Libraries and Development

The experience of libraries with development fall into several categories. At the local level, contributions made by public libraries in the economic, social and cultural development of towns and cities have been well documented -- public libraries support adult education, provide information services to local businesses, and promote local authors and history. Similarly, at

Acknowledgments

251

the national level, a body of research exists surrounding such matters as the role of the national library, national resource sharing schemes, the development of a national information infrastructure (NII), and the formulation of national information policy (NIP). Probably most relevant to the question of regional development is a growing body of writings on the role of libraries and information in national development, especially with regard to Africa and Latin America. At the international or cross-national level, research examines such issues as technology transfer, the international flow of information, the role and activities of such international bodies as UNESCO, the development of a Global Information Infrastructure (GII), and comparative librarianship.

There is a gap in the attention given to libraries and regional development.

Clearly, one can find considerable information concerning the role of libraries and development at the local, national and international levels. However, there is a gap in the attention given to libraries and *regional* development. Except for libraries in the private sector, the majority of libraries -- whether public, school, special, or university -- are public agencies funded and mandated to serve a specific geographic jurisdiction. Thus, the national library must be concerned with a national strategy while a public library's primary clientele will be its local municipality. Regional development is rarely considered.

If little consideration is given to regional development, there is also a gap with regard to the role of university libraries. This is not surprising. The goals and priorities of a university library will naturally conform with those of its parent institution, whose services to the university community will be its highest priority. Most universities have the broad objectives of teaching, research, and public service. The extent to which a specific university gives priority to public service, and it is usually the lowest priority, will determine the extent to which the library will reach out beyond the border of the university.

Reaching Out

More than any other type of library, university libraries are well positioned to contribute to regional development.

Universities do reach out to the community in many ways, as do their libraries, though this outreach is rarely extended within a policy framework aimed at regional development. Yet, perhaps more than any other type of library, university libraries are well positioned to contribute to regional development. University libraries have established links and gained much experience working at the local, regional, and national levels.

The Dalhousie University Libraries provide a vivid example of such links.

The Dalhousie University Libraries provide a vivid example of such links. At the local level, the Libraries are a founding member of Novanet, a consortium of Nova Scotia university libraries. Provincially, the Libraries are a member of the Council of Nova Scotia University Libraries (CONSUL). At the regional level, the Libraries participate in the Association of Atlantic Universities Libraries Council (AAULC). Nationally, the Libraries are a member of the Canadian Association of Research Libraries (CARL). CARL, which maintains links with national associations of research libraries in North America and abroad, includes the 27 universities offering a range of Ph.D. programs as well as the National Library of Canada and the Canada Institute for Scientific and Technical Information. All of these organizations give a high priority to exploring and implementing means of increasing resource sharing and promoting the development of electronic networks.

Operating within the aims and objectives of the University, the Libraries serve a variety of clientele, both internal and external. By nature interdisciplinary, the Dalhousie Libraries are a valuable resource for those both within and outside of the institution. Indeed, the Dalhousie University Libraries are in a unique position to encourage greater economic, educational and cultural growth in the region in the coming century.

The Libraries as a Learning Environment

The Association of Universities and Colleges of Canada (AUCC) in its brief, *Building on Our Strengths: Canada's Universities and the Renewal of the National System of Innovation*, observes:

> Economic activity is increasingly based on knowledge and sustained by new partnerships. Indeed, the distinguishing feature of the new economy is that knowledge has become a factor of production. Lifelong learning and continuous innovation are now seen as critical factors in achieving environmentally sustainable economic growth and social development. Intellectual dynamism and a willingness to explore new solutions for old problems are the defining characteristics of institutions and countries which have successfully adapted to the ways of the new economy.[1]

Without the most current information, decision-making and development are hindered. But information alone cannot aid problem-solving.

Development is often conceived in such economic terms alone. But as J. A. Boon and others stress, this is too narrow a conceptualization. There is religious, economic, political, educational and intellectual, cultural and community, social, human, and scientific and technological development.[2] Further, it is recognized that information, knowledge, creative decision-making and quality of life are essential to development, and that libraries support these intellectual and cultural endeavours. Without the most current information, decision-making and development are hindered. But information alone cannot aid problem-solving. The Libraries, therefore, provide on-going instruction in the use of information technology, encourage information literacy among students, and provide a general learning environment.

The University Libraries undertake instruction programs to teach library literacy and information self-sufficiency. For example, efforts are made to ensure that library instruction is available to all Dalhousie students. In the Health Sciences, the importance of

this knowledge has long been recognized. Library instruction is incorporated into the curricula in scheduled class time in most of the programs, with over 80% of the students involved at some point in their university career. Seminars for faculty and graduate students on how to access information on the worldwide Internet have been an immediate success. In the Killam Library, orientation sessions are also offered to off-campus groups including the Micmac Learning Centre and Returning to Learning.

The University Libraries strongly endorse the idea that individuals must develop the capacity for and commitment to lifelong learning.

The University Libraries strongly endorse the idea that individuals must develop the capacity for and commitment to lifelong learning, and contend that developing self-sufficiency in information gathering and use is a basic component of lifelong learning. At the local level, the Libraries promote information literacy, research and inquiry. At the regional and national levels, the Libraries are highly regarded for their wealth of resources. This combination of research resources and commitment to promoting information seeking skills can make a significant contribution to regional development initiatives.

The Libraries as a Research Resource

Dalhousie University is recognized as a national research institution. In several research areas it has achieved international recognition. Indeed, it is its role as a comprehensive *research library* that most distinguishes the Dalhousie University Libraries from other university libraries in the region. In support of the extensive range of graduate and professional programs and research conducted at Dalhousie, the Library system has developed in-depth collections of print and electronic research resources and the effective delivery of services in the health sciences, law, social sciences, management, and the arts. Holdings of the Libraries contain 1.4 million print items, over 8,000 current serials, and 80,000 maps, as well as a growing number of computer and network based bibliographic and fulltext databases. For research in the humanities and social sciences, the Libraries maintain major special collections as well as archival

and manuscript collections. In the sciences, unique collections support research not only at Dalhousie but throughout the region. The Dalhousie University Libraries Map Collection is one example of a special resource serving regional needs.

The Map Collection supports the cartographic and geographic information needs of students, faculty and researchers, and those from both the public and private sectors. The largest of its kind in the Maritimes, the Collection maintains a repository of information which is of enormous value to those in community planning and economic development, environmental and land management, transportation, mineral exploration, fisheries and coastal management, and recreation. More than just maps, the services of the Collection include the ability to find data or cartographic resources in other locations, and to assist the library user in contacting other agencies to obtain the information required. Many firms in both the public and private sectors are made more effective through access to data provided by the Collection and its curator.

Cooperation and communication between the Map Collection and other institutions in the region have helped to build strong ties.

Cooperation and communication between the Map Collection and other institutions in the region have helped to build strong ties. In addition, the Map Collection has developed cooperative learning experiences for students in other provinces. A recent workshop at the University of New Brunswick -- where the Internet was used to access maps and geographic data -- will be translated into a series of on-line sessions that can be conducted at any site. Through the membership in the Canadian Association of Research Libraries, Libraries staff are exploring initiatives to develop Geographical Information Systems (GIS) at the local and regional level. By building resources such as the Map Collection and GIS capabilities, the Libraries become a major asset not only to the University but to the region.

The Libraries' Service to the Community

Though the University Libraries have as their primary clientele the students, faculty and staff of Dalhousie University, they continue to provide a vital service to the community at large. Small business companies, consultants, professional organizations, the scientific community, and community action groups make use of the Libraries' reference services and collections, which contain extensive specialist material unavailable elsewhere in the region. By providing much-needed services to these groups, the Libraries help business people to maintain and improve the region's economic base, give community action groups access to the information needed to participate fully in the region's development, and assist the University in fulfilling its mission "to serve Nova Scotia, Atlantic Canada and nationally through activities that integrate research, scholarship, teaching and service" and "to serve ... through institutional contributions ... the life of Atlantic Canada."

The Libraries help business people to maintain and improve the region's economic base.

The W.K. Kellogg Library, for example, has a mandate to serve as the regional resource for practising health professionals throughout the Maritime Provinces. To fulfil this mandate, the Kellogg provides a Regional Reference and Loan Service. Annually, the Kellogg handles hundreds of requests for clinical information or bibliographic searches on a variety of databases and supplies over 10,000 photocopies and loans of material to the staff of small health care units, professional associations, and to individual physicians, dentists, nurses and other health professionals throughout the region. This service provides these professionals with information unavailable in their own communities but necessary for day-to-day clinical care. It also permits them to keep up-to-date with developments in their field.

The Libraries as a Cultural Institution

Canada does not have a rich history of library development. Unlike Great Britain or the United States, whose national libraries trace their origins to the early nineteenth century, the

National Library of Canada was not established until 1946. Nor are there found in Canada long established research libraries such as the New York Public Library. Consequently, most of the research resources of Canada are found in its universities. Manuscript and other records of the intellectual and cultural activity of Nova Scotia and the Atlantic region are kept in the Dalhousie University Libraries. The Libraries also serve as a cultural resource by collecting and making accessible to both the academic community and the public the published intellectual and creative output of the region. In this objective they also make an important contribution to the cultural development of Canada.

While the Libraries' services and collections encompass all the cultural interests of the region, one particular emphasis is devoted to developing strong collections of regional literature, the papers of regional writers and of local cultural organizations.

While the Libraries' services and collections encompass all the cultural interests of the region, one particular emphasis is devoted to developing strong collections of regional literature, the papers of regional writers and of local cultural organizations. In 1990, the Canadian Literary Collections Project (CLCP) was established to provide a focus for the further development, appreciation, and critical review of the Canadian literary collections at Dalhousie. To date, the CLCP has served these goals by promoting the collections, attracting external funding, and inviting the artistic community into the Libraries with its popular public reading series. The CLCP is one example of the Libraries stepping beyond their walls and taking an active part in the cultural life of the region.

The Libraries also collect non-regional writings that educate, broaden and inspire the research and artistic community. The Libraries' holdings include special collections of international stature. The Kipling Collection is one of the finest in the world. Other important holdings include the Francis Bacon Collection, the Sprott Collection of Australian Literature and the Oscar Wilde Collection. These collections serve as important resources for the region's cultural and arts communities.

Resource Sharing and Networking

It has never been possible for any one library to meet all the needs of all of its users. Therefore, for over a century, there have been cooperative efforts to share resources. Today, more than ever, it is impossible for a library to acquire and store locally the material needed by its primary clientele. The expansion of knowledge combined with declining financial resources are forcing libraries to accelerate efforts at sharing resources. These efforts are underway at the local, regional, national, and international levels. Fortunately, advances in information technology facilitate these resource-sharing initiatives through the use of electronic networks.

Much of this activity emerges out of the Dalhousie University Libraries' active participation in various bodies from the local to the national levels. At the local level, the Novanet consortium is a leader in Canada in resource sharing. The holdings of the participating libraries are in a joint online catalogue which makes available a wide range of material to library users and reduces the duplication of titles. Novanet has also established a Committee on Cooperative Collection Development to further promote collection rationalization. The Novanet database is accessed daily worldwide through the Internet. In 1994/95, over 20,000 items were provided through the interlibrary loan system to individuals outside the Dalhousie University community, mostly to persons in the Atlantic region.

Effective resource sharing among libraries requires the development and maintenance of an efficient interlibrary loan service as well as good communication and networking.

While it remains essential to develop a strong local collection, not only to meet the immediate needs of the Libraries' primary clientele but to contribute to the general availability and richness of the nation's library resources, the Dalhousie Libraries must also focus on providing access to information and knowledge regardless of its location. Effective resource sharing among libraries requires the development and maintenance of an efficient interlibrary loan service as well as good communication and networking. The Libraries recognize the necessity to move beyond the boundaries of the campus for access to information.

By doing so, the Libraries become a critical regional node in the rapidly expanding world of electronic resources and networking.

A Final Word

Through their involvement at various levels, the Libraries have established ties with institutions and organizations locally, regionally and nationally.

As demonstrated throughout this paper, the Dalhousie University Libraries are in a unique position to contribute to regional development. The Libraries have the resources at hand actively to serve, and already do so in a variety of ways. Through their involvement at various levels, the Libraries have established ties with institutions and organizations locally, regionally and nationally. The Libraries provide instructional services, assist the region's health care workers, and aid the work of researchers and professionals in many fields. In resource sharing and networking, the Libraries serve as a successful model to other units on campus. By opening its doors, the Dalhousie University Libraries enrich the region and assist in many aspects of its development.

Endnotes

1. Associations of Universities and Colleges of Canada, *Building on Our Strengths: Canada's Universities and the Renewal of the National System of Innovation.* A Brief Submitted to the Secretariat for Science and Technology Review Industry Canada. Ottawa: AUCC, September, 1994, p. 1.

2. J.A. Boon, "Information on Development: Some Reasons for Failures," *The Information Society*, 8, 1992, pp. 231-232.

13

ORPHEUS IN HALIFAX
THE UNIVERSITY MUSIC
DEPARTMENT HARMONIZES WITH ITS
REGION

by Walter H. Kemp

Introduction

One of the more significant changes in the sociology and economics of twentieth-century Western culture was the North American university's assumption of the role of Maecenas to the creative and performing arts. The medieval emperor and king, Pope and archbishop; the Renaissance prince and cardinal; the Enlightenment aristocrat; the post-Napoleonic modern European nationalist state and urban music society: these were replaced after World War II by the university, which sought to sponsor figures of international significance as faculty. The careers of Paul Hindemith at Yale and Arnold Schoenberg at Mills College showed that such a commitment could produce successful results, the institution providing a locus from which the composer and executant could make an effective impact in their own right beyond (and sometimes even without) duties in the theory classroom or teaching studio. In Canada, the University of Toronto's Faculty of Music set the model wherein composers such as Weinzweig, Morawetz, Kenins and Beckwith could function as writers and teachers; notable performers such as Anton Kuerti could be hired as much for their concert-giving as for the number of select students they were to teach; an arts management appointment could develop the outreach of the resident Orford String Quartet; and, in addition to newly expanded orchestral, band, and music education programmes, provision could be made for specialist areas such as an opera school, a graduate musicology library, and Canada's first university electronic music studio. Such an activities' and

academic responsibilities' model served the multiple enterprise' taken upon itself by the music division of the North American university, which in Europe traditionally had been the role of three separate types of institutions: the Conservatory, Academy or Hochschule for performance and theory, the university for academic teaching and research, and the Technology College or College of Education for the preparation of classroom music educators. In Anglophone Canada, the Conservatory came to devote itself primarily to pre-university level training, either administratively integral to the University Faculty (as at McGill when in 1966 the Conservatorium became the Preparatory School, later to co-exist as the Conservatory, and at Mount Allison), cooperatively related in various stages of interdependency (Mount Royal, Regina and Western), or independent, as in the present form of the Royal Conservatory of Toronto and Halifax's Maritime Conservatory.

Northrop Frye once stated that a nation as young as Canada, dating its official nationhood from as recently as 1867, could realize its unique identity only to the measure it merged into contemporary internationalism. So too, a university music division such as Dalhousie's, founded as a degree-granting Department in 1968, naturally would shape itself according to those norms and expectations of a music school current at that time. To the credit of its founder, David Wilson, the Department's original programme focused upon a curriculum designed to prepare quality classroom teachers for the burgeoning musical activities of the Halifax City Schools. Successive growth, particularly under British music educator Peter Fletcher, involved the idioms of choral, vocal and instrumental music, the establishing of an Opera Workshop, the assembling of the largest collections of early music instruments in the Maritimes, and the opening of an Electronic/Experimental Studio which under the direction of Steve Tittle lent itself to various experiences of performance happenings and improvisation. The faculty construct was made similar to other Canadian university music schools of Dalhousie's size: a core of fourteen full-time tenured professionals as composers, theorists and historians, with two

To the credit of its founder, David Wilson, the Department's original programme focused upon a curriculum designed to prepare quality classroom teachers for the burgeoning musical activities of the Halifax City Schools.

voice professors, a piano, a violin, and a guitar professor. Because all other applied skills idioms were to be taught by part time instructors on a per-student basis, employment as an instrumental teacher would not only be subject to market influences; the Instructor was to feel a certain incentive to recruit his or her own potential stake in the Department. When the author arrived as Chair in September 1977, programmes had expanded to include, in addition to the Bachelor of Music Education, and the General BA music major, the four year Honours Bachelor of Music (concentration Performance, History, or Composition); subsequently would be added the Double Honours BA, the 5-year BMusEd/BEd, and the one year BEd Certification in Music.

The regional effectiveness of Dalhousie's music programmes rests as much upon the interaction between the Department and organizations of Province-wide influence ... as it does upon its degree programme teaching.

The impact of such a music department upon its home urban setting is partially measurable and a categorized summary now follows. Regional effectiveness is less definitive in assessment, given that there are three Nova Scotia universities engaged in training musicians, each with a constituency yielding fairly regular applicancy (Acadia: Valley, South Shore etc.; St. Francis-Xavier: Cape Breton, Valley and other locales producing students applying for jazz studies; Dalhousie: Metropolitan Halifax, Bridgewater/Lunenburg) in addition to the out-of-Province student populations. The regional effectiveness of Dalhousie's music programmes rests as much upon the interaction between the Department and organizations of Province-wide influence such as Symphony Nova Scotia, the CBC, the Nova Scotia Music Educator Association, the Nova Scotia Registered Music Teachers Association, the Maritime Association of Teachers of Singing, the Nova Scotia Choral Federation, and the Nova Scotia Youth Orchestra, as it does upon its degree programme teaching. Without such collegial "Town and Gown" interaction, the university's faculty and students are merely navel-players, providing background music for their fellow Lotus Eaters.

* * *

The inter-active nature of the Dalhousie Music Department may be summarized under the following categories:

School Music Education

From its inception, the Dalhousie Department stressed Music Education.

Part of the rationale for founding a community-effective university music department lies in its provision of training in the methods and practice of classroom music. Ideally the university's Classroom Music programme will focus particularly upon the philosophy and techniques of school music espoused by the Board of the Institution's own urban setting. From its inception, the Dalhousie Department stressed Music Education, with an emphasis upon the Kodaly system employed systematically within the Halifax City School Music Program and included as a principal element in the pluralistic mix used in the schools of Dartmouth and Halifax County. This complementary approach between City Board and University has seen employment of City music teachers as Part-Time Instructors in the Bachelor of Music Education Program, thus offering additional salary increment to urban educators. Dialogue engagement between classroom Master Teacher and undergraduate students in the field placement situation has led to a more comfortable awareness of the local classroom setting on the part of the student and to a foreknowledge of that student's potential on the part of the Board's staff. The market success of Dalhousie in sustaining the implementation and reputation of Halifax City's nationally-respected school music programme may be measured by the fact that, as reported in March 1996, just under 50% of the City of Halifax Board music staff of thirty-four had been trained at Dalhousie. With the legislated implementation of the Shapiro Report phasing out of Certification by undergraduate degree by June 1999, and the centralizings of B.Ed. training in music at the Acadia College of Education, it will be the task of those faculty responsible for undergraduate classroom music in Nova Scotia's university music schools to monitor closely (in collaboration with the NS Music Educators Association) their ability to meet the educational needs of the communities whom their particular institution serves.

Community Pre-University Music Training

(i) University-Conservatory Relations

A university music department looks to a healthy local Conservatory of Music, entertaining high standards controlled by systematic evaluation of students by graded examinations, in order to guarantee the quality of its First Year recruitment population. So in turn the health of that Conservatory can be nurtured in part by the marketability of that university's graduates. At the Maritime Conservatory of Music, Dalhousie graduates have been holding, or currently hold, teaching positions in piano (2), voice (3), theory (2), and various orchestral instruments (2). The contribution by Dalhousie faculty as grade examiners, scholarship assessors, and curriculum consultants enhances the Conservatory's offerings, and the Conservatory's use of University's space for community outreach is further incidence of cooperation. The present implementation of shared presentation of guest workshop-recitalists and Province-wide festival style projects for band and orchestral instruments not only cuts costs but doubles the two-tiered recruitment and service effectiveness of these institutions.

(ii) University-Private Teacher Relations

The community private studio music teacher looks to the university for continuing pedagogical enrichment and career inspiration. This is accomplished through workshops sponsored through the Music Department given by visiting artists and Department Faculty, longitudinal upgrading of theory and history methods and resources for the teaching of Conservatory-level examination content through in-service sessions, and specific functions undertaken with the NS Registered Music Teachers Association and the Maritime Association of Teachers of Singing. The presence of a community-minded university music school thus leavens the private teacher's career and their capacity to attract good students. The teacher's professional and economic worth is enhanced, the young student's grounding in theoretical

and technical concepts is improved, and the university potentially acquires an applicant of fine standard and aptitude.

(iii) University-Festival Relations

A civic music festival pulsates more vibrantly where there is a university music school.

A civic music festival pulsates more vibrantly where there is a university music school, with respect to Faculty input into syllabus repertoire, adjudication, and preparation of competitors. In the history of Halifax's Kiwanis Music Festival Rose Bowl for Voice, the winners have been divided roughly equally between students at Acadia and Dalhousie Universities. A survey of these winners, conducted by a student in the author's Music in Canada class, has discovered that some 90% have gone on to a professional career in some aspect of music.

(iv) University-Training Resource Relations

Despite the growing standards of pre-university private sector teaching, the University still finds the preparedness of the average applicant not adequate for university-level studies. This is especially so in theory and ear-training.

Despite the growing standards of pre-university private sector teaching, the University still finds the preparedness of the average applicant not adequate for university-level studies. This is especially so in theory and ear-training. The Province's High Schools are cutting back on classroom music at the Senior level, and this deprives students in many regions of a working knowledge of music's fundamentals. If the school is sufficiently distant from Halifax, there may be no Conservatory standard of teaching musical rudiments or basic aural skills. To compensate for this, the Dalhousie Department of Music's Professor of Composition and Theory Dennis Farrell installed a Foundational Year, offering BA-specific classes in theory and related skills, history and performance as preparatory to the Bachelor of Music to those students whose audition reveals a talent as a performer but a lack of the required tools in theory and aural skills. This has been a success and is being scrutinized by other university schools across Canada, as a possible solution for their own regional deficiencies. The Department currently is addressing the issue of special teaching service within the Black community to solve problems in pre-university music preparation in an appropriate manner. The University must be pragmatic in its

approach to specific and identified community constituency needs, so that it can keep current with its potential for meaningful effectiveness.

* * *

The university music school has a salutory influence upon the careers of those teaching at a pre-university level. In return, the close association between those two stages of a young performer's training tends to increase the incidence of Provincial retention of its undergraduate-age musicians. This, coupled with the costly realities of out-of-Province education, validates the Nova Scotia Government's economic involvement in maintaining quality music schools at its universities.

The University and the Professional Musician

(i) University-Symphony Relations

The Dalhousie Department of Music maintains a close, interdependent relationship with the Province's professional orchestra.

The Dalhousie Department of Music maintains a close, interdependent relationship with the Province's professional orchestra, Symphony Nova Scotia, as it did with the previous form of that organization, the Atlantic Symphony Orchestra.

The availability of supplementary income through part-time employment in a degree-granting university music department can be a plus factor in attracting superior orchestral musicians to the community. However, consultation with the relevant players reveals that the Dalhousie-SNS reality is that, putting together the money earned from teaching the undergraduate student's individual applied skills lessons and the fees received for participation in the Department's Chamber Music Series and orchestral presentations, the average sum gained by the Symphony member serving as Instructor and/or occasional player at Dalhousie is merely about six per cent of his or her gross annual income. During the 1995-96 Season, seventeen (53%) of the thirty two symphony members were professionally engaged by the Dalhousie Department of Music, eight of these as Instructors. Nineteen players (46%) from the forty one musicians

on the Symphony's Extras Roster also were professionally connected with the Department, including one Full Time Professor, three part-time faculty, and two senior students. Of the total 1995-96 list of seventy three players, seven are Alumnae of the Dalhousie Department of Music.

To improve the hiring profile of its best senior students, and to further integrate with the Department of Music the Symphony's parallel mission in training the Province's musical youth, the Department this year inaugurated a Symphony Nova Scotia Apprenticeship, whereby a Fourth Year Student in the Bachelor of Music performance program will be hired by the Symphony for a sequence of apprenticeship services and receive a full university credit, the first academic project of this exact nature in Canada. It is intended that the Symphony seek a Donor, corporate or private, whose name would be included in the designation of the Apprenticeship, thus drawing more community financial assistance for the Symphony's public effectiveness.

The orchestra's season marketing can be repertoire-enhanced, and budget costs lowered, by taking advantage of the university's personnel resources.

The orchestra's season marketing can be repertoire-enhanced, and budget costs lowered, by taking advantage of the university's personnel resources: its faculty, senior students, collaborative visiting artist projects, chamber choir and community choir, the Dalhousie Chorale. Civic instrumental ensembles and churches can rely on the university to provide fine players to join with symphony musicians for community chamber music and choral concerts.

The University's students are enriched by the presence of Symphony Nova Scotia's conductor laureate, Dr. Georg Tintner, who is hired to conduct the Department of Music's orchestra, thus imparting to a new generation of musicians the great Viennese heritage.

In these ways the University/Symphony team supports a reflexive relationship of exposure, experience and employment without which the Region's music industry and its citizens would be the poorer.

(ii) University - General Professional Relations

Members of the Atlantic Federation of Musicians other than Symphony Nova Scotia players who are employed as part-time faculty by the Dalhousie Department of Music report earning between thirty and sixty per cent of their gross annual income from university teaching responsibilities. Normally the faculty member involved is solely responsible for a specific area of practice and a related applied skill; of these, the principal two are saxophone and jazz, organ and church music.

Community churches support the financial needs of appropriately talented undergraduate students by hiring them as organists, choir directors, or choral soloists. University-generated concerts, given in city churches, such as the Dalhousie Chamber Orchestra's "Town and Gown" Series and various choral events, advance the functional image of the church while contributing to its own organ or general maintenance fund. Two Dalhousie alumnae hold church music positions of major significance in Halifax; the Chair of the Department is also Director of Music at The University of Kings College Chapel. As this article is being written, a Halifax United Church has announced the appointment of an alumnus of the Dalhousie BMusEd Programme as its Director of Music, whose return to the city after graduate studies at Westminster Choir College, together with his wife, an alumnus of the BMus Performance Program in voice, exemplifies the cyclical potential for a rhythmic relationship between the University and its community, wherein mutual benefit of an economic, cultural, and religious nature can be gained through the presence of an undergraduate music program of excellence in a specific field. To further raise the standards of city church music, and to secure improved financially rewarding employment for fine quality graduates, the Dalhousie Department of Music has inaugurated a joint degree programme with The Atlantic School of Theology: the Bachelor of Music with a Concentration in Organ, Church Music Option.

To further raise the standards of city church music, and to secure improved financially rewarding employment for fine quality graduates, the Dalhousie Department of Music has inaugurated a joint degree programme with The Atlantic School of Theology.

The University's jazz activities and instruction prepare a student for the professional club, dance and studio scene, and have helped make the region more self-sufficient in the availability of performers for live events, broadcast, recording, theatre and film, in a rapidly blossoming East Coast Music Industry. The energy and leadership of Dalhousie's Jazz Instructor Don Palmer did much to inaugurate and continue what is now the DuMaurier Atlantic Jazz Festival, "Jazz East".

The relative security of a part-time university position and the uniqueness of their potential role within the Department helped two Cape Breton-born musicians in the diverse fields of church music and jazz decide to return to Nova Scotia after their foreign training and initial professional experience Each builds from a local base a national reputation for their own activity as performers and the regional effectiveness of their particular idiom. Both have taken advantage of the Maritimes music industry to issue CD recordings taped, produced and marketed in Atlantic Canada.

(iii) University-Technology Relations and the New Musics

Technology and New Musics have a home at the contemporary university music school.

Technology and New Musics have a home at the contemporary university music school. The Dalhousie Electronic/Experimental Studio has not only been a teaching tool but also a community professional resource for sound recording, film composition, and individual sound experimental work. The warming climate for cooperation among the Province's centres of higher learning, particularly within Metropolitan Halifax, opens the door to fresh and advanced opportunities for the Electroacoustic Studio to enhance sound projects in sister institutions, thus guaranteeing a cultural content and economy that will be truly contemporary.

The University's faculty collaborated with city musicians in the twentieth century repertoire series inNOVAtions in MUSIC, and continue to do so through its successor Upstream. Members of this improvisation ensemble give workshops to university and high school students under Department of Music auspices. Such

The vital presence of a regionally-important CBC staff is relevant in this regard, both for personnel, programming, and recording relationships with the University.

activities develop an outlet for the community's fresh creative minds, which predicates not only an informal and/or curious audience to commercially support such music-making, but also a desire on the part of the musician to make his home within the region and realize his creativity in a financially-viable existence. The vital presence of a regionally-important CBC staff is relevant in this regard, both for personnel, programming, and recording relationships with the University.

The taste shaping of a regional appreciation for the contemporary, as well as its economic feasibility, has been shared with the University not only by the CBC but also by ACCA, the Atlantic Canadian Composers Association. Its genesis was urged by the Dalhousie Department of Music professoriate, and its continuing membership is sustained by members of university music schools across Atlantic Canada, who also provide sites for its live and recorded programmes and hence further employment opportunities for the professional musician.

The University Physical Plant as Regional Resource

The University has a constructive role in its community, providing its physical plant to service the rehearsal and performance requirements of civic and provincial organizations. This allows the Nova Scotian cultural product to grow, and supports financially the delivery capability of the institution as renter or host.

The two performance sites within the Dalhousie Arts Centre (completed 1971) are the 1000-seat Rebecca Cohn Auditorium and the 250-seat Sir James Dunn Theatre. In addition the Theatre Department has a second Studio for public performance, and the Music Department utilizes its audio-visual lecture room and its rehearsal hall for extended community use. The Art Gallery, also in the Centre, houses Noon-Hour Recitals and special events, the latter sometimes connected with Gallery Exhibitions.

The availability of these sites provides incalculable service to the regional arts industry and its educational component. Without these theatres, experience of the dance would be almost impossible. Although the University took the production business out of the Arts Centre's mandate in 1989, its operation as a rental facility continues its unquestionable effectiveness, the presence of the Symphony Nova Scotia Seasons alone justifying the University's maintenance of this auditorium. The enterprising Scotia Festival takes over the building in late May/early June, after the NS High School Drama Festival concludes in the Dunn Theatre. The Neptune Theatre has depended upon the two theatres for mounting its productions during the rebuilding of its own facilities. Performing arts organizations depending in various measures upon the Arts Centre for the realization of their productivity include the Halifax Kiwanis Music Festival, the NS Youth Orchestra, Nova Sinfonia, the NS Gilbert and Sullivan Society and Jazz East. The Department of Music makes its space available to community societies, the Maritime Conservatory, NSRMTA, NSMEA, SNS, NSYO, NS International Tattoo, NS Gilbert and Sullivan Society, and private music teachers for rental purposes. The Department lends its instruments to community organizations or individuals; two recent commercial CD recordings have featured the University's keyboard instruments. Such collaboration assists the Department's revenue, and focuses the activities of a busy cultural life upon the university setting.

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Conclusion

It is possible to describe the manner and effectiveness of the university as an importer and exporter of talent, as a provider and enhancer of community careers in Symphony, Music Education, and other settings, as a stirrer of the Provincial economy. For example, in the June 1992 Nova Scotia Arts and Culture Sector Study, prepared by LORD Cultural Resources Planning and Management Inc., it is reported that the contribution to Nova Scotia's economy in salaries and other direct expenditures made by the Province's arts and culture sector is an estimated $164

million, and that 63% of its Survey respondents had graduated from university. However, as when attempting to describe in words the phenomenon of music itself, any assessment of a university music programme's impact and effectiveness falls short when measuring its acknowledged, appreciated, but intangible benefits to the individual and to that collective spirit which is the culture of the community.

14

THE UNIVERSITY'S ROLE IN COMMUNITY HEALTH AND ACTION RESEARCH: THE AMHERST INITIATIVE FOR HEALTHY ADOLESCENT SEXUALITY

by Donald B. Langille, M.D. and Richard Beazley, Ed.D.

Introduction

In this chapter we describe the involvement of the Departments of Community Health and Epidemiology and the School of Recreation, Physical and Health Education in the Amherst Initiative for Healthy Adolescent Sexuality (AIHAS). This involvement serves to demonstrate how universities and faculty can become involved in, contribute substantially to, and learn from, community development research projects. Such involvement leads to a greater understanding of the community development process itself, and of how community development can be used to impact upon health problems in ways which take advantage of the expertise, knowledge, and existing infrastructure which resides in communities themselves.

The purpose of AIHAS is to use a community development and participatory action research approach to improve the sexual and reproductive health of adolescents living in Amherst, Nova Scotia.

The purpose of AIHAS is to use a community development and participatory action research approach to improve the sexual and reproductive health of adolescents living in Amherst, Nova Scotia. The Initiative began in 1991 when personnel of the Cobequid Health Unit of the Nova Scotia Department of Health and members of the Cumberland County District School Board realized that it would be of benefit to the community if successful efforts were made to improve the sexual health of adolescents in Cumberland County. As data became more accessible to the community, the negative consequences of adolescent sexual activity were recognized by those with a major stake in the well-being of adolescents in Cumberland County, and these organizations and individuals became more concerned with

taking action to lessen them. The most obvious problem was that of teenage pregnancy, but as stakeholders became more aware of the potential for sexually transmitted infections to become a major health issue for young people, this aspect of adolescent health became of more concern.

The Initiative is constantly evolving, has broadened its community base and numbers of partners from academia and government, and is currently implementing and evaluating community based programs and services that have been defined as required to impact positively the reproductive health of adolescents. Linked to the Initiative through their ongoing interests in adolescent sexual health, the researchers contribute through helping the community to identify the relative merits of various approaches to improving this area of adolescent health, and through assistance with the evaluation of the Initiative's components and the health related outcomes associated with them.

Community Development and Research

Community development is a process through which individual members of a community act to gain control over factors which impact on their own lives and health, as well as upon their community as a whole.

Community development is a process through which individual members of a community act to gain control over factors which impact on their own lives and health, as well as upon their community as a whole. By achieving equal access to participation in collective decisions about their needs, and in the development and implementation of strategies which utilize their collective power to meet those needs, communities are empowered to resolve, using their own resources and infrastructure, those issues which face them. (Minister's Action Committee on Health Care Reform, 1994).

The community development process is well suited to directions being taken by Nova Scotia in its process of health care reform (Nova Scotia Provincial Health Council, 1992a), and the development of partnerships between communities and academics is a viable method for helping to achieve the majority of the Health Goals for Nova Scotia identified by the Nova Scotia

Provincial Health Council. Similarly, the Council's recommendation that the Nova Scotia Department of Health encourage and participate in the development of plans with a major emphasis on preventive initiatives, including the needs of specific groups at risk, such as children and youth, implies a need for such partnering (Nova Scotia Provincial Health Council, 1992). In addition, the Nova Scotia *Blueprint for Health System Reform* recommends placing greater emphasis on prevention, community care, local control of health services, and the use of multidisciplinary approaches, driven by the health needs of the community (Minister's Action Committee on Health Care Reform, 1994). The involvement of academia can be important to enable and facilitate these processes at the community level.

A challenge to researchers analyzing and evaluating such approaches is that, while clear and succinct research questions must be formulated, involvement of the community in the research process will necessitate reiterations of development and adaptation in formulating solutions to community concerns.

A challenge to researchers analyzing and evaluating such approaches is that, while clear and succinct research questions must be formulated, involvement of the community in the research process will necessitate reiterations of development and adaptation in formulating solutions to community concerns. Research interventions must be developed in ways which continuously reflect the perspectives of the community involved in such study. In this context, investigators must develop and communicate realistic understandings of their roles, and the limitations imposed on them and their efforts by such a research orientation. Communities have the right to define their own problems, while academics have a responsibility to assist in identifying and doing research upon health problems for the communities with whom they are involved (White, 1991). Each must negotiate in good faith with the other so that the interests of both can be represented in the process of addressing the community's health concerns and problems (Labonte, 1993). The role of universities in making original contributions to the theory and knowledge of how such community-based health initiatives may be most effectively carried out has been demonstrated by such projects as the cardiovascular prevention initiatives carried out in North Karelia (Puska, 1985) and in a number of communities near Stanford, California (Farquhar, 1977).

Participatory Action Research is a means for researchers to join with communities in taking action for social change, with locally determined and controlled action being both the cause and consequence of inquiry.

The links between community development and research have been articulated for several decades in the context of community in the United States and Great Britain (Lees and Smith, 1975). This relationship is best defined under the rubric of Participatory Action Research, which combines research, education and action to address social problems (Hall, 1994). Participatory Action Research is a means for researchers to join with communities in taking action for social change, with locally determined and controlled action being both the cause and consequence of inquiry (Maquire 1987). In this process, education, the creation of knowledge, and taking action based on that knowledge are simultaneous processes, and interventions are defined and redefined as the needs of the community are better understood by the community and the researchers (Gaventa, 1988). The process becomes one of constant reiteration and refinement of approaches to intervention, within the context of the research questions and objectives, and evaluation methods agreed upon by all partners in the research effort. The Amherst Initiative for Health Adolescent Sexuality serves as an example of such action research in Nova Scotia.

Cumberland County is a largely rural area in northern Nova Scotia. Its population is about 34,000, nearly 10,000 of whom reside in Amherst, the County seat. The demographics of Cumberland County, including gender, age distribution, educational levels and employment are comparable to those of the rest of rural Nova Scotia (Canada, 1992). Most employment occurs within the manufacturing, construction, retail services and government services sectors. The 2510 adolescents between the ages of 15 to 19 years who are resident in Cumberland County attend seven high schools, located in the towns of Amherst, Springhill, Oxford, Parrsboro, Advocate, River Hebert and Pugwash.

Pregnancy occurs in Cumberland County teenagers at rates comparable to the provincial average for women aged 15 to 19 years. In 1994, the pregnancy rate for this age group in Northern Region, which includes Cumberland Country, was 68/1000

(Nova Scotia Department of Health, 1994). Adolescent pregnancy is most often unintended, may result in low birth weight infants and preterm delivery, and has an associated higher infant mortality rate (Health and Welfare Canada,1989; Zabin, 1990). Each teen delivery which occurs in Nova Scotia is estimated to cost taxpayers approximately $36,000, including health care and social services costs (Cape Breton Teen Pregnancy Working Group, 1994), and sixty-nine per cent of unwed mothers receive social assistance benefits (Nova Scotia Department of Community Services, 1991). In 1994, 93 unwed mothers under the age of 24 years received social assistance benefits in Cumberland County (personal communication, Liz MacNaughton, Nova Scotia Department of Family and Childrens' Services).

The most commonly reported sexually transmitted disease (STD) in Canada is infection with *Chlamydia trachomatis*. In 1992 the reported provincial rate for *C. trachomatis* infection for the age group 15 to 19 years was 15/1000 for females and 2/1000 for males. Rates for Cumberland County were 12/1000 for females and 1/1000 for males in that year (Nova Scotia Department of Health, 1994). With the small numbers of reported cases, these rates are unstable, but it also should be remembered that many cases of C. *trachomatis* infection are not reported (LeBlanc, 1992), and that there is probably an under detection of such infection in Nova Scotia due to testing practices which are inadequate in searching for cases in the younger age groups (Langille, 1993). STDs are costly, and have been demonstrated to be associated causally with the development of pelvic inflammatory disease, with its sequelae of infertility and ectopic pregnancy (Noble, 1990; Chow, 1987). The sexual behaviours which are related to the occurrence of common STDs such as C. *trachomatis* infection, including multiple sexual partners and unprotected intercourse, are also those which are associated with transmission of HIV infection. Nineteen per cent of AIDS cases reported in Canada to March, 1994 occurred in individuals aged 20-29 years (Health Canada, 1994). The median time period from infection with HIV to the development of AIDS is known to

be ten years. This long latency period is an indication that many of these individuals probably became infected during adolescence (Center for Population Options, 1989), and an indication that for effective prevention of HIV, interventions targeted at this age group are essential.

Concern over, and a wish to positively impact upon, the above health issues led, in 1989, to the development of a partnership consisting of interested groups and individuals from Cumberland County, several departments of the Provincial Governmental, and Dalhousie University. Initially, contact was made between the Nova Scotia Department of Health, the Cumberland County District School Board, and Cumberland County Family Planning, followed by involvement of the Department of Community Health and Epidemiology and the School of Recreation, Physical and Health Education at Dalhousie. As these initial partners came to agree on the need to act on the issues of adolescent reproductive health and sexuality, further partnerships were pursued and developed. Table 1 indicates the initial membership of this interest group.

Table 1

Initial Partners in the Development of AIHAS

(1) Cobequid Health Unit, Nova Scotia Department of Health
(2) Cumberland County Family Planning
(3) Cumberland District School Board
(4) Department of Community Health and Epidemiology, Dalhousie University
(5) School of Recreation, Health and Physical Education, Dalhousie University
(6) Nova Scotia Department of Community Services

The initial decision taken by this group was to recognize that the solutions to these very difficult health and social problems could not be decided by a mere consensus of "expert" opinion, and that in order for progress to be made, a sound first step would be to assess Cumberland County adolescents' sexual behaviours, and to develop an understanding of their use of currently available services, and what services they felt would be useful in contributing to their reproductive health. The group forecast that, following this assessment, and its analysis and interpretation, dissemination of the knowledge and understanding gathered would occur, and that the period of dissemination would be used to expand and enhance local interest and involvement in the issues, so that appropriate action could be taken.

Sexual Behaviours of Cumberland County Adolescents and Their Needs for Sexuality Education and Clinical Services

Essential to this process was the involvement of the principals of the schools where the instrument was to be applied.

Plans for a survey of the needs of Cumberland County adolescents were begun in the summer of 1989. It was determined that the most feasible way of gathering such information was through a school-based survey, though the limitations of such an approach to determining the needs of youth not in school were also recognized by the researcher. Funding was obtained through the National Health Research and Development Program (NHRDP 6603-1386-RH), and questionnaire development began, with key stakeholders represented at all stages. Essential to this process was the involvement of the principals of the schools where the instrument was to be applied. Regular meetings with this group, and their facilitation by the Superintendent of the Cumberland District School Board, were felt to have contributed greatly to the acceptability of the final survey instrument. This acceptance translated into parental and general community support, a high rate of student participation, and the gathering of data which were considered to be of high quality. The instrument was validated for content by experts in the field of adolescent reproductive

health and sexuality, and was pretested using classes of grade 9 and 12 students in another school district in Nova Scotia. Adolescents aged 13 to 19 years attending high school in Cumberland County were asked to complete the self-administered questionnaire. The questionnaire asked about student characteristics, sexual behaviour, experience with STDs and pregnancy, and sources and utility of information about reproductive health, including sexual behaviours and the use of available community resources and services for the prevention of pregnancy and sexually transmitted diseases. Teachers administered the questionnaire during regularly scheduled class time. Sufficient space was allowed between students' desks to prevent observation of responses by other students, and questions were designed not to be skipped so that, from a distance, students' responses could not be detected. Confidentiality of responses was maintained throughout the study.

Students participating numbered 1239 [593 males (48%), 646 females (52%)].

Students participating numbered 1239 [593 males (48%), 646 females (52%)]. All seven high schools in the Cumberland county school system participated, with an overall participation rate of 61 % (range 40-74% in individual schools). Four hundred and ninety-eight respondents (40%) were aged 13 to 15 years, 567 (46%) 16 to 17, and 174 (14%) 18 to 19. Seven hundred and sixty-nine students (62%) lived in towns, 294 (24%) lived in country areas, and 176 (14%) in villages.

Sexual Behaviours of Cumberland County Students

Results of the survey were reported by age group and gender. Overall, 55% of students of both genders reported at least one lifetime sexual experience of vaginal or anal intercourse. Forty per cent of those 13 to 15 years were sexually experienced, compared with 60% of those 16 to 17, and 82% of those 18 to 19 (p<0.001). Fifty-two per cent of females and 50% of males reported at least one such sexual experience in the year prior to the survey. Thirty-six per cent of those 13 to 15 years reported having had sexual intercourse in the past year, compared to 56% of those 16 to 17 and 75% of those 18 to 19 (p<0.001). Twenty-

six percent of those 13 to 15, 47% of those 16 to 17 and 61% of those 18 to 19 had sexual intercourse in the 2 months before the survey (p<0.001).

Tables 2 and 3 indicate the numbers of partners sexually active students had for vaginal sex in the year prior to the survey. Thirty-six per cent of sexually active females and 44% of males had more than one partner (p=0.056). A statistically insignificant rise in the proportion having more than one partner is seen with increasing age group for both genders, with the exception of females aged 16 to 17.

Table 2

Number of Partners for Vaginal Intercourse in Past Year

by Age Group
Females
Number of Partners (%)

	1	2	3	4	5	6 or >	Total
Age Group							
13-15	59(59)	22(22)	9(9)	4(4)	1(1)	5(5)	100
16-17	119(69)	29(17)	8(5)	7(4)	5(3)	4(2)	172
18-19	30(57)	10(19)	5(9)	1(2)	1(2)	6(11)	53
Total (%)	208(64)	61(19)	22(7)	12(4)	7(2)	15(5)	325

Table 3

Number of Partners for Vaginal Intercourse in Past Year
by Age Group
Males
Number of Partners (%)

	1	2	3	4	5	6 or>	Total
Age Group							
13-15	44(64)	12(17)	7(10)	3(4)	1(1)	2(3)	69
16-17	75(55)	32(23)	13(10)	5(4)	3(2)	9(7)	137
18-19	40(53)	12(16)	14(18)	1(1)	3(4)	6(8)	76
Total (%)	159(56)	56(20)	34(12)	9(3)	7(2)	17(6)	282

Table 4 shows condom use by age group for sexually active students reporting vaginal intercourse only. Overall, 55% of students reported condom use more than just some of the time for vaginal intercourse; 35% always used condoms. Younger students reported more frequent condom use, but this was not statistically significant.

Table 4

Frequency of Condom Use by Students Having Only Vaginal Sex
by Age Group

	AGE GROUP			
	13-15	16-17	18-19	Total
CONDOM USE(%)				
NEVER	21(16)	41(16)	24(24)	86(18)
SOMETIMES	34(26)	67(26)	31(31)	132(27)
MOST TIMES	22(17)	61(24)	17(17)	100(20)
ALWAYS	54(41)	91(35)	29(29)	174(35)
	131(100)	260(100)	101(100)	492 (100)

Effectiveness of Sources of Information About Pregnancy and STDs

We asked students to rate the information about pregnancy and STDs that they received from various sources, both in the community, and through the media generally, as "not helpful", "somewhat helpful", and "very helpful". Tables 5 and 6 indicate the numbers and percentages of students who rated the helpfulness of the information they had received, using these categories. The absolute numbers allow the efficiency of use of the sources to be compared, while the per cent columns indicate the degree of helpfulness the students associated with such use.

Students indicated that the schools's Family Studies program, print materials, and television and radio were most helpful to them as sources of information on preventing pregnancy and STDs. Least helpful sources included public health nurses, family doctors, and the schools's Personal Development and Relationships program.

Table 5

Numbers of Students Who Used Various Sources of Information About Preventing Pregnancy and Their Perceived Helpfulness (n=1239)

SOURCE	Number Using	Somewhat Helpful (%)	Very Helpful (%)
Mother	883	51	8
Father	518	54	13
Family Studies	611	62	15
Friend	897	50	13
PDR	1048	44	7
Guidance Counsellor	112	52	17
Television/Radio	1024	63	13
Family Doctor	376	38	10
Print Media	885	61	13
Family Planning	176	55	10
Public Health Nurse	210	53	9
Teacher	600	59	9

Table 6

Numbers of Students Who Used Various Sources of
Information About Preventing STDs and their Perceived
Helpfulness (n=1239)

SOURCE	Number Using	Somewhat Helpful (%)	Very Helpful (%)
Mother	680	52	5
Father	364	54	7
Family Studies	462	61	9
Friend	762	56	10
PDR	1009	38	5
Guidance Counsellor	96	52	10
Television/Radio	960	61	9
Family Doctor	318	38	6
Print Media	817	63	9
Family Planning	165	52	9
Public Health Nurse	207	47	7
Teacher	625	58	8

Most Needed Sources of Information and Services

Students were asked to indicate their views about which sources
of information and services for preventing pregnancy and STDs
were most needed by young people in Cumberland County. The
three sources of information seen as a need by the highest
proportions of students were school-based, and included
specialist counsellors at school (20%), increased numbers of
school programs (21%) and improved school programs (19%).
The need for better informed parents was expressed by 14% of
those responding. When asked which of five services could most
help young people prevent pregnancy and STDs, most (52%)
favoured condom machines in schools, followed by a teen health
centre in or near the school (35%).

Dissemination of Survey Results and Community Activation

Results of the student survey were distributed to the community of Cumberland County through a series of town hall meetings in the Fall of 1993. In all, Dalhousie researchers took part in seven open meetings with the individual communities served by the seven schools which had participated in the survey. As well, these meetings involved the Superintendent of Schools for the Cumberland District School Board, principals, and members of the District School Board. Invitations to attend were extended to parents through their children, and to the community generally using the local media. The collaborative nature of the relationship between the University and the community groups trying to motivate action for change in the area of adolescent sexuality was made clear at each of these meetings, and the welcoming of other groups and individuals into the process was also a prominent feature. Findings were presented by the researchers and discussed with attendees, including young people and their parents, who were asked to indicate their views as to where the solutions to these health problems resided. Media attendance was consistent; favourable reviews and articles appeared both in print and electronic media. This participation and indication of genuine interest was considered essential to moving from the information gathering and community mobilization stage to interventions and research based in true partnership between the university researchers and the community.

The collaborative nature of the relationship between the University and the community groups trying to motivate action for change in the area of adolescent sexuality was made clear at each of these meetings.

At this point the researchers were aware that the majority of students in Cumberland County were sexually active, and were very often not engaging in safe sexual practices. It was also clear that students were not using available services very often, and where they were using them, did not find these services very helpful. While anxious to proceed to the action phase, the researchers decided at this point to allow the community to reflect on the issues over the course of the Winter of 1993-94. It was their feeling that to put forward too strongly their own views about solutions to the many issues related to adolescent

At this point the researchers were aware that the majority of students in Cumberland County were sexually active, and were very often not engaging in safe sexual practices.

reproductive health and sexuality would diminish community ownership of any subsequent process aimed at developing a response to the issues identified. The researchers were also aware of the fact that when behaviour and lifestyle are the basis of health issues, efforts to positively impact them are most effective where multiple sectors are involved (Milio, 1986), and that broadly-based coalitions of community groups have been shown to be most useful in health promotional efforts targeted at preventing adolescent pregnancy and STDs (Fielding and Williams, 1991; Johnson, 1988; Morris, 1993). Comprehensive approaches to health promotion encourage individuals to adopt healthy personal behaviours through attempting to modify a multiplicity of aspects of the social environment so as to facilitate such adoption (Milio, 1986; Brown, 1991).

Such community development models involve education and skill development for change in the context of a social milieu which facilitates health-related behavioural choice.

Such community development models involve education and skill development for change in the context of a social milieu which facilitates health-related behavioural choice (Susser, 1992). The success of such community development depends on the involvement of community members in the identification and resolution of problems, and as will be seen, in the identification of research objectives and methodologies where inquiry into the nature of such development and measurement of its impact plays a role in the process. Essential to the process and the success of its strategies are active participation by community members, maximum reliance on their own initiative and the resources and infrastructure available within the community (Steckler, 1981; United Nations, 1972). In the area of sexual health, this will require education about relationships and behaviour, and the provision of clinical and other services which are accessible, affordable, and provided in facilitating and confidential environments.

The researchers were equally cognizant of the need for the community to reach its own conclusions about how to proceed next.

Though convinced of the merits of a broadly based community approach (which would include school and community education, the enhancement of clinical services for adolescents, and change in the social environment related to adolescent sexuality and the community's response to it), the researchers were equally

cognizant of the need for the community to reach its own conclusions about how to proceed next. This approach, and the wait that it called for, proved worth-while. In the Spring of 1994, the way was paved for further activity and community control of the process. A Steering Committee was struck through the activities of the Cumberland District School Board and Cumberland County Family Planning, which resulted in more comprehensive community representation, and the creation of a number of goals to work toward. Table 7 gives the list of membership of the Steering Committee, and Table 8 lists its goals, developed by that committee.

Table 7

Membership of the Amherst Initiative for Healthy Adolescent Sexuality Steering Committee

(1) Amherst Regional High School Administration
(2) Media
(3) Amherst Ministerial Association
(4) Parents
(5) Cumberland County Branch Medical Society
(6) Cumberland County Family Planning
(7) Amherst YMCA
(8) Nova Scotia Department of Health
(9) Highland View Regional Hospital
(10) Family and Children Services of Cumberland County
(11) Amherst Regional High School Student Body
(12) Cumberland District School Board of Trustees

Table 8

Goals of the Amherst Initiative for Healthy Adolescent
Healthy Sexuality Established by the Steering Committee

1. To recognize, and where appropriate intervene on, the
    multiplicity of factors, including attitudinal and
    interpersonal factors, which create the social
    environment in which sexual behaviour occurs.
2. To increase community awareness of the problems of
    adolescent STD and unwanted pregnancy.
3. To develop and evaluate programs which increase the
    use of existing community resources.
4. To develop and evaluate programs which increase
    communication between youth and their parents.
5. To develop, implement and evaluate effective sexuality
    educational programs in schools and in the community
    in general.
6. To establish and evaluate a teen health centre or
    centres.
7. To increase behaviours that protect individuals at risk
    for pregnancy/STD.
8. To reduce sexually transmitted diseases, unwanted
    pregnancy, and the harmful sequelae of these among
    Cumberland County Adolescents.

As the AIHAS began to involve more of the community in
moving towards action to improve the reproductive health of
adolescents in the community, the academic partnership also
began to expand. Recognizing the necessity for interdisciplinary
research expertise to reaching the goals of the Initiative,
academics from other institutions and disciplines were invited to
participate. Represented currently on the Research Committee for
AIHAS are the Departments of Community Health and
Epidemiology and Pediatrics in the Faculty of Medicine, and the
School of Recreation, Health and Physical Education in the

Faculty of Health Professions at Dalhousie. Also involved are the Department of Education at Acid University, and the Department of Psychology at Mount Saint Vincent University.

The Steering Committee was also able to articulate, with the assistance of its academic partners, the relationship between various players, and a vision of its future organizational structure. The linking of community to the research as an integral part of the process provides the mechanism for collaboration between the community development process and the research component of the Initiative; the Steering Committee identifies problems and interventions, while the Research Committee provides technical support for implementing these interventions and directs evaluations and eventual publication of the findings. This approach is gaining support among researchers throughout North America (Labonte, 1993; Brown, 1991; Shea, 1992) and is congruent with the level of community involvement seen in health reform at all levels (Nova Scotia Provincial Health Council, 1992b; Rachlis and Kushner, 1994).

The community of Cumberland County has, as seen in the project's name, decided that the best course of action would be in the form of a demonstration project located in the town of Amherst, and targeted at adolescents in that town, in an effort to show the benefits of community-based approaches to improving adolescent sexual and reproductive health. The academic researchers and the Steering Committee have obtained funding for such a project (NHRDP Project No. 66031474201) the objectives of which will be to demonstrate the feasibility and sustainability of such efforts, and their potential for impacting sexual behaviour. The community has taken ownership of AIHAS, as evidenced by its enthusiastic involvement and committment to contributing to its successful implementation. Examples of such committment include indications by the Cumberland District School Board of a willingness to adapt and change adolescent reproductive health education to reflect community need, by Amherst Regional High School to provide space and other resources to the Initiative, of medical

The community has taken ownership of AIHAS, as evidenced by its enthusiastic involvement and committment to contributing to its successful implementation.

practitioners to cooperate in the provision of clinical services, and by the willingness of many community organizations to support the Initiative's efforts.

Conclusions

The Amherst Initiative for Healthy Adolescent Sexuality clearly illustrates the potential for the University to become involved in community development directed at improving health status and related research. Key to this process is understanding that the answers to community problems reside in the community's existing capacity to respond to the challenges it faces. An obvious corollary is the need for researchers to accept study communities as full partners in the process of inquiry, and to utilize the knowledge, experience and existing resources of communities to contribute to the process of defining both problems and their possible solutions.

Key to this process is understanding that the answers to community problems reside in the community's existing capacity to respond to the challenges it faces.

Key elements identified as essential to the establishment of AIHAS have been **(1) involvement of respected and influential community stakeholders from a wide variety of backgrounds and areas of interest.** Without the active participation of appropriate individuals and community agencies (Table 1), the Initiative would have been unable to develop the local credibility and support required to carry out research and stimulate action on such a sensitive issue as adolescent sexuality. This is, of course, the essence of the community development process, the major tenet of which is that communities can both identify problems of concern to them, and find solutions within already existing community infrastructure and expertise. It is our belief that, where there is liable to be contention over the problem itself, that this ground work is of special importance. This may be especially true in the area of sexuality, where views are strongly held, and are diverse in nature. **(2) a demonstration of real interest in, and concern about, the community's problems.** Communities can be rightly distrustful of the motives of academics, whose methods in the past have often included only the wish to study problems, but not a wish to help the community to reach

The researchers have at no time attempted to take over ownership of the issues, and more importantly, demonstrated, and continue to demonstrate, genuine concern that solutions appropriate to the community be found.

solutions to them. The AIHAS started with the active involvement of community groups and agencies, which then involved the University appropriately as partners in developing an understanding of the problem of the untoward effects of adolescent sexual behaviour. The researchers have at no time attempted to take over ownership of the issues, and more importantly, demonstrated, and continue to demonstrate, genuine concern that solutions appropriate to the community be found. This was made most clear during the development of the initial survey instrument, and again during the community visits to explain the results of the adolescent survey and explore with community members their views as to what might evolve in response. The period of waiting for the community to develop its thoughts and ideas as to an appropriate response was also key to making this understanding clear to all concerned. **(3) encouraging and facilitating the expression of the community's goals for the Project.** The researchers have been active in pointing out to the community the need for an appropriate and well thought out response, including the setting of appropriate goals for AIHAS (Table 8), but have not intervened in this process. Thus, the stated goals of AIHAS are its own, and not merely established to serve the agenda of the researchers. As the Initiative precedes to develop its research agenda, the involvement of academics will be essential to the identification of well-defined research goals which will, by necessity, relate strongly to the outcomes developed by the community as those they feel are most appropriate, as defined by local culture and mores, as well as availability of resources within the community itself. Goals will develop and be redeveloped as the community reflects on the nature of the problems, and their views as to relative importance of some areas of adolescent reproductive health, and potential solutions, change.

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15

DALHOUSIE OUTPOST
AND COMMUNITY HEALTH
NURSING PROGRAM

by Ruth Martin-Misener

Dalhousie University has offered a program specifically designed for nurses employed at health care facilities in remote, northern, Canadian communities since 1967.

Dalhousie University has offered a program specifically designed for nurses employed at health care facilities in remote, northern, Canadian communities since 1967. These facilities are known as nursing stations or health centres and they do not normally have a resident physician. The communities that are served by these facilities are primarily First Nations or Inuit.

Historical Roots of the Outpost Nursing Program

Dalhousie University first became interested in education for northern nurses through the initiative of Dr. Robert Dickson, a member of The Royal Commission on Health Services in the early 1960's (Hall, 1964) and, at that time, Head of the Department of Medicine at Dalhousie Medical School. The "Hall Commission", as it is frequently known, called national attention to many unique characteristics of the North that impacted significantly on health services delivery. Dr. Robert MacDonald, Dean of the Faculty of Health Professions, and Dr. Electa Maclennan, Director of the School of Nursing at Dalhousie University, became concerned about the lack of available education to prepare nurses for this role and decided to initiate a program for registered nurses designed to prepare nurses for positions in northern communities where there were no resident physicians. The Dalhousie Faculty of Medicine agreed to provide assistance with clinical teaching and to make available the clinical facilities needed by the students. For many years there had been an informal relationship between the Dalhousie Medical School and the Grenfell Association in northern Newfoundland and Labrador. Because of this relationship the University was aware of many realities inherent in the delivery of health care to

For many years there had been an informal relationship between the Dalhousie Medical School and the Grenfell Association in northern Newfoundland and Labrador.

remote northern communities and was eager to be involved in a program to prepare northern nurses.

After securing funding from the Department of National Health and Welfare and some initial assistance from the Newfoundland Department of Health in 1966, the School of Nursing invited Ruth May, a nurse and midwife on the then-isolated Labrador coast with the Grenfell Association, to come to Dalhousie University to develop, administer and teach the program.*

After a year of planning and program design, the first students were admitted to the program in September 1967.

After a year of planning and program design, the first students were admitted to the program in September 1967. When the program began it was two years in length. During the first year students' experiences were at the University and consisted of classroom theoretical teaching in public health nursing, general medicine, pediatrics, surgery and midwifery and various, associated clinical experiences in local health care facilities. The second year consisted of an internship under the direction of the University in a northern setting, using selected International Grenfell Association hospitals and Department of National Health and Welfare nursing stations. Half of that year was dedicated to a midwifery experience at St. Anthony Hospital, St. Anthony, Newfoundland and Goose Bay Hospital, Labrador.

*Ruth May, a graduate of Wellesley College, in Massachusetts, Massachusetts General Hospital in Boston, and the Midwifery Program at Frontier Graduate School in Hyden, Kentucky, had worked for eight years as the sole nurse in Mary's Harbour, Newfoundland where she was responsible for the health care of several coastal communities which at that time were accessible by boat in the summer and by dog team in the winter. The timing of the invitation was fortuitous. Her experience with the high professional level of outpost nursing in Grenfell nursing stations contributed to her belief that well-prepared nurses could provide a very high calibre of health care in a nursing station setting. She was convinced that formal, organized education for outpost nursing was needed, not on-the-job, apprentice type training (May, 1992). In 1966, she accepted the University's invitation, came to Halifax from Mary's Harbour, a journey which is now considerably easier than it was then, and so the Outpost Nursing Program began.

The entire midwifery component of the curriculum was assessed as equivalent in time and content to a British pattern of midwifery preparation (May, 1967). Since it was an expectation, at that time, that nurses in the north routinely conduct the deliveries for low-risk pregnant women in their communities, it was necessary that the Outpost Nursing Program curriculum emphasise midwifery in order to be responsive to the health needs of northern citizens. The excellent midwifery experience at St. Anthony Hospital was made possible largely because of the commitment Dr. Gordon Thomas, then medical superintendent of Grenfell, had to the goals of the Outpost Nursing Program. An internship of this sort for nurses was unprecedented in Canada.

In 1979, the Outpost Nursing Program incurred several important changes in response to changing patterns of health care delivery in the north, particularly in obstetrical services.

In 1979, the Outpost Nursing Program incurred several important changes in response to changing patterns of health care delivery in the north, particularly in obstetrical services. Since women in the north were having to leave their communities to deliver their babies in a hospital, full midwifery preparation for Outpost Nursing students was no longer appropriate and the midwifery component of the curriculum was shortened considerably. As a result, the overall length of the program was reduced to fifteen months and the annual enrollment increased to twelve students. Regrettably, it was no longer possible, for various reasons, to access the clinical facilities in Newfoundland and Labrador that had provided such support for the learning goals of the program and excellent clinical learning opportunities for students in the program. This was a great loss to the program.

The silver lining in this change was that the internship sites at Iqaluit, Northwest Territories and Sioux Lookout, Ontario were developed and continue to the present. Physicians and nurses in these sites have provided excellent clinical teaching in the internship courses of the program. The program would not have enjoyed the success that it has had without the internship's experiences for students to consolidate and expand the knowledge and skills acquired earlier in the program.

The funding arrangements for the program also changed such that Medical Services Branch, National Health and Welfare Canada (later, Health Canada) supported the program on a tendered, contractual basis. The program has been offered continuously since 1979 with this federal support.

Finally, the content in the program related to health promotion and illness/injury prevention, and cross-cultural awareness and aboriginal issues related to health care were significantly and incrementally increased in the ensuing years. This last point will be expanded later in the chapter.

One of the guiding principles during the development of the curriculum was to determine realistically what outpost nurses needed to know and be skilled to do.

One of the guiding principles during the development of the curriculum was to determine realistically what outpost nurses needed to know and be skilled to do. Inherent in this process, and equally important, was the challenge to determine what a outpost nurse did not need to know or do. The danger of overloading the program was consciously avoided by careful scrutiny and tactful rejection of content which, although interesting, might obscure content critical for the development of knowledge, skills, and judgement needed for competent practice in an outpost setting (May, 1992).

In the early years of the program, graduates of the program were eligible to receive, from the University, a diploma in Outpost Nursing and a diploma in Public Health. Upon completion of the program, most graduates were employed in Canadian nursing stations but some chose to work in positions in developing countries. As a result, the Outpost Nursing Program developed a profile and reputation in many countries around the world. After the extensive changes to the program in 1979, graduates were granted a Diploma in Outpost and Community Health Nursing from the University. The funding arrangements with Medical Services Branch included a stipulation that all students enrolled in the program be, or become, federal employees. In return for substantial financial support from Medical Services Branch, students agree to a return service commitment in a nursing station for a specified length of time. This has been a

fantastic benefit for students in the program, but has also added considerably to the overall cost of the program.

Program Goals, Philosophy, and Methodology

The fundamental, philosophical underpinning of the Outpost Nursing Program has been a belief that outpost nurses must develop cross-cultural awareness and sensitivity, and have competence in health promotion and illness/injury prevention as well as competence in the assessment and management of episodic emergent and non-emergent illness, trauma, and chronic illness including rehabilitation. Outpost nurses providing care in the north work in a setting that allows these arms of health care delivery to be melded together so that it is possible to have a seamless continuum of care. Consequently, the Outpost Nursing Program was designed to weave these aspects of health care throughout the curriculum.

Courses in the Outpost Nursing Program integrate cross-cultural awareness and concepts related to health promotion, health education, illness/injury prevention and practice management in a remote northern setting with clinical content.

Courses in the Outpost Nursing Program integrate cross-cultural awareness and concepts related to health promotion, health education, illness/injury prevention and practice management in a remote northern setting with clinical content. The program recognizes that cross-cultural and psycho-social content has to be filtered through each person's beliefs and their value system. The courses in community health nursing, family nursing, health education, and mental health help nurses to evaluate their own life- paradigm and foster the development of attitudes that will seek to understand and be sensitive to aboriginal lifestyles and values that may differ substantially from their own. The many strengths and positive aspects of aboriginal communities, including the important role of elders in aboriginal communities and traditional healers, are explored in seminars, field experiences and during the internship. Attention is also given to the role that outpost nurses have when working with communities to address family violence, substance abuse, suicide and other social issues which aboriginal people have identified as troubling their communities (Royal Commission on Aboriginal Peoples, 1995).

One of the assumptions, on which the Outpost Nursing Program was established, was that outpost nurses have difficulty in reaching out to communities and engaging with them to address the larger issues of aboriginal health, when they doubt their own clinical knowledge and judgement. The fear that they will make a mistake and hurt someone in the process can be absolutely paralyzing. As a result, many nurses confine themselves to their clinics wondering what clinical problem will next appear at their door. As Ruth May (1992) has noted, it would be useless to try to design a curriculum that would address every clinical situation an outpost nurse might encounter. The Outpost Nursing Program does prepare nurses to be comfortable with generalist knowledge and skills which are appropriate for the assessment and at least initial management of any patient. This comfort is developed through a combination of carefully planned seminars and highly individualized clinical experiences. The critical criteria for our clinical experiences has been that they be as "hands on" as possible and that they be appropriately guided and supervised. Our experience and the experience of others has been that students develop clinical knowledge and skills best through what they do in their interactions with real patients, next best through what they see and least well through what they hear and read. In most of the clinical courses at the University, the clinical teaching has been done by an Outpost Nursing Program faculty member and a physician from the University Medical School. This interdisciplinary combination has been optimal for clinical learning. While physicians contribute essential medical expertise, Outpost faculty tailor the learning experience to a northern remote context and the role that outpost nurses have in that setting. The level of comfort that students develop with clinical knowledge and skills reduces their stress and frees them to be more interactive with the community.

During the internship, students are required to be increasingly self-directed.

During the internship, students are required to be increasingly self-directed. Their learning is service-oriented and is supervised by physicians in the hospital component of the internship and by an outpost nurse, normally a graduate of the Outpost Nursing Program, in the nursing station and health centre components.

There is, however, an Outpost Nursing Program faculty member at each of the two main internship sites who is responsible to coordinate the learning experience, offer guidance and support to students and interpret the program's goals and methodologies to hospital staff. Their role has been of key importance to the success of the internship experience.

Although communication and transportation systems have become increasingly sophisticated over the years, they are not so advanced as to negate the significance that the degree of isolation and distance from medical and hospital back up and support have on clinical decision making and the imperative for adequate preparation of nurses providing health services to the people living in northern communities (Vukic, 1996). Outpost nurses must be skilled clinicians because there literally is no one else in the community to turn to when community members need health care. Outpost nurses are required to diagnose common problems and be able to distinguish, as early as possible, when a patient needs to be transported to secondary or tertiary facilities for further care. Prevention and early detection of serious illness is crucial because it may take several hours before an emergency evacuation, usually by air, can be arranged, if indeed it is possible at all. Weather continues to be a powerful and unpredictable force that can prevent air transport for several days. Outpost nurses must be competent to manage these critically ill people in the interim. As well as having a diagnostic role, outpost nurses are required to prescribe medications, such as first line antibiotics and analgesics. Since, neither diagnostic nor prescribing functions are considered to be traditional nursing responsibilities, they are not taught in generic baccalaureate or diploma nursing programs. The Outpost Nursing Program prepares outpost nurses safely and confidently to carry out these functions with an appreciation and respect for their own limitations. It is important to appreciate that this role is an expanded nursing role, not a physician replacement, and that clinical knowledge and skills must be balanced with cross-cultural knowledge and sensitivity (Vukic, 1996). Without cultural knowledge and awareness, even

Outpost nurses must be skilled clinicians because there literally is no one else in the community to turn to when community members need health care.

the best clinical expertise will not influence the overall health of the community.

Aboriginal Input in the Outpost Nursing Program

Aboriginal input into the program has always been important to the program and has increased significantly in recent years.

Aboriginal input into the program has always been important to the program and has increased significantly in recent years. Curriculum decisions have always been made by faculty members who have extensive nursing experience with northern peoples. Familiarity with the realities of northern nursing has shaped the program objectives and curriculum design. In the past decade, faculty members have increasingly consulted with aboriginals regarding curriculum content. Aboriginal guest speakers regularly meet with students and lead classroom discussions. Aboriginal students have also provided valuable input.

Program faculty have extensive experience in the north and return there each year to work during the summer. In this way, they retain strong ties with aboriginal peoples and gain fresh perspectives, which are reflected in their teaching.

Changes, Developments, and Milestones

By the middle of the 1980's, the number of nurses in Canada with baccalaureate preparation in nursing was increasing.

By the middle of the 1980's, the number of nurses in Canada with baccalaureate preparation in nursing was increasing and, in keeping with this trend, the Outpost Nursing Program was receiving more and more applications from nurses with this educational background. These nurses had already completed, in their degree programs, a substantial number of the non-clinical courses in the Outpost Nursing Program such as community health, family nursing, health education and nutrition. It was clear, given the 'baccalaureate entry to practice resolution,' which professional nursing associations across the country were establishing, that the trend toward increasing numbers of baccalaureate-prepared nurses was going to continue. In response to this change in the profession, a shortened stream in the Outpost Nursing Program was developed for baccalaureate-prepared nurses, that credited their university degree courses.

This stream, which is nine months in length, was first implemented in 1987 and has since been offered continuously. There was also a fiscal and community-driven rationale to support this stream. Because it was shorter, it was less costly to federal financiers and, from the communities' perspective, nurses were away from them for less time. From 1987 to 1992, nurses with baccalaureate preparation in nursing represented one third of the program's total enrollment. In 1993, the evolving demographics of the nursing profession prompted a further increase in the proportion of baccalaureate-prepared nurses enrolled in the program.

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The middle 1980's heralded another milestone in the history of the program, when several courses in the Outpost Nursing Program were evaluated positively for transfer credit in the baccalaureate nursing program at Dalhousie University. This recognition was of critical importance for Outpost Nursing Program graduates with diploma preparation in nursing, who wished to pursue a baccalaureate education in nursing. In 1996, the Outpost Nursing Program was again reviewed for transfer credits in the Dalhousie nursing baccalaureate program and additional credits were granted.

During the early 1990's the Outpost Nursing Program was privileged to receive several visits from Australian remote area nurses, the counterpart to Canadian outpost nurses on the other side of the world. Subsequent to one of these visits, in 1992, Ruth May was invited to Australia to be the keynote speaker at a conference of The Council of Remote Area Nurses of Australia and to make presentations about the Outpost Nursing Program at several other meetings of remote area nurses during a two week tour. The dialogue that occurred, as a result of these exchanges, was exciting and the similarities discovered were greater than the differences, with the exception of the weather.

In the fall of 1993, an extensive, external evaluation of the Outpost Nursing Program was conducted by Chaytor Education Services. The purpose of the evaluation was to assess whether or

not the program prepares registered nurses appropriately to provide cross-cultural primary health care in northern Canadian aboriginal communities. The evaluation was undertaken within the context of health care reform in Canada and took into consideration the ongoing transfer of health care responsibilities from the federal government to aboriginal groups. The evaluation (Chaytor, 1994) was formative and used a responsive approach that facilitated a diversity of views to be expressed and enabled participants to tell their own stories in their own words. This participatory method of evaluation is consistent with the direction of health care reform in Canada and the principles of primary health care established by the World Health Organization (1978).

The evaluators gathered data from multiple sources.

The evaluators gathered data from multiple sources to inform their review of the program's method and content, the settings and needs for which the program is intended and the administrative structure influencing the program. Site visits were carried out in three different aboriginal communities in northern Canada, where the evaluators interviewed many community members, para-professionals, program graduates, and other nurses. Interviews with physicians, nurses and administrators at a northern hospital were also undertaken in order to ascertain perceptions about the quality of health care provided by program graduates. Three questionnaires were developed by the evaluators in consultation with the School of Nursing and Medical Services Branch, Health Canada. The questionnaire, designed for program graduates since the major curriculum change in 1979, solicited responses regarding their experience in the program and the appropriateness of their preparation for their work settings. The questionnaire for Medical Services Administrators (who employ and supervise graduates) solicited responses regarding the quality of health care provided by graduates working in the north. A third questionnaire was sent to students who entered but did not complete the program and their reasons for leaving the program solicited. As well, the evaluators facilitated focus groups with current students in order to explore their experience in the program.

Summarized briefly, the evaluators found that communities respected the work that nurses do but, for the most part, were not aware of the qualifications of nurses nor the preparation required of different types of nursing. Some community members did identify that taking the Outpost Nursing Program had made a difference in the way nurses related to the community. Recurring themes that emerged from community interviews, and which are expanded in the full report, were a need for more nurses and more skilled nurses, a need for more community health and home visits, a need for nurses to understand the community, a need for local control and more aboriginal nurses. Medical Services Branch Nurses Administrators gave consistently high ratings to all aspects of the graduates' performance in a northern cross-cultural setting. Graduates made many positive comments and also gave consistently high ratings to all aspects of the program. Physicians reported that program graduates have the clinical judgement and skills needed for their work and also contribute significantly to community health. Graduates, nurse administrators, and physicians reported that the Outpost Nursing Program sets a standard of excellence for northern nursing practice.

The evaluation also found that graduates of the Outpost Nursing Program stay longer in the north than do other nurses and that many graduates went on to teaching and administrative positions. The evaluation confirmed what Outpost Nursing Program faculty have long believed to be true on the basis of anecdotal evidence - namely that, although the program graduates annually a small number of students, there is significant spin-off of knowledge and skills from graduates to other nurses in the communities. This was of particular interest to program faculty because the small annual enrollment has been criticized and faculty have reviewed several times the justification for this policy. If we were to raise the enrollment in the program, it would not be possible to give students the intensive and highly individualized clinical experience that is so critical to their clinical learning. Each time this enrollment policy has been evaluated, faculty have decided against dilution of the clinical learning, believing that there is a

Graduates, nurse administrators, and physicians reported that the Outpost Nursing Program sets a standard of excellence for northern nursing practice.

greater impact on health care in communities when outpost nurses are well-prepared and can then be a resource to others in their communities.

The evaluation results were highly valued by the Outpost Nursing Program.

The evaluation results were highly valued by the Outpost Nursing Program because it enabled the voices of so many people, particularly the voices of aboriginal people, whose lives are affected by the program and its graduates, to be heard. The evaluation provided some direction to the activities of the School of Nursing, three of which are briefly described here, and has strengthened our belief in the social justice issues inherent in any discussion of northern health care. One of our top priorities has been to find new approaches to reach out to aboriginal groups with information about the goals of the program and the competencies of program graduates. Although the program has had numerous and varied contacts with aboriginal individuals and groups, the accelerated pace of transfer of responsibility for health by the federal government to aboriginal control has added some urgency and intensity to our efforts to share information about the Outpost Nursing Program. We believe that informed decisions about nursing education should be made at the community level, where the impact of outpost nursing practice is most immediate. A new brochure was developed for this purpose and distributed to aboriginal communities, political organizations, and transferred health authorities. Outpost Nursing Program alumni have been active ambassadors for the program in northern communities and have also been involved in lobbying the government to choose policy directions, that promoted informed decision-making about nursing preparation and education at the local community level.

One of the themes that was expressed by the communities was a need to have more aboriginal nurses.

One of the themes that was expressed by the communities was a need to have more aboriginal nurses. Dalhousie School of Nursing has been very excited by a recent invitation from Arctic College in Iqaluit to collaborate with them to develop a nursing program for Inuit in the territory of Nunavut. The proposal is now being developed with guidance from a steering committee and an advisory committee (both of which have membership

from the two educational institutions involved and the territory of Nunavut).

The evaluation of the Outpost Nursing Program (Chaytor, 1994) recommended that Dalhousie University should assume responsibility for the continuing education of its graduates. After conducting a needs assessment, the Outpost Nursing Program found that there was a groundswell of support for a continuing education publication that would be developed at the University, specifically to address the educational needs of northern nurses. Many graduates reported feeling cut off from conventional, southern-based sources of continuing education and found that, even if available, these sources were less in tune with health issues in the north. The feeling of professional isolation, experienced by many nurses who work in the north, has been well documented in the literature and has been identified as a significant factor affecting the retention of outpost nurses (Nowgesic, 1995). The first issue of this venture, entitled Outpost Horizons, was published in 1995. It was awarded start-up funding from Medical Services Branch, Health Canada. The articles were written by Outpost Nursing Program faculty and edited by Ruth May, former program coordinator. The feedback received about the first issue was very positive. Aa second issue is scheduled for late 1996.

After conducting a needs assessment, the Outpost Nursing Program found that there was a groundswell of support for a continuing education publication that would be developed at the University, specifically to address the educational needs of northern nurses.

Looking to the Future

In October 1996, the School of Nursing was notified that the federal government would not be renewing funding for the program past June 1997. As part of the federal initiative to transfer resources for health to aboriginal control, a decision was taken to devolve the resources for nursing education to the various Medical Services Branch regional offices in each province and territory. The School of Nursing is now in the process of exploring the interest other key stakeholders may have in supporting the Outpost Nursing Program and is investigating what the implications might be for new funding arrangements.

311

The Outpost Nursing Program has,and will continue to have, a deeply held belief that aboriginal people in the Canadian north deserve to have a high standard of health care and that having nurses who are educated specifically for the realities integral to outpost nursing in the north is an important part of that goal.

Obviously, it is a critical time in the long history of the program, but not one without opportunity.

The Outpost Nursing Program has,and will continue to have, a deeply held belief that aboriginal people in the Canadian north deserve to have a high standard of health care and that having nurses who are educated specifically for the realities integral to outpost nursing in the north is an important part of that goal. In Canada today, provincial professional nursing associations are beginning to come to grips with the types of practice that outpost nurses are engaged in and the implications this has for education and public safety in the north. But there is much still to be done before consumers in the north can be assured that nurses in their communities have been prepared for the unique role of outpost nursing. As transfer of health evolves, aboriginal people will determine the preparation nurses will require to work in their communities, and Dalhousie School of Nursing looks forward to collaborating with them to meet their health goals.

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16

A BROADER VISION OF EDUCATION

by Robert Bérard

In its controversial report, "Reshaping Teacher Education in Nova Scotia,[1] the Nova Scotia Council on Higher Education not only set forth a vision for teacher education in Nova Scotia, but also radically affected the whole field of educational studies in the province. At a stroke, the Commission recommended the closure of the School of Education at Dalhousie, the Faculty of Education at Saint Mary's University in Halifax, the Department of Education at St Francis Xavier University in Antigonish (although this Department was later spared by the provincial government), and the Nova Scotia Teachers College in Truro.

While only time will tell whether the decision of the Council will meet its stated aims of saving money for the postsecondary education system in Nova Scotia or result in a closer fit of the number of teacher education graduates and the number of openings for teachers in the public schools of the province, it is clear that the Council's view of educational studies (and that of many universities and members of the general public) appears confined almost exclusively to the preservice training of teachers for local public schools. This is, of course, a critical part of the mission of almost every faculty of Education, but ever more rapid changes in how we view education in society and how and where and by whom it is delivered to a varied clientele suggest that institutions engaged in educational studies must formulate their missions to include much more than service to the public school system.

To date, very few institutions in the Maritimes have given adequate consideration to educational studies which have their focus outside the public school system.

To date, very few institutions in the Maritimes have given adequate consideration to educational studies which have their focus outside the public school system. Even the School of Education at Dalhousie University, which, through its various graduate programmes, especially its Ph.D. in Educational

Foundations, did more than any other regional institution to promote a broader vision of educational studies,[2] remained very dependent financially on its role as a teacher-training institution. With the closure by Dalhousie of its School of Education under pressure from the Nova Scotia Council on Higher Education and the provincial government, it becomes even more important for the Education faculties which remain, especially those at Acadia and Mount Saint Vincent University, and for other units in universities which no longer have faculties of Education to ensure that their programmes address the growing number of alternatives to public school education and the broader study of education as a major social institution. Furthermore, in order to play their needed role in the educational development of the region, Maritime universities must not only broaden their base of research and professional preparation in education, they must also address as institutions their relationship with other forms of educational activity and other types of educational institution.

I will suggest four major areas -- other than public school teacher education -- which universities should be addressing in their programmes: 1) Private Schools; 2) Home Schooling; 3) Adult and Continuing Education; and 4) Educational Foundations and Policy Studies.

I will suggest four major areas -- other than public school teacher education -- which universities should be addressing in their programmes: 1) Private Schools; 2) Home Schooling; 3) Adult and Continuing Education; and 4) Educational Foundations and Policy Studies. It is not merely that these fields are a vital part of a comprehensive programme of educational studies, but it is clear that each is growing steadily, while the public school system in the region is experiencing either stasis or a decline in absolute numbers of students and teachers. In short, as education takes place more and more outside the schoolroom, universities will have to adjust their programmes to take account of this trend.

Private Schools

Most recent studies suggest that the numbers of students in private schools and the number of private schools in Canada have increased and continue to increase.[3] This growth has, perhaps, been somewhat less pronounced in the Maritimes than in other parts of Canada both because of the economic underdevelopment of the region and lack of any significant

support for private education by the governments of the region. While substantial public funding for independent schools has been available in Québec and somewhat less generous support in British Columbia and other Western provinces, even a modest recommendation made by the Royal Commission on Public School Financing (the "Walker Commission")[4] in 1980 for a provincial tax credit to parents who paid independent school tuition was never taken up by the government of Nova Scotia.

Despite this lack of public support and the double burden of high taxation to support public schools as well as stiff tuition fees (often four to six times that paid for university tuition), a growing number of parents in the region are choosing independent schools. The best known of these include long established traditional private schools, day schools such as the Halifax Grammar School and the Sacred Heart School of Halifax and boarding schools, such as King's-Edgehill School in Nova Scotia or Rothesay Collegiate-Netherwood School in New Brunswick. Each has reported increases in the numbers of students seeking places in all grades.

A growing number of parents in the region are choosing independent schools.

In addition to these institutions, a variety of new independent schools have appeared in the past few years. Throughout the Maritimes, a number of small, independent Christian schools -- most, but not all associated with fundamentalist Protestant churches -- have been formed. In reaction to a perceived lack of values education in public schools or a perception that the values taught in those schools are anti-Christian, many parents have sought out schools which provide not only religious education but a perspective on the whole curriculum which is consistent with their religious beliefs. In other parts of Canada, the growth of Christian schools has been even more dramatic. Similarly, we have witnessed in the past few years the rise of Jewish independent schools, such as those which survived the target school experiments in Calgary, and Islamic independent schools, such as one recently opened in the Halifax area, to meet comparable parental and community concerns.

Other alternative schools have begun to appear as well. The Shambhala Elementary and Middle Schools, associated loosely with the substantial Buddhist community in Halifax but serving a much broader spectrum of the population, have attracted considerable interest. Families interested in the unique approach of Waldorf or Montessori schools have established preschool programmes and are actively pursuing plans to open alternative schools for the higher grades.

For the most part, the region's universities, particularly their faculties of Education, have not paid adequate attention to independent and alternative schools.

For the most part, the region's universities, particularly their faculties of Education, have not paid adequate attention to independent and alternative schools, either as a social phenomenon or as sites in which their students could be learning. In part this neglect has been due to the linkage of university teacher education programmes to provincial licensing requirements and the reluctance of the provincial government to recognize practica carried out in private schools. Only now has this problem been recognized, and it is expected that it will be remedied.[5] Furthermore, the fact that independent schools are not required to employ licensed teachers may have contributed to the lack of contact between those schools and faculties of Education. A recent study suggests, however, that independent schools want to be involved in the preparation of future teachers [6], and the growing importance of the independent school sector should encourage universities to take a greater interest in these institutions both as sites for research and practica.

Home Schooling and Schooling in Alternate Sites

A phenomenon that has gone almost unnoticed by universities and faculties of Education in the last decade has been the striking rise in the number of families who have opted out of the public school system in favour of educating their children at home. Estimates of home schooling families in North America range from between 400,000 and 2,000,000.[7] Certainly the growth of the home schooling movement has been dramatic. From the 75 families reported as engaged in home education in Nova Scotia in 1992, that number has nearly tripled. A Nova Scotia

Home Education Association has been formed, and similar support groups exist in other Maritime provinces.[8]

The reasons for the rapid growth of this alternative form of schooling are similar to those which account for the burgeoning of independent schools, including a concern by parents for academic rigour, a safe and supportive learning environment, and a desire for curricula which reflect the values of those families. In general, about two-thirds of families who educate their own children, often with little help from or the active antagonism of local education authorities, have a strong religious orientation.[9] Most of these are evangelical Protestants, but my own work on Roman Catholic home educators [10] and recent information on home schooling among Jews and Muslims [11] suggest that the educational concerns of parents with a strong faith are similar across religious lines.

There are also large numbers of home educators whose objections to the pedagogical methods and the institutional nature of schools have led them to develop individualized home schooling programmes for their children. Others have gone further to adopt a philosophy of "unschooling," in which the formal structures of school are eliminated in favour of what is thought to be a more naturalistic approach to learning.[12]

Few Canadian universities have developed clear policies on the admission, much less the recruitment of home-schooled students.

Even more than in the case of private schools, universities have been slow to recognize and respond to this developing movement, in part because of their institutional linkages with the public school system. Thus, few Canadian universities have developed clear policies on the admission, much less the recruitment of home-schooled students (unlike such American universities as Hillsdale College (MI) or Franciscan University, Steubenville (OH), which actively recruit home schooled applicants through, e.g., advertising in a variety of home-school publications.

For their parts, faculties of Education, too, have undertaken little study of home schooling as an educational phenomenon, nor have they developed programmes to assist in the preparation of

parents to undertake the demanding role of home teachers. In the Maritimes, as indeed is the case throughout Canada, home school families are heavily dependent on curriculum packages, teaching advice, materials, continuing education, and support from various American organizations which have recognized the need for such services.[13]

Similar challenges are being faced by those who, while not home-schooling, attempt to provide educational services to children in sites outside the formal school. The most common example is found in hospitals, where teachers often have to direct the studies of children who are engaged in long-term treatment. Here, a small number of professionals and volunteers are called upon to provide a range of teaching services to children from Primary to Grade XII, who come from different schools, even different provinces. While some special education programmes address the needs of learners who are institutionalized because of learning or behavioural problems, there has been little study of teaching average students who must, for a period of time, be instructed outside the regular public school setting.

There has also been a growth in the popularity of tutorial centres within the region.

There has also been a growth in the popularity of tutorial centres within the region. Parents who believe that their children cannot get sufficient academic support at school or at home and who are unable or unwilling to choose an alternative school often turn to private tutors or independent or franchised "learning centres" which provide a range of educational services to young people. While such centres frequently employ recent graduates of teacher education programmes or a variety of subject specialists, it is likely that few of those employees have been prepared to deal with the specific challenges of one-on-one teaching or remediation.[14]

Finally, countless numbers of young people take part in specific educational programmes that are based outside the school, including sports, arts, safety, environmental, and language programmes. One of the most common educational experiences for young people in the region, and one for which their teachers

have received the least specific preservice preparation, is that of catechetical or "Sunday School" instruction. An unscientific review of past university calendars from the past two decades suggests that the study of religious instruction has all but disappeared from the curricula of teacher education programmes. While it is certainly true that many technical skills and reflective approaches to teaching acquired in teacher education programmes are transferrable to settings outside that of the formal school, there are specific challenges related to specialized programmes which should be addressed.

At Dalhousie, the School of Education admitted a number of students over the years to the regular Bachelor of Education programme who had stated explicitly on their applications that they were studying in order to be able to teach their own children. In every case, however, no special arrangements for alternative studies or practicum arrangements were made. If this important and relatively highly educated sector of the public is ignored by the universities, an important partnership for change in education in the region will be lost. Faculties of Education in the region have had, on several occasions, student teachers who have chosen to complete practica in the hospital setting, working with the teachers and volunteers at the Izaak Walton Killam Hospital for Children in Halifax, and a substantial number of students each year volunteer to work for a growing number of tutoring services, which provide individual tutoring to students from the elementary to the postsecondary level. Unfortunately, the bias toward pre-professional training for the public school system has obscured our view of the broader reality of education in the region.

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Adult and Continuing Education

Initially it appeared that one of the most shocking consequences of the decision of the Nova Scotia Council of Higher Education to close the School of Education at Dalhousie University was the likelihood that one of the major programmes in adult and continuing education in the region would be lost completely. In large measure, this programme has been preserved and expanded

321

at Mount Saint Vincent University, but the period of interim uncertainty surrounding the programme can be traced again to the myopic perception that the study of education begins and ends at the door of the public school. Even attempting to list the number of sites and the names of providers of education for adults would take more pages than have been allotted to this piece.

In my fifteen years with the School of Education at Dalhousie, while most students pursuing preservice teacher education degrees were intent on pursuing careers in the public school system, a significant minority was seeking to prepare themselves for educational work in other sectors, often in fields where their students were likely to be younger or older adults. In Master of Education and Master of Arts programmes in Adult and Continuing Education, students were drawn from an even broader range of educational settings. The aging of the region's population and the rapid pace of economic change that has become the rule in the past decade suggests that these non-school settings will continue to grow in relative importance in the delivery of education to the people of the Maritimes. The School of Education had, in cooperation with other units at Dalhousie University and other postsecondary institutions in Nova Scotia, developed programmes tailored to promote reflective educational practice in those settings, and it appears that the new programme at Mount Saint Vincent is seeking to restore those cooperative linkages.

One area in which teacher education has been all but absent has been in the preparation of teachers in postsecondary institutions.

One area in which teacher education has been all but absent has been in the preparation of teachers in postsecondary institutions. An unfounded assumption that simple mastery of a subject area is sufficient preparation for teaching that subject has been almost an article of faith among many university faculty members. Coupled with what has been at some universities suspicion if not hostility toward what are dismissively called "educationists," this assumption has left countless undergraduates at the mercy of brilliant scholars seeking to transmit their knowledge through pedestrian pedagogy. In recent years, however, a widespread instructional development movement has emerged to improve

teaching methods at the postsecondary level. At Dalhousie, for example, an Office of Instructional Development, directed by a faculty member who held an appointment in the School of Education, has developed materials and conducted workshops for professors and graduate teaching assistants in most of the disciplines offered at the University. The Dalhousie School of Education itself developed an innovative M.Ed. programme, specially designed to meet the needs of professional faculty members in the University's Faculty of Dentistry. The success of this programme had led to plans for similar programmes for instructors in Dental Hygiene, but the closure of the School of Education prevented its implementation. It is clear, however, that the programme could serve as a prototype to serve faculty members in other disciplines, and the remaining faculties of Education should consider seriously developing programmes for their colleagues in postsecondary institutions. The School of Education at Dalhousie also worked in cooperation with the Atlantic Provinces Special Education Authority to develop a specially tailored Master's of Education degree programme for teachers of the visually impaired, a programme which is being carried on at Mount Saint Vincent University, which has also developed a comparable companion programme for teachers of the hearing impaired.

The School of Education at Dalhousie was able to accommodate in its undergraduate and graduate programmes professional educators in a variety of health fields, from nutrition to occupational therapy to nursing.

In addition to these focused programmes, the School of Education at Dalhousie was able to accommodate in its undergraduate and graduate programmes professional educators in a variety of health fields, from nutrition to occupational therapy to nursing. My own students included people whose teaching responsibilities were in such fields as military science, trade union education, private language training, police education, library education, accounting education, and instruction for inmates of correctional facilities. Graduate Education students at Dalhousie prepared theses dealing with advocacy education, safety training, etc.[15] Nearly all of these were supervised by committees comprising specialists in these areas along with faculty members from the School of Education. It is a model that worked successfully to raise and extend standards of reflective educational practice and

should be maintained in whatever institutional structures are developed in the future for graduate studies in Education faculties in the region.

Educational Foundations and Policy Studies

An adequate professional preparation of educators for teaching experiences that include, but also go far beyond those of the public school classroom, demands a balance between the purely professional and the more liberal elements of a professional education.

Finally, an adequate professional preparation of educators for teaching experiences that include, but also go far beyond those of the public school classroom, demands a balance between the purely professional and the more liberal elements of a professional education. Teachers in all settings need to be able to think and act critically, reflectively, and open-mindedly, and the study of educational foundations assists in the development of such habits of mind. In addition to providing a liberal professional education for teachers, however, university faculties of Education have a number of responsibilities, similar to those of other disciplines, in the liberal education of undergraduate students, in promoting research, and in informing public policy. The first of these roles was recognized in the Nova Scotia Council's report but has not yet been realized in most universities in the region. Education being one of the most significant and enduring social institutions in human history, its study can be considered central to the liberally educated person. Furthermore, research in and the teaching of the educational foundations -- history of education, philosophy of education, sociology of education, and educational psychology -- underpin the development of professional courses which apply the insights of foundations research. Most often such study is carried out within faculties of Education, in part to encourage interdisciplinary cooperation, but even in the absence of a faculty of Education, universities which neglect educational studies risk ignoring a formidable social institution and a formative influence on the lives of nearly every human being.

As a social institution, the political, legal, economic and other aspects of education are vitally important areas of study. At Dalhousie over the years, the School of Education was able to offer, in cooperation with the Faculties of Law, Science, and

Management, respectively, courses in School Law, Educational Finance, and Educational Programme Evaluation. Such cooperative ventures provided students with a broader range of course work than could have been provided by a faculty of Education alone, created new research opportunities for faculty members, and helped to break down artificial disciplinary barriers within the University.

The aim of this paper has been to illustrate the complexity, breadth, and importance of educational studies to the people of this (or indeed any) region of this country. These needs which have, with great difficulty, been met in recent years by the region's Faculties of Education, in partnership with other units, cannot be addressed by institutions which regard educational studies as no more than the preparation for public school teachers for a single province. Any attempt to return to a normal-school model for education will ill-serve the growing and changing demands for educators in the region. On the other hand, a spirit of cooperation within and between universities can help foster the development of courses and programmes that will reflect the diversity of educational experiences in the region and prepare tomorrow's graduates to meet the challenges of this critical resource sector.

Any attempt to return to a normal-school model for education will ill-serve the growing and changing demands for educators in the region.

Endnotes

1. **Reshaping Teacher Education in Nova Scotia: a Report from the Nova Scotia Council of Higher Education, presented to the Minister of Education, March 1994.** (Halifax, 1994).

2. A review of the Calendars of the different universities which offer courses in Education and a review of the thesis titles from graduate programmes show clearly the broader conceptualization of educational studies at Dalhousie than the other institutions. Indeed, this may have proven to be an impediment to Dalhousie in the eyes of the Nova Scotia Council on Higher Education.

3. John J. Bergen, "Myths and Facts about Private Schooling", **Canadian School Executive**, v. IX, no. 2 (1989), pp. 13-16.

4. See Recommendation 58 in Nova Scotia. Commission on Public Education Finance (Chair, George C. Walker). Halifax, NS: The Commission, 1981, p. 38.

5. At the time of writing, the Nova Scotia Department of Education was revising its policy on Teacher Certification, and the Heads and Deans of Education in Nova Scotia Universities had been assured that practice teaching in non-public school settings could be recognized.

6. See Robert N. Bérard and H. Joseph Murphy, "Practice Teaching in Canada's Independent Schools," **McGill Journal of Education**, v. XXVIII, no. 1 (1993), pp. 13-32.

7. See Patricia Lines, "Home Instruction: the Size and Growth of the Movement," in Jane Van Galen and Mary Anne Pitman (eds.), **Home Schooling: Political, Historical, and Pedagogical Perspectives.** (Norwood, NJ: Ablex Publishing, 1991), pp. 9-41.

8. Publications include **Home School News**, the newsletter of the Nova Scotia Home Education Association, **Canadian Home Educator**, published in Bow Island, Alberta, and **Quest: the Home Educators' Journal**, published in Ottawa, Ontario.

9. See Jane Van Galen, "Ideologues and Pedagogues: Parents Who Teach their Children at Home," in Van Galen and Pitman, **op. cit.**, pp. 63-76.

10. Robert Nicholas Bérard, "Roman Catholic Home Schooling in the United States and Canada" paper

presented at the 1993 Annual Meeting of the Canadian Association of Foundations of Education, Carleton University, Ottawa, Ontario, 4 June 1993.

11.   See C.R. Sulaiman, "Home Schooling: a Muslim Alternative to Classroom Education," in **The Message** (Islamic Circle of North America, Jamaica, NY), November 1994.   There is also an Islamic Home Schooling Association of North America, based in Warrenburg, Missouri.

12.   This libertarian approach to schooling has been widely identified with the educational philosophy of the late John Holt, whose book **Teach Your Own: a Hopeful Path for Education** (New York: Delacorte Press, 1982), has been an influential text among non-religious home schooling families.   For a critique of Holt's ideas, see Susan Douglas Franzosa, "The Best and Wisest Parent: a Critique of John Holt's Philosophy of Education," in Van Galen and Pitman, **op. cit.**, pp. 121-136.

13.   Prominent among these are the non-denominational Calvert School, based in Baltimore, Maryland, which has been providing materials for home education for most of the century, Accelerated Christian Education (ACE) and Bob Jones University in South Carolina, which are the leading providers of evangelical Protestant curricula, and the Seton Home Study School, Front Royal, Virginia, and the Our Lady of the Rosary School, Bardstown, Kentucky, which provide materials for Roman Catholic home educators.

14.   These may be local franchises of broader organizations, such as the Sylvan Learning Centres, or independent operations, such as the Dalhousie Tutoring Service.

15.   See the "Self-Evaluation Report on Education for the Nova Scotia Council of Higher Education", Dalhousie University, July 1993, Appendix 8.

PART VI

RELIEF, DEVELOPMENT
AND COMMUNITY SERVICE

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RELIEF, DEVELOPMENT AND COMMUNITY SERVICE

The papers in Part VI serve to remind the reader that the Maritimes, while mercifully peaceful in recent years, are by no means isolated from the effects of international, and even local, disasters. Moreover, groups and individuals within the universities in this region are far from uninvolved.

Tom Faulkner's paper makes refreshing reading. He engagingly describes the enrichment to the Dalhousie community (and the local area) that was a result of accepting refugee students. He also reminds the reader of the brutality of parts of the world from which Dalhousie students sometimes come.

John Benoit's paper introduces the theme of disaster preparedness - a reminder (if one be needed) that the area does indeed encounter life-threatening dangers quite routinely. Dalhousie's little-publicised work with volunteer fire brigades, directed through Henson College, suggests many of the signs of a significant record-in-the-making. Benoit's personal commitment to this field of work is impressive and fast gaining international recognition.

The final paper in this part, by Ian McAllister, draws attention to two institutions in Nova Scotia that have been working closely with a number of Dalhousie students and faculty. The first, the new Peacekeeping Training Centre at Cornwallis, is hinged very directly into many of the current peacekeeping missions - from Rwanda to Somalia, Burundi, Zaire, Haiti and Bosnia. At the same time, the Centre has many of the characteristics of a regional development project, providing employment at the former military base at Cornwallis. The second institution, the International Red Cross and Red Crescent Movement, is described at some length. Many of the strains that it is currently experiencing, particularly as its work stretches from natural and human-made disasters - through to rehabilitation and the distribution of humanitarian services in war and 'peacemaking' situations, are also being faced by other non-governmental and UN organizations with representation in the region, including Oxfam Canada, UNICEF and the Lutheran World Federation of Churches. A growing number of links are being made directly with these agencies and several research classes, community projects and advisory roles are being undertaken by Dalhousie faculty and students. The non-governmental organizations are increasingly being recognized to be significant contributors to regional development and democratization processes at grass-root levels, whether in Canada or overseas.

17

THE UNIVERSITY AND DEVELOPING MI'KMAQ COMMUNITIES

by Fred Wien

Introduction

When it comes to questions of community and regional development, we have grown accustomed over the past several decades to looking at government policies and programs, in interaction sometimes with the private sector and the organizations of the targeted community, as being of decisive importance. This is particularly the case in the instance of the socio-economic and political development of Aboriginal communities because of the decisive role that the federal government and in particular the Department of Indian Affairs has had in controlling all facets of life on Indian reserves. We have written less, and know less about, the role that other institutions such as universities can play in the development process. The occasional commentaries that exist suggest, however, that the university's role can be considerable.

Universities themselves are inclined to highlight their role in the educational formation of a large portion of a regional population, and the implications of this for the socio-economic development of a region or a country. They may also point to their importance in economic terms for a host community or region - in terms of the economic stimulus provided not only by the purchasing of goods and services to feed the needs of the institution but also in terms of the impact of several thousand students on the local economy. More difficult to pin down are the spin-off effects that go beyond the purchasing power of the institution and its students to include such elements as the university as an incubator of ideas that are subsequently picked up and applied, the role of university graduates as new entrepreneurs, the role of the community service side of the University in building institutions and capacities in the

community, and so forth. While not much has been written about the subject, some universities have been recognized for the developmental roles that they play; examples that come to mind include the University of Moncton in relation to the Acadian population of the Maritimes, and universities with strong engineering, science and technology programs such as the University of Waterloo and the Massachusetts Institute of Technology in relation to high technology spin-off businesses in their surrounding communities.

In this paper, I explore the relationship between the Mi'kmaq population of Nova Scotia and Dalhousie University over the past two decades.

In this paper, I explore the relationship between the Mi'kmaq population of Nova Scotia and Dalhousie University over the past two decades. While there have been specific projects that have marked the relationship at particular times, and each of these could be described in some detail, I have chosen to provide an overview that includes a fairly large number of initiatives and connections.

In the period between 1970 to 1992, there have been significant and often positive developments occurring within the Mi'kmaq community.

In the period between 1970 to 1992, there have been significant and often positive developments occurring within the Mi'kmaq community, despite the stubborn persistence of problems of poverty, alcoholism, suicides, family breakdowns and other indices of social well-being. While I will argue that the University has made a constructive contribution to many of these developments, I do not wish to imply that the University and its personnel are the key actors in the ongoing drama; rather, the principal initiatives have come from within the Mi'kmaq communities, and the University's role has been principally (and properly) responsive in nature. Neither can it be said that the University's role is beyond criticism, a point that will be illustrated from time to time in the following pages. Finally, I do not wish to imply that Dalhousie is the only University active in the field. On the contrary, the University College of Cape Breton has in recent years developed a strong Mi'kmaq Studies Program which has attracted large numbers of Mi'kmaq students, especially those from Cape Breton, to enrollment in post-secondary programs at the institution. Other Nova Scotian

universities have also made specific contributions from time to time.

Historical Background and Contemporary Issues

This is not the place for a lengthy historical outline, but a few key points deserve to be noted in order to set the stage for the discussion that follows. There is documented evidence that Aboriginal peoples, perhaps direct ancestors of the contemporary Mi'kmaq, lived in the area that became Nova Scotia as early as 11,000 years ago. At the time of early and sporadic contact with Europeans in the early centuries of this millennium, the Mi'kmaq had developed a rich social and cultural life. They were governed by their own political institutions, both locally and in federations with related tribes, and their economic base consisted of seasonal hunting, fishing, trapping and gathering activities.

Contact with Europeans became more sustained in the 1500's, when visiting fishermen would set up seasonal encampments on the shores of the area. In the following decades, and particularly in the 1600's and early 1700's, the fur trade came to dominate the economic relationship. While the fur trade was disruptive of Mi'kmaq patterns, it was not devastating in its consequences because the Mi'kmaq were vital participants in the trade, and had in any event considerable past experience with the hunting and trapping of fur-bearing animals. They were also important militarily in the ongoing struggles between French and English for control of the territory, a factor that was important in their signing a series of treaties of peace and friendship with representatives of the British Crown in the 1700's.

With the ascendancy of the British in the latter part of the 1700's, however, and with the decline of the fur trade, the Mi'kmaq became of reduced military and economic significance. The end of the French/British wars marked the beginning of a massive influx of settlers to Nova Scotia, from the United States in the period following the American Revolutionary War and the War of 1812, and from Europe as well. Settlers took over Mi'kmaq

lands for agricultural purposes, and also settled at the mouths of rivers, with colonial governors and legislatures doing little to restrain these illegal incursions. In addition to loss of their ancestral lands, the Mi'kmaq also had their traditional economy completely disrupted. Impoverishment, starvation and population declines ensued, to the point that, by 1830, no more than about 1300 Mi'kmaq still survived in the Province from an estimated pre-contact population of some 20,000 people. The relegation of the Mi'kmaq to small, generally resource-poor reserves, marked the extent to which they had become dispossessed of their traditional lands and way of life.

The decades of the 1800's also marked the gradual imposition of an intrusive, colonial, and hierarchical relationship between the European and Aboriginal communities.

The decades of the 1800's also marked the gradual imposition of an intrusive, colonial, and hierarchical relationship between the European and Aboriginal communities. While the Mi'kmaq were not defeated militarily, nor did they voluntarily give up their powers of self-government, nevertheless colonial governments (and after 1867, the federal government) increasingly took it upon themselves to dictate how the Mi'kmaq should govern their affairs and indeed what kinds of political organizations should speak on behalf of Aboriginal communities (i.e., an elected chief and council rather than more traditional leaders). The federal Indian Act of 1879, and its various successors, was particularly detailed and limiting in terms of the authority left to Aboriginal governments.

Despite these measures, by the closing decades of the 1800's and into the 1900's, the Mi'kmaq were regaining at least a marginal foothold in the region's economy and their population began to expand again. While poor, Mi'kmaq families were able to survive through some combination of handicraft production, traditional hunting and fishing, wage labour on the fringes of the white economy (e.g., loading ships, cutting pit props for the mines, working on road building projects, etc.) and through migration to the eastern seaboard of the United States for both seasonal and more long-term wage or piece-work employment.

Two events in the first half of the twentieth century were to undermine these developments. First, the Depression of 1929-1936 seriously affected the tenuous toe-hold of the Mi'kmaq on the fringes of the white economy; as the Mi'kmaq lost the opportunity for wage employment, the federal government began to respond to the emerging problems of poverty and underemployment with the provision of welfare payments to an ever-increasing proportion of the population.

Secondly, in the early 1940's, officials of the Department of Indian Affairs determined that, for reasons of administrative efficiency as well as for the provision of services and religious/moral teachings, it would be best if the 40 or so small Mi'kmaq reserves scattered throughout the Province could be centralized in two locations. Accordingly, residents of the smaller reserves were encouraged and in some cases forced to give up their subsistence way of life in their own communities in favour of relocating to Eskasoni in Cape Breton and Indian Brook on the Nova Scotia Mainland. While for a time the new and the original residents of these two communities were kept busy building houses for the expanding population, as well as health facilities, schools and churches (to be staffed almost entirely by non-Aboriginal personnel) the boom period soon ceased and very high levels of unemployment ensued. These conditions continue into the present day, with unemployment levels for the on-reserve population measured at half to two-thirds of the labour force in the 1970's and 1980's, and somewhat lower for the off-reserve population.

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In the last two decades, the Mi'kmaq have strengthened their political organizations at both the band and the provincial levels, with the formation of the Union of Nova Scotia Indians in 1969, the Native women's Association of Nova Scotia in 1974, the Native Council of Nova Scotia in 1975, and the Confederacy of Mainland Micmacs (splitting some of the smaller Mainland bands from the UNSI) in 1986. The Grand Council of the Mi'kmaq, a more traditional organization dedicated to preserving Mi'kmaq rights, ceremonies and spiritual beliefs, has also

337

continued to strengthen its role. While the activities of each of these organizations have differed somewhat, depending on the constituency and mandate, nevertheless it is possible to summarize the main priorities of the Mi'kmaq as represented by these organizations as follows:

(a)   to obtain recognition of and respect for Mi'kmaq Aboriginal and treaty rights, including rights to land, to fishing and hunting, to commerce etc., whether by political negotiations or by court decisions

(b)   to regain authority over their own affairs, both in the form of self-government for representative or traditional political organizations, and through the development of appropriate organizations to regain control over matters such as education, policing and justice, health and family and child welfare

(c)   to rebuild a strong economic base for Mi'kmaq communities

(d)   to protect, preserve and develop the Mi'kmaq language, traditional spiritual belief systems, and other forms of cultural expression

(e)   to develop Mi'kmaq-controlled school systems and to make major improvements in the proportion of Mi'kmaq students graduating from high schools and from the Province's post-secondary institutions

(f)   to address the social problems affecting Mi'kmaq communities, such as alcoholism, suicides, unemployment and poverty.

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In these two decades, the relationship between Dalhousie and the Mi'kmaq communities and organizations has touched on many, if not all, of these priorities. We turn now to a description and analysis of that relationship, under four headings: research and professional expertise, applied projects, special educational programming, and student access and support.

338

Research and Professional Expertise

Over the last two decades, University faculty and graduate students have engaged in a variety of research and scholarly activity pertaining to the Mi'kmaq in Nova Scotia. A small part of this work has been largely isolated from the Mi'kmaq community itself, in the sense that the faculty members have not themselves been engaged with the Mi'kmaq community. Their sources of information have been largely secondary in nature, for example archival records of historical demography or public documents on race relations.

A second category of research involves the Mi'kmaq community more directly, but the initiative for the research and the questions that are pursued stem from the personnel in the University. However, Mi'kmaq cooperation is required in order for interviews to be done or documents to be accessed, so at least the effort is made to explain the research and its possible benefits. In the process of gaining permission to proceed, some trade-offs may be negotiated -- for example, to ask some questions of interest to the Mi'kmaq organization involved, or to ensure that a copy of the completed research report is left with the community. Again, a few pieces of faculty research fit into this category, as well as several of the student theses completed in subjects such as history (on the 1940's centralization program) or in economics (on entrepreneurial development in a Mi'kmaq community).

A third type of research is largely responsive in nature, where individuals or organizations in the Mi'kmaq community take the initiative in seeking out a researcher and/or specifying the research topic and major questions to be addressed. A reserve may be interested in a study of shopping and buying patterns, for example, in order to establish whether there is an economic basis for setting up a general store in the community. Or there may be an interest among several reserves in establishing their own police force and a Mi'kmaq controlled justice system, leading to a need for research to be carried out in pursuit of this objective. In the urban area, the Friendship Centre may be interested in

achieving a better understanding of the needs of its constituency so that it can develop appropriate programs of service; thus graduate students may be approached to undertake thesis or project work to meet this need.

Perhaps the most significant research initiative undertaken in this period was that of the Marginal Work World Project located at the Institute of Public Affairs.

Perhaps the most significant research initiative undertaken in this period was that of the Marginal Work World Project located at the Institute of Public Affairs. This was a major interdisciplinary project funded by the Social Sciences and Humanities Research Council in the period between 1975 and 1981, and focused on the issue of low-income, marginal employment in the Maritime Provinces. It was recognized early in the life of the project that racial and ethnic minorities in the Region were likely to be over represented in the marginal employment sector, making it desirable for a portion of the larger research program to be focused on this issue. It quickly became apparent that the information base about the characteristics, causes and solutions to this problem was for the most part non-existent. With regard to the Mi'kmaq, for example, the available census data revealed very few people who were employed, and even for this group it classified fully 25 per cent of the employed as being "engaged in occupations that are unknown or not elsewhere classified". Thus the project undertook to document Mi'kmaq employment patterns in a systematic way. A Mi'kmaq research assistant was engaged, who went to each of the twelve band councils in turn to ask permission to undertake the research project on each of the reserves. This was granted without exception, although sometimes he would be asked to explain the project both in English and in the Mi'kmaq language. On the two largest reserves (Eskasoni and Indian Brook), the methodology called for a sampling approach to be used but the chief and council would not permit this approach. They insisted instead that each household be surveyed, rather than every third one according to a random sample, and no amount of arguing about the merits of scientific sampling would dissuade them from the belief that the researcher would invariably obtain a biased picture of employment and unemployment patterns on the reserve. As a result, each household was covered on all the reserves in the Province.

Once all the data was collected and analyzed, the researchers went back to a collective meeting of all the chiefs to present the results to them and to discuss how they might wish to use the data for their own purposes. At the time, this was an unusual step, and the chiefs' past experience with research was more along the lines of outsiders collecting information and not being heard from again, or having the results used against their interests (for example, by the Department of Indian Affairs to "prove" that their request for housing funds were excessive). In this instance, the chiefs reacted initially with some surprise (how did we let all this information get out) and with a tendency to try to sit on the results rather than looking at them in terms of how they might be useful to them. A particular concern was the fact that the results (which included data on unemployment rates and rates of welfare dependency) could be reported for each community, thus raising the concern that an invidious ranking of communities would become public. It took almost two years for this concern to surface verbally, and as a result the publication reporting the results of the survey was held up until it became clear that results should not and need not be reported publicly on a community by community basis.

Individual bands and other Mi'kmaq organizations made some use of the results, for example in documenting the characteristics of their community for purposes of grant applications. Indeed, the research was of sufficient value that the Popular Education Program of the Union of Nova Scotia Indians requested that a follow-up study be done five years after the original data collection. This was done in 1981, yielding profiles of each of the reserves as well as a valuable picture of Mi'kmaq employment patterns changing between two points in time.

The impact of the research should not be exaggerated.

The impact of the research should not be exaggerated, however; long statistical reports are at odds with the more oral traditions of the Mi'kmaq, so it is unlikely that the resulting documents were widely read. In any event, there was no obvious impact on Mi'kmaq political leaders who continue to use statistics in a rather loose manner when it suits their political purposes (e.g., in

routinely claiming unemployment rates of 90 per cent or higher). In retrospect, the personal relationships that developed through the research process between members of the Mi'kmaq community and University personnel, relationships that were to form the basis for collaboration in the future, were probably the more important outcome of the research enterprise.

In addition to collaboration in research, University expertise may also be called on to provide professional advice on topics of importance. While the range of subject matter may include everything from business management to medicine, the clearest example comes in the field of law. As mentioned previously, one of the highest priorities being pursued over the last several decades by the Mi'kmaq political leadership is to have their Aboriginal and treaty rights recognized and respected. The pursuit of these issues through the courts and through political negotiations requires considerable legal expertise, ranging from an in depth understanding of the developing concept of Aboriginal rights in Canadian and international law, knowledge of the terms and circumstances surrounding the signing of the treaties of peace and friendship, and a grasp of Canadian constitutional developments over several centuries. While several lawyers in Nova Scotia have specialized in this field over the past two decades, a faculty member at Dalhousie's Faculty of Law has made major contributions to research on these issues and to the pursuit of specific cases that have been argued successfully before courts at all levels of the Canadian judicial system.

One of the highest priorities being pursued over the last several decades by the Mi'kmaq political leadership is to have their Aboriginal and treaty rights recognized and respected.

What has been largely absent in these research and related activities is the presence of Aboriginal scholars in university positions where they themselves could carry out the research that is required to be done. In contrast to U.C.C.B. where several Mi'kmaq faculty are appointed, this situation is changing only very slowly at Dalhousie. The Law School has had in recent years three faculty members who are of First Nations origin, one of whom is Mi'kmaq from Nova Scotia. The Latter is the only one of the three who is currently teaching at the Law School, and she is the only faculty member of Mi'kmaq origin in the University.

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Before leaving this section, it should be noted that University personnel are also sometimes called upon because they are perceived to be able to play a mediating role, or because they are seen as informed but neutral observers between contending parties. In the last round of constitutional discussions, for example, the Premier of the Province joined by the leaders of the opposition parties established a Constitutional Advisory Committee on Aboriginal Issues. Each of the major Aboriginal organizations was invited to send a representative, and two Dalhousie faculty members were asked to serve as Co-Chairs of the Committee. The discussions and the Report of the Committee clarified the nature of past differences on constitutional, treaty and self-government issues between the Province and the Mi'kmaq. They also contributed in a small way to the beginning of direct negotiations on these matters between the elected leadership of the Mi'kmaq and of the Province.

Similarly, a Dalhousie faculty member was asked to advise the Provincial Electoral Boundaries Commission on how it might sound out the Mi'kmaq community on the desirability and feasibility of establishing a Mi'kmaq seat in the Nova Scotia House of Assembly. After consultation, it was agreed that a briefing session for members of the Commission should be organized, followed by a two-day conference that would bring together the elected Mi'kmaq leadership, and others, to discuss the idea. The conference was held in January of 1993 and the issues surrounding the establishment of a Mi'kmaq seat in the legislature were thoroughly debated. While agreement was not reached at the time on the particular model of a legislative seat to be recommended, the idea of having such special representation was widely supported. After the Commission reported its findings, the Nova Scotia House of Assembly approved the creation of a Mi'kmaq seat in the legislature, subject only to the achievement of agreement on the details of the seat to be established.

These examples illustrate that University personnel can sometimes play an educational and mediating role that can contribute to progress on important issues of public policy. It is a role that can, perhaps, be pursued more assertively in the future.

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contribute to progress on important issues of public policy. It is a role that can, perhaps, be pursued more assertively in the future.

Joint Applied Projects

University personnel have undertaken a number of joint projects with Mi'kmaq organizations.

Apart from providing research and other forms of expertise, University personnel have also undertaken a number of joint projects with Mi'kmaq organizations. In the summer of 1981, the President of the Union of Nova Scotia Indians came to visit the Director of the Maritime School of Social Work to talk about, and develop a plan of action regarding, the serious social problems faced by many of the reserves in the Province. A series of meetings ensued, culminating in the decision to have the UNSI and the MSSW jointly convene a conference on social conditions and social services on Mi'kmaq reserves. With funding obtained from several sources, the three day conference took place at Liscombe Lodge in Nova Scotia in May of 1982. Some 60 Mi'kmaq from all parts of the Province and from all walks of life were invited to attend; the group included political leaders, elders from the community, Mi'kmaq youth, some band staff, and some who were unemployed. In addition, a small number of resource persons, both Aboriginal and non-Aboriginal, were also in attendance.

It was agreed that steps would need to be taken to develop an employment and economic development strategy for the Mi'kmaq communities.

It was recognized that social problems on the reserves could not be effectively addressed in isolation from action on the economic front.

The conference dealt with serious concerns, and those attending spoke openly for the first time in many cases, and emotionally, about friends, relatives and community members who had been lost to alcoholism, to suicides, to adoptions into non-Indian homes, to poverty and to despair. While the group did not officially have any decision-making authority, nevertheless it brought together a cross-section of the community and included

344

most if not all of the Mi'kmaq political leadership. Consensus was reached on at least three major points. First, the emerging movement to have the Mi'kmaq reassume control over their own child welfare matters was given a major push forward by the conference; it was agreed, in effect, that the formation of a Mi'kmaq Family and Children's Services agency was a matter of high priority. Secondly, it followed from the above that such an agency should be staffed by well-trained Mi'kmaq personnel, and that this would require the University's School of Social Work to establish a special and relevant degree program for the purpose. Finally, it was recognized that social problems on the reserves could not be effectively addressed in isolation from action on the economic front. Under conditions where up to two-thirds of the on-reserve labour force was unemployed and reliant on social assistance payments, it was unrealistic to expect that major progress could be made in tackling the social problems that provided the impetus for the Liscombe Lodge conference. Accordingly, it was agreed that steps would need to be taken to develop an employment and economic development strategy for the Mi'kmaq communities.

In the months following the conference, the Maritime School of Social Work, in cooperation with existing and emerging Mi'kmaq social agencies, developed the design for and eventually implemented the Mi'kmaq Bachelor of Social Work Program.

In the months following the conference, the Maritime School of Social Work, in cooperation with existing and emerging Mi'kmaq social agencies, developed the design for and eventually implemented the Mi'kmaq Bachelor of Social Work Program. The early 1980's also witnessed the formation of the Mi'kmaq Family and Children's Services Agency, which gradually assumed responsibility for all family and child welfare services for on-reserve persons in the Province.

On the employment and economic development front, Dalhousie and UNSI staff worked over the summer of 1982 to prepare a submission to the Donner Canadian Foundation. A proposal was submitted jointly by the Presidents of Dalhousie and the Union of Nova Scotia Indians, and was awarded a grant of $125,000 in the early fall of the same year. Two Mi'kmaq staff were hired, and an advisory council called the Mi'kmaq Development Council was formed and co-chaired by the President of the UNSI and the

Director of the MSSW. The Council included respected academics and business persons from the non-Indian community, as well as a number of chiefs and other community leaders from the Mi'kmaq side. Two years of meetings on reserves in different parts of the Province ensued, while the staff undertook research and consultation in all parts of the Province with a view to the development of an employment and economic development strategy.

When a draft document was prepared, the Mi'kmaq chiefs tended to ignore the off-reserve employment strategy that was suggested, but they did show considerable interest in the strategy for promoting on-reserve economic development. In particular, the Donner project recommended the formation of a Mi'kmaq controlled economic development agency that would provide capital and other forms of support to existing and new small businesses, whether these were owned by the bands or by individual entrepreneurs. As a result, the Ulnooweg Development Corporation was formed in 1984, with headquarters at Eskasoni, and with the chiefs of the bands plus representatives from the Native Council and the Native Women's Association comprising the Board of Directors. Under the leadership of the Board and UNSI staff, Ulnooweg attracted over $4 million in capital from the federal Native Economic Development Program, and it continues to the present day to support small business development in Mi'kmaq communities.

Under the leadership of the Board and UNSI staff, Ulnooweg attracted over $4 million in capital from the federal Native Economic Development Program, and it continues to the present day to support small business development in Mi'kmaq communities.

The Liscombe Lodge Conference, therefore, played an important stimulating role in a number of areas. As a footnote to the discussion, by the end of the 1980's there had been sufficient changes in social conditions on the reserves, and sufficient interest in new and pressing issues, that a follow-up conference was planned. Held at Oak Island in the early summer of 1990 but following the Liscombe example in terms of participants and organization, Mi'kmaq persons from around the Province again debated the state of social conditions and services on reserves. New topics were addressed, such as the prevention of family

violence and AIDS, and new resolutions about action to be taken were passed, some of which are now being implemented.

Over the latter part of the 1980's, the University, the Union of Nova Scotia Indians, and the Native Council of Nova Scotia also collaborated on what came to be called the Mi'kmaq Professional Careers Project. Working with seed money granted to the University from a private estate and supplemented by grants from the federal government, a coordinator was hired to work within the University to improve access for Mi'kmaq students to academic programs leading to professional careers. The work of this project is implicated in a number of the educational developments referred to in the following two sections.

Special Educational Programming

It has only been in the last decade or so that there has been any significant improvement in the percentage of Mi'kmaq students who successfully complete high school, and the proportions who now do so are still well below the rate of non-Aboriginal students.

It has only been in the last decade or so that there has been any significant improvement in the percentage of Mi'kmaq students who successfully complete high school, and the proportions who now do so are still well below the rate of non-Aboriginal students. Thus, while there are currently a good number of young Mi'kmaq students studying in and graduating from post-secondary institutions, there are also large numbers of persons in older age brackets who have not been able to access this level of education. The large majority of those who currently fill positions at the band level, whether as chief, band council member, band employee, or alcohol and drug worker have not had the opportunity for nor the preparation to undertake studies at the post-secondary level. At the same time, better levels of education and training are badly needed as these staff face increased responsibilities resulting from the transition of their communities to regaining powers of self-government.

The University has been asked to respond to this situation by providing a number of non-traditional programs aimed at meeting the educational needs of this group of potential students, a group characterized by being employed, by being mature in years and rich in work experience, but often not well prepared

347

academically. As noted above, the Mi'kmaq BSW Program was one such initiative (1984-90), and this was followed by a two year certificate program directed to Community Health Representatives (1988-90). A Certificate Program for Mi'kmaq Alcohol and Drug Workers was completed in the period 1993-95.

In each of these cases, the academic programs are planned by a joint committee that includes both University and Mi'kmaq community representatives.

In each of these cases, the academic programs are planned by a joint committee that includes both University and Mi'kmaq community representatives. Committees with similar composition are also the key decision makers in the implementation of the program, making decisions in areas such as the approval of course outlines to make sure they reflect the desired, culturally relevant content, the selection of course instructors with emphasis on attracting qualified aboriginal teachers, and the recommendation of students for graduation. Since mature, working adults are involved, the programs are part-time and are offered on a decentralized basis (usually on reserve) with students coming together for several days of intensive study each month before returning to their home communities, their families and jobs. The certificate programs are likely to include a mix of courses, some geared to academic upgrading and personal development, others of immediate relevance to the work of the students, and still others that provide university credit so that the student is encouraged to undertake degree studies upon completion of the certificate program.

While the University has in the last analysis approved and supported each of these programs, they have not fit easily into the standard University mold. University structures and administrative procedures are geared towards degree programs which are stable in character (e.g., admitting a group of students each year), respectful of a certain academic timetable, supervised by established committees and regulations that have developed over several years, funded by the established mechanism through the Maritime Provinces Higher Education Commission, taught by regularly appointed University faculty in University classrooms, and so forth.

The special academic programs designed to meet the educational needs of mature, working, Mi'kmaq students, on the other hand, break all of these norms. They may only admit one class of students, they may well begin classes in a month other than September, they involve the community in special committees to supervise the program and develop academic regulations for its particular circumstances, they are typically funded by grants from several federal departments and (increasingly in the era of self-government) these grants may be channeled through an Aboriginal organization, classes may be taught by qualified sessional instructors many of whom are Aboriginal in origin, classes are typically held off-campus in the Mi'kmaq communities, and the Registrar may need to contend with non-credit as well as credit courses in terms of registration and transcripts.

This lack of fit creates frustrations on the part of both University personnel and those associated with the special programs. It is important to recognize, however, that these programs are necessary at this particular point in time. They are part of a response to a large educational need in the Mi'kmaq communities, as they make the transition to self-government and as they come to grips with the legacy of mainstream educational institutions at all levels that have not served them well in the past.

Student Access and Support

At the beginning of the 1970's, one could count the number of Mi'kmaq students attending universities on the fingers of one hand. In the early 1990's, the number enrolled in Nova Scotia's universities is in the vicinity of 400 students, of which some 100 are enrolled at Dalhousie and a further 230 at the University College of Cape Breton. Many factors are responsible for the improvement, among them better rates of high school graduation, the return of more mature students to resume their studies, the takeover of the administration of post-secondary programs by Mi'kmaq bands and tribal councils, and the improved levels and types of support services available to students.

At Dalhousie, the increased numbers of Mi'kmaq students are reflected both in regular admissions to standard university degree programs, as well as in special access programs in a number of fields.

A further difficulty, faced particularly by the students enrolled in the Faculty of Law, has been the lack of articling and employment positions available to these students at the end of their program of study.

At Dalhousie, the increased numbers of Mi'kmaq students are reflected both in regular admissions to standard university degree programs, as well as in special access programs in a number of fields. Since 1971, the Transition Year Program at Dalhousie has been admitting Black and Mi'kmaq students who have academic potential, but who would not otherwise achieve academic acceptance. Such students are provided with a year of credit and non-credit courses in subjects such as Mathematics, English, and Black and Mi'kmaq studies, after which they go on to enroll in the regular degree programs of the University. Several professional schools have also established affirmative action programs (often including curriculum modifications and the provision of support services) in order to encourage the acceptance and graduation of Mi'kmaq and Black students. This has been the case at the Maritime School of Social Work since 1974, and more recently at the Faculty of Law, the Faculty of Medicine, and the School of Education. Usually these initiatives have worked fairly well, although these kinds of programs are inherently controversial within both the Aboriginal and the non-Aboriginal community. In addition, University personnel have tended to have these programs serve the Nova Scotia Black population as well as the Mi'kmaq, without always fully appreciating the differences between the two groups. A further difficulty, faced particularly by the students enrolled in the Faculty of Law, has been the lack of articling and employment positions available to these students at the end of their program of study.

The University has also learned a great deal about the kinds of academic support services that are required not only to assist in the admission of students, but also to maintain a high level of retention of students through to their graduation. Of particular importance is the appointment of a Mi'kmaq education counselor whose role includes reaching out to the high schools where Mi'kmaq students are found, organizing orientations for incoming students, providing academic and some personal counseling to students, organizing workshops on study skills, library research or paper writing, and so forth. The availability of a resource

center and meeting place for Mi'kmaq students is also very important.

While considerable progress has been made in achieving student access to regular degree programs, some important issues remain to be addressed. For example, virtually all Mi'kmaq students are concentrated in a narrow range of university programs, especially in the humanities and social sciences and a few in the professions that rely on these disciplines. Hardly any are found in mathematics or the natural and physical sciences, or in the professions that depend on a strong science base. This streaming is due in large measure to shortcomings in the high school education of Mi'kmaq students, who leave Grade 12 without a strong grounding in mathematics and the sciences. Thus in the short term, the University should consider undertaking a transition program for students admitted to the University to strengthen their backgrounds and prospects of admission into math, science and health science programs. Also, University personnel could perhaps make a contribution by working with Mi'kmaq educators and secondary school teachers to strengthen math and science education at the pre-university level. Such collaboration might extend to the organization of math and science-based summer camps for promising young Mi'kmaq students.

The University also needs to move much further in having its staff better reflect the Mi'kmaq presence among the student body. The number of Mi'kmaq employees in the University, which is one of the largest employers in the Province, is similar to student numbers a couple of decades ago -- less than a dozen persons and no one appointed to a tenured faculty position.

Curricula that include an awareness of cross-cultural differences and issues in race relations are also important for non-Aboriginal students to be exposed to.

The Mi'kmaq presence in the curriculum of university degree programs is also quite weak. This issue is important for two

reasons. First, Mi'kmaq students need to have a curriculum that is relevant to their educational needs and reflective of their cultural background, both to enhance their motivation to study and to equip many of them for work related to their communities upon graduation. It is especially important to offer courses in the Mi'kmaq language for all the Aboriginal students studying in the metropolitan area. Secondly, curricula that include an awareness of cross-cultural differences and issues in race relations are also important for non-Aboriginal students to be exposed to. This is particularly important in the professional schools of the University, whose graduates go on to work with clients from different cultural backgrounds --for example, the graduates of teacher education programs who will go on, in many cases, to become the teachers of Aboriginal students.

Conclusion

In this article, I have tried to summarize the various ways in which the research, teaching and administrative resources of the University have contributed to the process of Mi'kmaq socio-economic development over the past couple of decades. As might be expected, a major part of the University's role has been to provide, for the first time in its long history, post-secondary education to a large and growing number of Mi'kmaq students. This has been done not only in the regular degree programs of the University, but also in special transitional programs and in degree/ certificate courses of study established specifically to meet Mi'kmaq educational needs.

Through this role, but also more directly through joint projects, the University has also contributed to the development and strengthening of Mi'kmaq institutions, notably the Ulnooweg Development Corporation, Mi'kmaq Family and Childrens' Services, and other social agencies.

While a good deal has been accomplished, progress has to be measured against a University record that at best ignored the educational and research needs of the Mi'kmaq community for over a century, from the founding of the University in 1818 to the beginning of the 1970's.

While a good deal has been accomplished, progress has to be measured against a University record that at best ignored the educational and research needs of the Mi'kmaq community for

over a century, from the founding of the University in 1818 to the beginning of the 1970's. Progress must also be measured against the financial cost of the special educational and other programs that have been described in these pages -- costs which have almost invariably been met by direct external grants from federal departments rather than from the University's or the Province's educational and research dollars. In this connection, Mi'kmaq spokespersons point out that the province receives, on an annual basis, millions of dollars in the form of grants for equalization, health and post-secondary education. These amounts are calculated on the basis of the provincial population, a count that includes the Mi'kmaq, yet they have arguably seldom received the benefits that such funding provides for the rest of the Nova Scotia population.

Finally, the record of achievement must also be measured against what remains to be done fully to realize the objectives and priorities summarized at the end of Part II of this article. This raises the question whether the activities of the University in relation to the Mi'kmaq community have been optimal under the circumstances, or whether new directions and new approaches should be pursued. I have argued that, for the most part over the past two decades, University personnel have tried to respond constructively if not always perfectly to Mi'kmaq priorities. This approach is the correct one, much preferable to personnel in the University trying to determine unilaterally what is good for the development of Mi'kmaq communities and attempting to impose these priorities on them.

A shortcoming of the responsive approach as it has manifested itself, however, is that it can be rather ad hoc and sporadic in nature, with initiatives coming and going, not necessarily coordinated with each other and not planned over the longer term. In view of the relationship that has developed between the University and the Mi'kmaq community over the last two decades, it may now be useful to think about a relationship that is more planned and forward looking in nature. This might begin with senior personnel from the University sitting down with the

I have argued that, for the most part over the past two decades, University personnel have tried to respond constructively if not always perfectly to Mi'kmaq priorities.

In view of the relationship that has developed between the University and the Mi'kmaq community over the last two decades, it may now be useful to think about a relationship that is more planned and forward looking in nature.

Mi'kmaq leadership to discuss the issues likely to face Mi'kmaq communities over the coming decade, and ways in which a strengthened partnership with the University might be helpful in addressing them. As the movement toward self-government continues, there will certainly be important but unresolved issues and unmet educational needs to which the University can surely contribute. The struggle to do so will continue to enrich the University and help it fulfill its mission in the region and beyond.

18

WHAT THE STUDENT REFUGEE BRINGS TO CAMPUS

by Tom Faulkner

Since 1978 campus committees of World University Service of Canada (WUSC) have sponsored about 400 student refugees.

Since 1978 campus committees of World University Service of Canada (WUSC) have sponsored about 400 student refugees from Africa, Asia, Latin America and the Middle East. In co-operation with Canadian immigration and United Nations authorities, the Ottawa office of WUSC screens applications and interviews candidates in their country of asylum, then submits the applicants to local groups who choose a student refugee for sponsorship. The local WUSC committee helps the student refugee to find suitable accommodations, gain admission to academic programmes, and get advice and support as needed. Here at Dalhousie University the university administration, student union, faculty association and Beaver Foods have agreed to share the costs of fully supporting two refugee students every year. After one year the student refugee is expected to be financially independent.

The programme has been highly successful. Capable students who are *bona fide* refugees find themselves in good academic programmes with adequate financial support and an active network of campus friends who can help them to adjust to Canadian life. One year is usually enough for them to be able to proceed with their studies at Dalhousie without further WUSC sponsorship. Dal's WUSC committee keeps a friendly eye on their progress but moves on to sponsor two more refugee students each year.

Consider the case of a refugee student we will call John. He grew up in an African state that has been wracked by ethnic conflict ever since gaining independence in the 1960s. John attended an African university and did very well—which meant that his scholarship compared favorably with that of the best Canadian

students. Then government forces carried out an "ethnic cleansing" early one morning in John's community. His parents and sisters were brutally murdered but John escaped over the border and spent several months in a UN refugee camp. WUSC representatives on site investigated his story and invited him to attend Dalhousie. He leapt at the chance.

Like most WUSC students John arrived just two weeks before classes began - a certified refugee but lacking the usual university records.

Like most WUSC students John arrived just two weeks before classes began - a certified refugee but lacking the usual university records. He had finished most of his undergraduate science studies in Africa but Dalhousie put him into a first-year program until his abilities could be properly assessed. And the students and faculty members on the WUSC committee helped him to find an apartment, get oriented and make friends.

John turned up in my first-year introduction to comparative religion. The October assignment involved a study of "ritual" - a standard tool of analysis that the class had to apply to their own experience of Thanksgiving in a Canadian home. John was reserved at first but, as the other students compared notes on who sits where at the table and who carves the turkey, he suddenly came out of his shell and started telling them about the harvest festival in the village where he grew up. I recall John describing 20 men and women sitting around a single vat of homemade beer, each of them sipping through their own long straw from the communal supply. The Canadian students were amused at first, then intrigued. And then they began to notice new things about their own version of Thanksgiving. John ended up with two invitations to Canadian homes for Thanksgiving dinner.

John finished his first year and by that time his African university transcript had caught up with him. He went straight into the final year of an honor degree in science. Between the usual scholarship and bursary funds that Dalhousie offers to its best students, and savings from a backbreaking summer of planting trees in the Rocky Mountains, John was able to fund himself after the initial year of support from the WUSC refugee program. And from Dal

he went on to successfully complete graduate work at another Canadian university.

His success is typical of WUSC refugee students. Things had gotten off to a rough start but his own determination and the support of the local WUSC committee helped him to establish himself within one year. What is particularly striking to me is the way that his presence enriched the education of the Canadian students at Dalhousie. Having someone who sees things from a radically different perspective makes it easier to step outside our own shoes and into someone else's—and that is a skill that is essential to scholarship in the humanities and the social sciences. John showed us how to do it. The students will remember the lesson that he gave long after they have given up trying to drink beer through a two-metre straw.

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There is something else that WUSC refugee students bring to campus: an opportunity to make an important ethical decision. Consider, for example, the contribution of $10,000 that the Dalhousie Faculty Association (DFA) makes to the program every year. The DFA collects dues and mobilizes volunteers in order to serve its members. It promotes academic freedom and better working conditions for faculty and librarians. Despite numerous appeals from various charities for donations, the DFA is expected to channel its funds and energies into actions that benefit its own members directly. And many of those members have legitimate reservations about their professional association diverting resources into other activities, no matter how worthy a particular charity may be - particularly when salary rollbacks and nonreplacement policies are reducing DFA financial reserves.

But the DFA has found that the WUSC Student Refugee Sponsorship Programme deserves its support. DFA Members know that it is a well-run project that serves scholars in the Third World who urgently require assistance. It benefits the host campus by bringing interesting and capable students to it, and it makes good use of local resources by involving individual members of the WUSC local committee. DFA Members know

The WUSC Refugee Student Sponsorship Programme is tailor-made for faculty associations who want to put some part of their resources behind an experienced effort to aid university people overseas in ways that only universities can.

that they can trust the programme to select student refugees with a real need, and to support those student refugees on their own campus long enough to launch them on a successful course of study in Canada. This is not just another appeal for a donation to mitigate a disaster somewhere else. Faculty associations receive such appeals all the time. Instead the WUSC Refugee Student Sponsorship Programme is tailor-made for faculty associations who want to put some part of their resources behind an experienced effort to aid university people overseas in ways that only universities can.

The same logic applies to the student groups, administrative units and caterers who contribute to the WUSC refugee program at Dal. Everyone here is faced with serious cutbacks to budgets. Yet they continue to allocate significant support to a program that mobilizes university resources to do some good for university scholars who have suffered terribly in other parts of the world. And those same refugee students then make their own contribution to Dal and the region. There are still some who ask on campus, Can we afford such altruism in times of reduced budgets? But most are ready to reply that we get as much back as we give. It is not altruism; it is just good sense.

19

MANAGING VOLUNTEER FIREFIGHTING IN THE REGION

by John Benoit[1]

Introduction

It is 2:00 p.m., Sunday at the Legion in Waverley, N.S. About a dozen exhausted men are sitting at the tables, drinks in hands. Since Friday morning they have had an average of three hours of sleep. Since Friday evening they have participated as instructors in a course known as Incident Command. Removing another four hours for meals and personal hygiene, these dozen men have worked 36 hours each, much of it in cold wind and rain blowing off the lake at all hours. In darkness, the sequence was the same: prepare for the next exercise, start the exercise, evaluate student performance, return to the garage, critique student performance. During daylight, the instructors operated the simulator and conducted classes including case studies and discussion.

The dozen men are all volunteers. When they return home they will quickly fall asleep and wake up next morning to go to work. At work, they will enthusiastically discuss the weekend experience and hope to be invited to teach at the next offering of Incident Command. Tuesday evening, most of these same people will report to their fire halls in different parts of rural and suburban Nova Scotia, spending four hours training other volunteers. This time the training will more likely be firefighting rather than Incident Command. Next Saturday they will sit in a booth at the local mall, fundraising for the volunteer fire department, imparting fire prevention tips to the general public. That evening they will dance with their partners at the dance organized by the fire hall for further fundraising. The partner will have baked squares to be served at the dance. Afterwards, both will clean the dance hall which also serves as a community

centre, bingo hall and meeting hall for the volunteer fire department.

The Volunteer Fire Service

Do they actually fight fires?

Do they actually fight fires? Occasionally. Most common will be chimney fires brought on by the use of wood stoves. Similarly, brush fires are common in the spring when the locals have dead grass in their barn from the previous winter. Perhaps once a year they will fight a major structural fire which will save a residence from total loss (Nova Scotia Fire Marshal, 1992). Occasionally, they will be called to an auto accident on the highway. This will likely save the most lives. The task will be to extricate victims from the crushed automobile, turning these victims over to the ambulance service. Other volunteer firefighters will keep watch over the gas tank lest it ignite. Twenty-four hours a day, seven days a week, fifty weeks a year (two week vacation), year after year, typically fifteen to thirty years, these volunteers will wear pagers which could signal an alarm at any time.

Some 8,000 Nova Scotians and 94,000 Canadians volunteer their services as firefighters and officers (Benoit, 1990a). In Nova Scotia, some 310 volunteer departments respond to about 25,000 calls each year. If these persons were paid, then the municipalities of Nova Scotia would be paying out about 60 million dollars per year.[2] In fact, Nova Scotia municipalities pay about 35 million dollars. Thus, volunteers provide 25 million dollars of service each year, if we count fire suppression as the only service.

If a volunteer fire department did not respond to a single major fire, it would still provide a lot of service to its community.

If a volunteer fire department did not respond to a single major fire, it would still provide a lot of service to its community. Much of this service would not be intended but it is a benefit nonetheless. Let's consider what these benefits are. In order to put a fire out, water must be applied to the fire. Getting water to the seat of the fire requires:

1) the right equipment (capital);
2) trained teams of personnel (human capital);
3) personnel (labour);
4) a place to protect the equipment (land).

Of these "factors of production" only personnel is virtually free if volunteers are used. The remaining factors are relatively less expensive than paid labour. However, they are expensive enough. A pumper will cost about $200,000. A tanker may cost about $50,000. Both are necessary to fight a rural structural fire. In order to ensure that the volunteers are properly and legally protected, about $1,500 must be spent per volunteer position on protective clothing, Self Contained Breathing Apparatus (SCBA) and so on. The personnel will train, and the apparatus will be housed in a fire hall (which typically includes a community hall for fundraising). This fire hall will cost about a half to one million dollars.

The typical rural fire department will require about $100,000 per year to operate effectively. Usually, only about a half of this amount will be provided by the municipality. The other half is derived from the fundraising of the volunteer fire department itself.

The very act of fundraising confers benefits on the community.

The very act of fundraising confers benefits on the community. The volunteer firefighter may not wish to organize community events for their own sake. Nevertheless, in order to raise money to respond to fires which are becoming less frequent, the community benefits. Let us consider these benefits:

1) fires are extinguished even if fire prevention measures make them less frequent;
2) emergency medical service is provided (more on this later) (Anderson and Clary, 1987);
3) hazardous material spills are contained allowing experts to dispose of them (a rare event);
4) technical training is given to "middle class" volunteers (e.g. mechanical skills, driving skills) (Benoit, 1990b);

5) management training is given to "working class" volunteers (e.g. running meetings, accounting, decision making) (Benoit, 1990b);
6) entertainment is provided to the community in order to fundraise (e.g. dances, bingos, suppers, etc.);
7) the youth are given worthwhile tasks;
8) "ladies auxiliaries" are formed providing a social outlet and a source of funds;
9) the unemployed are made employable through confidence building, training and networking. (This hypothesis must be tested.);
10) the volunteer fire department is an enduring model of a public private partnership, providing a service in fiscally constrained times. (This hypothesis is about to be tested.)

Lest volunteer fire departments be seen as paragons of social virtue, let us consider some of their vices;

1) they have been white male social clubs resistant to reform (Benoit, 1990a). This is slowly changing;
2) many have squandered their very success in fundraising by making questionable purchases;
3) responding to alarms often drains productive labour from work places.[3]

Dalhousie's Role

Dalhousie University has been involved with the management education of volunteer fire officers since 1986.

Dalhousie University has been involved with the management education of volunteer fire officers since 1986 and most intensively since 1989. In 1989, aided by a grant from the Windsor Foundation, the Volunteer Fire Service Leadership Program was established at the Centre for Public Management of Henson College. This is a management education program by correspondence, designed to be completed by volunteer fire officers in a 10 month period. It is offered across Canada. To date, some 125 fire officers from all ten provinces and two territories have completed the program. The majority of the students are from the Maritime Provinces. One reason is because

students from the Maritimes can proceed to the four year, twelve course certificate in Fire Service Administration. Another reason is because, historically, the fire management education programs of Henson College have had their greatest impact in the Maritime Provinces.

What is the content of the Volunteer Fire Service Leadership Program?

What is the content of the Volunteer Fire Service Leadership Program? The student is exposed to these general themes: organizational behaviour, service delivery and finance. The specific lessons are as follows:

THEME	LESSON
Organizational Behaviour	Organizational Structure
	Recruiting Volunteers
	Training Volunteers
	Motivating Volunteers
	Dealing with Change
Finance	Budgeting and Accounting
	Fundraising
	Purchasing Apparatus
Service Delivery	Rural Water Transport
	Fire Prevention
	Hazardous Materials
	First Response Planning
	Emergency Medical Service Delivery

The curriculum is designed to address major trends facing the rural volunteer fire department. For example, problems of recruitment and retention of volunteers are addressed in the lessons. For example, historically many buildings were destroyed by fire because the rural fire department, not having access to fire hydrants, ran out of water before the fire was extinguished. Now volunteer fire departments can carry extra water in tankers and even shuttle water from a lake or stream to a barn or silo. For

example, the advent of cheap automatic defibrillators, requiring only hours of training, allows the volunteer fire department to save more lives of heart attack victims. In most rural areas, a volunteer fire department will arrive before an ambulance. Indeed, it may <u>be</u> the ambulance.

Graduation from the program requires that students successfully complete six essay assignments and write a three hour invigilated examination. Because of this, about one third of the students who register do not graduate. Most of these drop out within the first three months. However, about 10% receive a failing grade. This is a fairly typical attrition rate in correspondence education. It arises from the lack of face to face contact and the fact that there are no educational requirements to enter the program.

What is the future of the volunteer fire service in the Maritimes?

What is the future of the volunteer fire service in the Maritimes? Ten years ago most "experts" concluded that it was a dying enterprise. However, reports of its death seem greatly exaggerated. One trend is that suburban volunteers will remain as local government is hard pressed to support a fully career (i.e., fully paid) fire department. Over a decade ago, suburban areas gradually acquired paid firefighters to deal with a growing fire threat. Eventually, the volunteers would atrophy. Now, however, the opposite trend is evident. Volunteers are being introduced to hitherto full career departments as central cities and suburbs amalgamate. This phenomenon is a response to an almost national trend to amalgamate adjacent municipalities, presumably to find elusive economies of scale. The result is what is known as a composite fire department (i.e., partially paid and partially volunteer).[4] However, the marriage is likely to be an uneasy one. Paid firefighters often feel that volunteers are replacing them. The volunteers are the "thin edge of the wedge." Volunteers resent the loss of autonomy. They may not have to worry about fundraising so much but now they become accountable to the municipal government. Whether such a structure can survive without the best possible management remains a moot point.

The challenge which faces Dalhousie is to learn more about these composite departments: learning what works and what doesn't. This is the research agenda. The next challenge is to incorporate this research, and that of a handful of other social scientists, into an updated version of the Volunteer Fire Service Leadership Program. Should such a challenge be met, then Dalhousie can provide continuing management education for these composite fire department which will be relevant in the suburbs of San Diego, California, let alone Surrey, B.C. or Sackville, Nova Scotia. The pressures to amalgamate municipalities are greatest in Atlantic Canada compared with the rest of Canada or the United States. As a consequence, the region serves as a laboratory for North America. The coproduction of fire service will be able to inform the rest of North America, if the resources can be found to develop a Composite Fire Department Leadership Program. This is one of the challenges which faces Henson College at Dalhousie University over the coming years.

The pressures to amalgamate municipalities are greatest in Atlantic Canada compared with the rest of Canada or the United States. As a consequence, the region serves as a laboratory for North America.

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Endnotes

1.   The author thanks the Centre for Public Management, Henson College for agreeing to deliver and then delivering the Volunteer Fire Service Leadership Program since its inception in 1989. The author also thanks the Windsor Foundation for providing the research and development funds.

2.   A precise costing has not been done yet. However, the potential cost per call can be estimated by dividing the sum of Halifax and Dartmouth annual fire department expenditures by the sum of the number of calls for service in both municipalities. The result is about $2,400.00 per call. Multiplying this result by the number of calls provides the estimate of the cost of fire suppression if a fully paid firefighting force was used. The value of the volunteer component is harder to determine. The annual expenditures of Halifax, Dartmouth, Sydney, Westphal-Cole Harbour, Sackville, Bedford, Truro, Glace Bay and Yarmouth were added. The 35 million dollar sum is overestimated by the volunteer components in all but three departments who have 1 to 4 drivers. This estimate is then subtracted from the 60 million dollar estimate to calculate the value of service volunteer firefighters provide.

3.   In some areas, volunteers will leave their jobs for an hour or two to protect an adjacent community. This starts a chain reaction. A small fire requiring, say, 12 firefighters, may involve 100 firefighters in "covering off" in adjacent municipalities.

4.   In Canada, Newfoundland and Saskatchewan have recently undergone some degree of municipal amalgamation. Currently, Nova Scotia, New Brunswick and P.E.I. are undergoing forms of municipal amalgamation. Ontario and Quebec are considering forms of municipal amalgamation.

      Within the Maritime Provinces, larger composite departments will be formed by the amalgamation of fully career and volunteer departments or hitherto smaller composite departments. This process is underway in: Industrial Cape Breton; Metro Halifax; Charlottetown; Miramichi City; and perhaps Moncton/ Dieppe/Riverview.

20

DISASTER RELIEF, DEVELOPMENT AND PEACEKEEPING: FRAGILE CONNECTIONS
Perspectives drawn from the International Red Cross and Red Crescent Movement

by Ian McAllister

Preamble

In the Spring of 1995, the Lester B. Pearson Canadian International Peacekeeping Training Centre was opened at Cornwallis Park, Nova Scotia. The centre has subsequently designed and implemented a substantial number of courses, conferences and other events - drawing to the sessions senior military, police, United Nations, government and non-governmental officials from across the world. Field visits to New York, Haiti and other venues are built into the programme.

While it was becoming increasingly clear that, as a growing number of international crises were occurring, there was need for additional professional training facilities around the world, it was by no means certain that Canada would see fit to play a lead training role, nor indeed that Nova Scotia would be selected to host such endeavours.

Substantially because of the enterprise of its founding president (Mr. A. Morrison), with strategic endorsements by senior politicians, military and foreign affairs officials, the centre was embarked on, appropriately named after Lester B. Pearson in his role as Canada's Nobel Prize winner for peace. Cornwallis Park was a politically attractive site, given that the military base was being phased out and excellent facilities were already in place. The impact of a base closure on the Annapolis region was of significant social and economic concern: from a policy vantage

point, the new Peacekeeping Training Centre was viewed to be an important regional development project.

Connections between the new centre and Dalhousie University have been mutually supportive. Several faculty members participated in early planning sessions held at the centre; some have continued to play a role in teaching segments of courses, participated in workshops and some linked research undertakings. Several students from Dalhousie's Masters of Development Economics programme have served as interns at the Centre (gaining invaluable experience in the process) and others have attended short courses, often of great help for thesis research. Full-time faculty from the Centre, as well as some of the course participants from overseas, have contributed to seminars at Dalhousie University.

The following paper, written for the Peacekeeping Management, Command and Staff Course of the Pearson Centre, focuses on the fragile connections between disaster relief, development and peacekeeping and draws particularly on the author's work with the International Red Cross and Red Crescent.

The Red Cross, in particular among international NGOs but certainly not exclusively, has many links with Atlantic Canadian Universities. While blood donorship and other Canadian Red Cross services (such as water safety) are the most obvious connections, a growing number of Dalhousie students and faculty have become involved in disaster relief work. Irene Knoben, for example, was sponsored by the Netherlands Red Cross to undertake research for a (Dalhousie) Masters of Development Economics thesis on refugee - hosting countries (working in the refugee department of the IFRC in Geneva as part of the process), while Sarah Erlichman both served as a volunteer for the Canadian Red Cross after the most recent earthquake in Los Angeles and has also taken many of the Red Cross courses (she is currently an intern at the Peacekeeping Training Centre). Patricia Griffith completed an MDE thesis on non-governmental organizations, with a review of the work (largely in the region) of

the Nova Scotia branch of the Canadian Red Cross. Christel Hervet is currently writing a thesis on the work of Médecins Sans Frontières and Oxfam, drawing on Red Cross resources in the process. James Mackin, after a period with the UN in Bosnia, also (as part of his MDE programme experience) has participated both on Red Cross and Pearson Centre courses. Hank Spierenburg has just completed an MDE thesis on refugees and asylum seekers, especially drawing upon recent Rwandan case materials. He too has participated in Red Cross and Pearson Centre workshops.

Introduction and Synopsis

Complex disasters bring together many organizations. Each has its own institutional history and culture, often indeed its own jargon. This paper examines the evolution of one of the world's great humanitarian organizations. The International Red Cross and Red Crescent Movement dates back to the middle of the last century and, over-time, has witnessed numerous changes both on the world scene and within its own fabric. Today it has deep roots within Nova Scotia, as well as across Canada and much of the globe. Wars, earthquakes, civil unrest, famines, diseases such as malaria and AIDS, industrial disasters, rural, transport and urban catastrophes - all have resulted in emergency missions led by groups from the Red Cross and Red Crescent.

The purpose of this paper is to indicate something of the history and culture of the Movement - especially elaborating around three themes: disaster relief, development and peacekeeping.

The paper begins with a brief profile of the Red Cross and Red Crescent - from its origins (and some of the lessons of those earlier years) to the post-World War II era, when a rapid expansion of national and international NGOs has generated a competitive climate for the provision of humanitarian aid. This latter period also saw, within the Red Cross and Red Crescent Movement, a quite radical re-ordering of priorities - particularly as Third World needs became better recognized and public funds for overseas emergency aid became more accessible.

Many of the institutional changes that have been occurring within the Red Cross/Red Crescent have shown striking similarities to those taking place within other maturing NGOs, such as Oxfam and Médecins Sans Frontières (e.g. a greater emphasis on strategic management) and most NGOs have also been encountering similar types of funding constraints (e.g. difficulty in attracting resources for longer-term disaster prevention, preparedness and post-disaster recovery phases, as distinct from

more traditional and immediate forms of emergency aid, such as for food, medicines and tents).

This paper continues to explore two models (developed initially by a UNESCO-Harvard research project) and suggests that such ideas, while not yet systematically applied within the Red Cross and Red Crescent, are becoming more influential. The Movement has, over the past century and a quarter, built up a dauntingly complex institutional memory, including conventions and numerous operational principles. These, as might be anticipated, are routinely re-examined and a number of current issues are discussed. The focus of the initial part of the paper is on the links between (and problems associated with) disaster relief and development.

The discussion then moves to explore a sample of issues that peacekeeping and peacemaking processes introduce. Tensions are identified that occur for an organization that is emphatically neutral and, at the same time, a pro-active proponent of humanitarian principles.

Profile of the Movement

The International Red Cross and Red Crescent Movement encompasses a family of 169 National Societies (1996),[1] hinged with the International Committee of the Red Cross (ICRC) and the International Federation of Red Cross and Red Crescent Societies (IFRC). The National Societies vary enormously in scale, programme responsibilities, and depth of human and material resources. The Movement is committed to seven Fundamental Principles[2] and pursuit of the Geneva Conventions. The ICRC concentrates substantially on working in and regarding civil unrest and war-related situations; its core staff members are Swiss. The IFRC focuses largely on natural disasters, rehabilitation, community development, health programs (such as AIDS prevention) and the strengthening of the National Societies; its staff are from across the world—for the most part drawn from National Societies. In many respects the IFRC is a

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The International Red Cross and Red Crescent Movement encompasses a family of 169 National Societies (1996),[1] hinged with the International Committee of the Red Cross (ICRC) and the International Federation of Red Cross and Red Crescent Societies (IFRC).

373

support secretariat for the National Societies. Both the ICRC and the IFRC are located in Geneva, with regional delegations.[3] There are numerous occasions when the ICRC and IFRC reinforce each other at planning and operational levels, given the frequent overlap of functions in complex post-war and revolutionary situations, including the support of refugees. Total membership of the Red Cross and Red Crescent has been indicated as 250 million; the 1996 aggregate budget of the whole Movement is loosely estimated as some US $30 billion (most being raised by, and administered within, wealthier National Societies).[4]

Origins and Early Lessons

The Red Cross Movement traces its origins to Henry Dunant, a Swiss businessman.

The Red Cross Movement traces its origins to Henry Dunant, a Swiss businessman, whose book (*Un souvenir de Solferino*, 1862) led to the formation of the "International Committee for Relief to Wounded Military Personnel" (later ICRC), to the calling of a diplomatic conference in Geneva and to the consequent "Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field" (1864).[5] The Swiss flag in reverse (a red cross on a white background) came to be adopted as the emblem of the new Movement and an international symbol of humanitarianism. In Muslim countries, the red crescent on a white background became the equally respected emblem of the same Movement.[6]

The initial emphasis of the Red Cross[7] was on wars and on war-linked activities.

The initial emphasis of the Red Cross[7] was on wars and on war-linked activities: care for the wounded, care for war-displaced persons, tracing, diplomatic negotiation for the promulgation of humanitarian law to cover such issues as the treatment of prisoners of war. For much of the pre-World War II years, Europe was the main theatre of Red Cross and Red Crescent attention, although major disasters elsewhere became short-run points of concern (e.g., the Tokyo earthquake of 1923).

Among lessons to be drawn from these earlier experiences have been:

- the value of the Movement being, and being recognized as, uncompromisingly neutral;

- the importance of the Red Cross and the Red Crescent as internationally-respected emblems of humanitarian service, neutrality and non-aggression;

- the under-pinning importance of volunteers with basic training - able to respond quickly to crises, both at local levels and between regions; and

- the value of the Geneva Conventions (both as entry points and as foundations for international humanitarian law) and also of a dynamic body of "principles and rules" - to guide conduct across the Movement.

The need to develop small cadres of permanent staff also became increasingly recognized, as did the requirement that volunteers be given practical and ongoing challenges during peace-time and non-emergency periods (for example performing social service activities); otherwise volunteers lost interest and failed to remain at anything approaching an adequate state of disaster preparedness.[8]

NGO Growth and Competition

The post-World War II years saw rapid expansion in the number and coverage of both national and international nongovernmental organizations.

The post-World War II years saw rapid expansion in the number and coverage of both national and international nongovernmental organizations (NGOs). While the Red Cross was (and still inevitably remains) in competition for emergency and development funds (e.g., with Save the Children Fund, Oxfam and Médeçins Sans Frontières), the Movement has continued to expand and also to diversify its responsibilities. There was, for example, a mushrooming of numbers of National Societies, in step with the process of independence of former colonies. (No

nation state is permitted more than one National Society.) There was also a marked increase of depth of many National Societies (including the spread of local branches - each Canadian province now has one), and a significant expansion in scale (including within the Geneva-based ICRC and IFRC headquarters) and functions (the war and natural disaster focus broadened to include more primary health services, complex blood collection and processing operations, environmental, refugee and community development activities).[9]

The Red Cross, despite its diversification and the spread of other NGOs into many of its traditional fields of endeavour, has retained a number of distinctive qualities. These include:

- A special international status (UN observer status, for example, in the cases of the ICRC and IFRC), with a "guardian role" in the protection of the red cross/red crescent emblems and the promulgation of humanitarian law, built around the Geneva Conventions;

- A massive amount of international recognition and hence also international expectation. Both the ICRC and IFRC have been awarded, as institutions, Nobel Peace prizes;[10]

- Considerable international representation and depth, including numerous delegations, advanced communication systems and strategically-placed warehouses. The Red Cross and Red Crescent networks enable the organization to access global information and to transfer and (usually reliably) place resources across the world, with great rapidity;

- A body of detailed documentation that provides the basis of its institutional memory. Much of this documentation is quasi-legalistic; it includes principles and rules for such activities as disaster

relief and international development cooperation. Such principles and rules (well-debated) form frameworks and procedures for action. Obviously training is an essential link between general guidelines and the specific kinds of judgements necessary in actual field operations.[11]

- A wide diversity of skills and specialized knowledge from within the ranks of volunteers and staff. Such skills are not only of a technical nature but also call upon many cultural insights, comparative experiences and languages. Human resources are matched, especially in many richer countries, by substantial physical infrastructure facilities. The Red Cross Museum, immediately below the headquarters of the ICRC and across the road from the UN Palais in Geneva, is an impressive repository of a cross-section of the Movement's records and visions.

In many ways the Red Cross/Red Crescent is a complementary grouping to the United Nations.

In many ways the Red Cross/Red Crescent is a complementary grouping to the United Nations. Indeed the International Federation (established in 1919) was, until 1991, called the League of Red Cross and Red Crescent Societies, a non-governmental parallel to the erstwhile League of Nations. On both policy and operational issues, the Red Cross works closely with many UN agencies, including UNICEF, UNHCR, (UN)DHA and UNDP—sometimes, for example in the case of refugee camps, acting as an implementing agency.

Whereas many of the great international NGOs distribute much of the aid they generate to "unrelated" local organizations, the Red Cross and Red Crescent Movement already has its own "family member" (National Society) as the implementing/coordinating unit in each country that may require assistance. This is generally an enormous strength. It means common procedures and established working links already should (and often do) exist. Precious time can be saved in times of crisis.

If, of course, that particular National Society is weak, fragmented or even corrupt, problems occur and lives can unnecessarily be jeopardised. Some donor National Societies prefer, at such times, to bypass the "operating" National Society and work with other local bodies. This can be argued to have the effect of further weakening the local Red Cross Society, when the crisis should be seen as an occasion to reform and strengthen that National Society. The appropriate action in such cases is a matter of periodic contention within the Movement.[12] The ICRC, in particular, treads a wary path in conflict and near conflict situations, as it struggles to promulgate the Geneva Conventions and the neutrality of the Movement's humanitarian aid.

Changing Priorities and Needs

The earlier post-World War II era not only saw expansion in the numbers of National Red Cross and Red Crescent Societies (and their branches), the period also witnessed significant changes in the priorities of the Red Cross.

The earlier post-World War II era not only saw expansion in the numbers of National Red Cross and Red Crescent Societies (and their branches), the period also witnessed significant changes in the priorities of the Red Cross. These included a growing interest in, and influence of, developing country concerns (e.g., child nutrition, primary health care, the meeting of basic needs, and natural disaster reduction). Coincidentally, the National Societies in many of the industrialized countries (and Canada was no exception) became quite marginalized in many of their traditional health and social welfare fields, as socialist/liberal governments accepted greater responsibility for the provision of a growing number of these services. When the early 1970s saw a rapid expansion in the scale of Northern government foreign aid budgets, numerous Northern Red Cross National Societies joined forces with their national foreign aid agencies. Often they became conduits for relatively large volumes of government aid to the South—both for relief and, increasingly, for a mix of small-scale community and health development projects. The Red Cross Societies tended to have valuable grass-root linkages that could facilitate foreign aid placement—particularly useful in countries where government to government relationships proved problematic. The relief-development continuum began to be talked about.

New diseases and social situations then also began to claim attention, (AIDS and street children being examples); new global priorities (such as environmental concerns as expressed at the Rio Earth Summit) additionally influenced many National Societies, often as a means of attracting volunteer groups. Events at Chernobyl, Bhopal and the destruction of the Kuwaiti oil fields re-inforced this trend.

New phases have continued to open up.

New phases have continued to open up. The dramatic changes taking place in the former Soviet Union, following the demise of the cold war, across Eastern Europe and in formerly Soviet-aligned regimes such as Vietnam and Somalia, have called for increased transfers of resources as their traditional social service systems crumbled. New claims upon aid budgets have been threatening less politically fashionable areas that still desperately require support, including Ethiopia, Liberia, Bangladesh, Haiti and the Sudan. Rwanda, Zaire and Burundi add yet new dimensions of horror to the world scene, while Nigeria shows signs of a major calamity in the making. In the case of many "traditional aid recipient" countries, a sense of aid fatigue appears to have become widespread, not only in the attitudes within donor government aid agencies, but also in some of the Northern National Societies. This aid fatigue is fuelled by a quite widespread view that many past aid records have been ineffective. Success stories have tended to be lost sight of and certainly not gained much media attention.

Perspectives for the Red Cross drawn from other NGOs

David Korten, in a review of a cross-section of NGOs, argued that an evolutionary process can be observed in many NGO program strategies.

David Korten, in a review of a cross-section of NGOs, argued that an evolutionary process can be observed in many NGO program strategies (Figure 1).[13] Korten's framework provides useful insights from which also to analyse the Red Cross Movement. In some larger National Societies (e.g., Amcross, the British Red Cross, Cancross, Finncross, the Swiss Red Cross, the Bangladesh Red Crescent, and the Ethiopian Red Cross), there are indications that the National Society is at, or entering,

Korten's third stage of evolution. Emphasis is placed, for example, on strategic management and on sustainable systems development, as well as on all or most of Korten's other third stage functions.

The majority of National Societies appear to be more comfortably placed within Korten's second stage with a focus on relief or development projects.

The majority of National Societies appear to be more comfortably placed within Korten's second stage with a focus on relief or development projects. In the case of new National Societies, the first stage is probably the best fit with an emphasis on a variety of short-term and rather ad hoc activities.[14] However, it also is apparent that in many National Societies there is some criss-crossing of emphasis. For example, logistics management still plays an important role in countries facing the scale of crises routinely encountered by the Bangladesh Red Crescent Society; in such cases the damage caused by massive catastrophes (such as cyclones or floods) can readily overwhelm more "strategic management" commitments, however sincerely these may have been embarked on. Even in relatively well-funded and established National Societies (and the IFRC) one can periodically observe "logistics management" being the predominant "culture" of junior or middle management, whereas strategic management may be given emphasis by the senior management (and occasionally vice versa).

The progress even from stage one to stage two of Korten's model is not necessarily easy.

The progress even from stage one to stage two of Korten's model is not necessarily easy. This is particularly evident when foreign aid (transferred directly to a National Society from an international aid agency or through a donor country's National Society) is only partially funding a project or, a frequent occurrence, is doing so for an initial phase. Since much Red Cross work begins in desperate settings, requiring quick decisions and the prompt distribution of emergency relief, unsecured promises of aid can readily lead to sights being set high; difficulties subsequently occur when longer-term funding for projects (such as rehabilitation centres, rural health clinics, training institutions) is sought. Without follow-up support, the initial emergency aid can prove to have been of little lasting benefit. There are many examples of underfunded and poorly

maintained projects that have been the outcome of short-term promises or local aspirations, as distinct from longer-term financial commitments.[15]

Figure 1

Three Generations of NGO Development
Programme Strategies

	Generation		
	First	**Second**	**Third**
Defining Features	Relief and welfare	Small-scale self-reliant local development	Sustainable systems development
Problem Definition	Shortages of goods and services	Local inertia	Institutional and policy constraints
Time frame	Immediate	Project Life	Indefinite long term
Spatial Scope	Individual or family	Neighbourhood or village	Region or nation
Chief Actors	NGO	NGO + beneficiary organizations	All public and private institutions that define the relevant system
Development Education	Starving children	Community self-help initiatives	Failures in interdependent systems
Management Orientation	Logistics management	Project management	Strategic management

Source: David C. Korten, "Third Generation NGO Strategies: A Key to People-centred Development," *World Development*, 15, Supplement, August 1987, p. 148.

Funding Issues

Funding for disaster relief, rehabilitation and development purposes is an inevitable challenge for all NGOs today, not least the Red Cross Movement (for example, in relationships with some government aid agencies and also regarding public appeals). Government development assistance agencies, moreover, break their programming into divisions—the sections providing humanitarian relief are often distinct from the country development programme sections of the same organization. Each group frequently develops a separate culture or philosophy. Humanitarian relief is often viewed as a quite distinct activity from institution building or community development.[16] In the case of public appeals, those for disaster relief have tended to be more readily funded than appeals for longer-term development aid. A child being pulled from the rubble of an earthquake or the victim of a napalm attack is, understandably, a focal point for an outpouring of immediate sympathy and funds, when the drama is presented on a television screen. Creeping disasters (such as those caused by eroding lands or ongoing malarial disease) or volunteer-training projects are less newsworthy and, hence, less readily fundable from government aid agencies or public appeals—even though many more lives may be assisted through support for these latter situations.

Recent years have seen considerable down-sizing by many governments as they have wrestled with deficits. There has been some temptation to view the NGO community (including the Red Cross and universities) as able to provide services at lower overhead costs than government departments or the private sector. The temptation can be strong for National Societies to accept underfunded commitments in the hope that everything will work out well. To make matters worse, the United Nations system has become enormously overcommitted and underfunded - not least in precisely the kinds of disaster relief and peace keeping fields that complement the work areas of the Red Cross and Red Crescent.

From Relief to Development

Two models, useful in clarifying, if not bridging, the gaps between relief and development operations, have been designed by Mary Anderson and Peter Woodrow. These are the outcome of a UNESCO-Harvard research project in the late 1980s and are increasingly being used in training sessions (e.g. in Red Cross regional courses and also at the Pearson Canadian International Peacekeeping Training Centre).[17]

The first is a decision tree (Figure 2). Several points will be drawn from this model. Begin with the "do nothing" option. Pressures for the International Red Cross Movement always to become involved in every disaster are strong—both from within the organization and also from governments and the public, regardless of real capabilities. An activist role on all disaster fronts is often believed to be central to the mandate of the Red Cross. Furthermore, an activist image is viewed, by many within the Movement, as essential for ongoing fund raising.
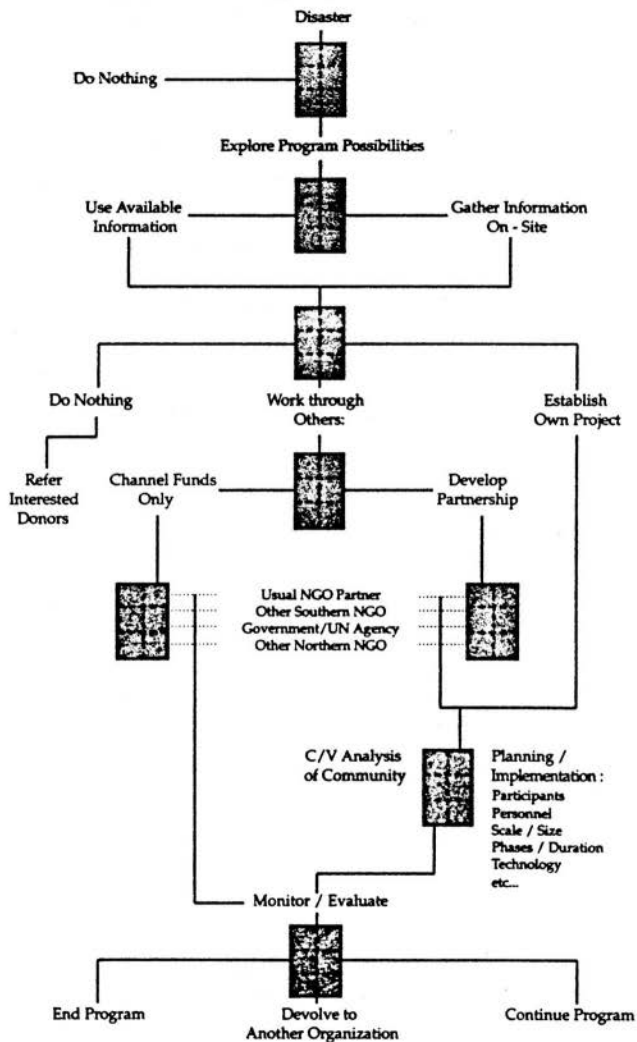
Because of its network of National Societies, the Movement is generally at least as well placed as other organizations to help in a very large number of crises. This is not the same as saying the Movement in fact has adequate capacity to undertake many of the assignments it becomes involved in.

Then take the "work through other" option. Because of its network of National Societies, the Movement is generally at least as well placed as other organizations to help in a very large number of crises. This is not the same as saying the Movement in fact has adequate capacity to undertake many of the assignments it becomes involved in, but only that it may be **no worse placed** than anyone else. Working through non-Red Cross groups, even when capabilities are limited, is often discarded as an option because it "waters down" the Red Cross image or, on other occasions, might compromise neutrality.

Third, the "establish own project option". The temptation to establish Red Cross (particular donor National Society) projects is invariably strong, as an identity mark for the peoples and governments of donor nations. Showing the national flag is of perceived political importance: donor Red Cross National Societies are often viewed as being in a good position to do so.

Figure 2

Decision Tree for Agency Intervention

Disaster

Do Nothing

Explore Program Possibilities

Use Available
Information

Gather Information
On - Site

Do Nothing

Work through
Others:

Establish
Own Project

Refer
Interested
Donors

Channel Funds
Only

Develop
Partnership

Usual NGO Partner
Other Southern NGO
Government/UN Agency
Other Northern NGO

C/V Analysis
of Community

Planning /
Implementation :
Participants
Personnel
Scale / Size
Phases / Duration
Technology
etc...

Monitor / Evaluate

End Program

Devolve to
Another Organization

Continue Program

Source: Mary Anderson and Peter Woodrow, *Rising from the Ashes*, Paris:
Westview Press, UNESCO, 1989, p. 22

384

Figure 3

Capacities and Vulnerabilities Analysis Matrix

|	Vulnerabilities	Capacities
Physical/Material What productive resources, skills and hazards exist?		
Social/Organizational What are the relations and organization among people?		
Motivational/Attitudinal How does the community view its ability to create and change?		

Development is the process by which vulnerabilities are reduced and capacities increased.

Source: Mary Anderson and Peter Woodrow, *Rising from the Ashes*, Paris: Westview Press, UNESCO, 1989, p. 12

Anderson and Woodrow's decision tree usefully reaches down to the community level of analysis, developed in their second model. Figures 3 and 4 distinguish between vulnerabilities (or long-term, fundamental weaknesses in a community) and capacities (or potential strengths). Many NGO activities, especially in times of crisis, may appear most laudable on surface inspection but in fact may not contribute to resolving the basic problems behind the disaster. Indeed, worse, they might destroy such capacities as may already be in place within the local population (e.g., the authority of local leaders, paramedics, etc. can be undermined by

Figure 4

**Programme Options Tested Against
Capacities/Vulnerabilities Analysis**

Immediate Need for:	Range of Program Possibilities:	Impact on Capacities and Vulnerabilities
Emergency Food	A. Feeding centers with Western MDs	⇒
	B. Village distribution and local medics treat severe cases	⇒
Medical Care	C. Village distribution and local health educators train mothers in ORT	⇒

Source: Mary Anderson and Peter Woodrow, *Rising from the Ashes*, Paris: Westview Press, UNESCO, 1989, p. 23.

Sustainable recovery and development, in short, can often be weakened rather than reinforced through well-intentioned, but inappropriate, foreign "assistance".

the sudden arrival of outsiders, who fail to recognize their important roles and then just as suddenly, withdraw - leaving a vacuum). Sustainable recovery and development, in short, can often be weakened rather than reinforced through well-intentioned, but inappropriate, foreign "assistance".

The connections between relief and development may appear obvious, yet such links are often not adequately drawn together.

Rethinking Basic Principles

Complex disasters and unanticipated circumstances of a fast changing world place strains on the most carefully crafted of constitutions and charters. The Red Cross Movement is no exception. Reference has already been made to the Movement's seven "Fundamental Principles". Figure 5 summarises them. While these principles have served the Movement well over many years, they raise important questions that demand ongoing interpretation. Several examples will illustrate these concerns:-

Unyielding emphasis on neutrality (of the Movement) poses desperate moral dilemmas.

Unyielding emphasis on **neutrality** (of the Movement) poses desperate moral dilemmas when field staff encounter corrupt government regimes or fragmented para-military forces and their consequences, particularly in tense or violent situations. In overall terms, it is widely believed that because of its consistent reputation for neutrality, the International Movement has been enabled to intervene in barbaric situations of human rights abuse, to visit prison camps and to defuse explosive confrontations. In field situations, neutrality can be a tough judgement call.

Many of the poorest countries, with the most urgent problems, still have the weakest and least-funded National Societies.

Unity has many interpretations. To speak with one voice on the fundamental basics of humanitarian ethics is one thing, hard though that may be sometimes in practice. Yet if unity is also interpreted to imply some degree of resource equalisation between each National Society (whether on a national per capita or on a "disaster needs" basis), then the Movement is far from practising **equity**, across the world. Many of the poorest countries, with the most urgent problems, still have the weakest and least-funded National Societies. Many richer nations, conversely, have quite affluent National Societies, with relatively luxurious head office buildings and supporting facilities. The sharing process, while admirable so far as it has gone, is still piecemeal and far from systematic.

The author well remembers, for example, the contrasts between the tastefully decorated and magnificent offices of the senior management of the Japanese Red Cross, with wonderful

paintings on the walls donated to that great National Society, and the Hanoi head office quarters of the Vietnamese Red Cross with, at the time, the most spartan of furniture, no fax machine (since corrected) and little space. Yet, at the time of his visit (1990) the Vietnamese Red Cross faced enormous challenges on a minuscule budget.

Figure 5

Seven Fundamental Principles
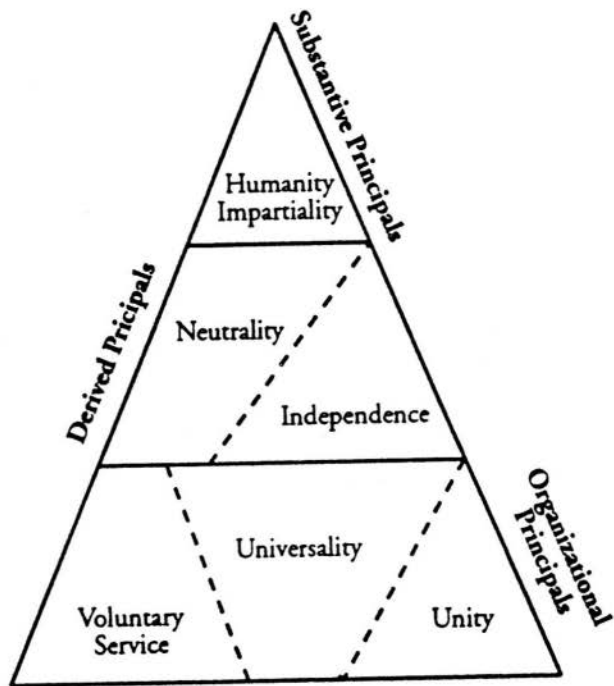
Source: IFRC.

In the case of **independence**, two scenarios might be painted: **independence from government** and other influences; **independence in terms of resource capacities** so as to be self-sustaining. In the case of the former, National Societies often find themselves working closely with, for example, the military for transportation and refugee camp security purposes. Neutrality can readily be at risk or *be perceived* to be at risk if a National Society (or the ICRC/IFRC) depends on the help of a military group - perhaps (as in Somalia and Bosnia) to protect humanitarian aid distribution. Such risks are almost inevitable in complex emergencies and call for good judgement on the ground. In making internal appointments, moreover, National Societies, concerned as they frequently are with logistics management, have often turned to experienced senior military personnel (retired) to assume management positions. Does this jeopardize independence—or perceptions of independence? Obviously it can. Much depends on the particular circumstances.

Neutrality can readily be at risk or be perceived to be at risk if a National Society (or the ICRC/IFRC) depends on the help of a military group - perhaps (as in Somalia and Bosnia) to protect humanitarian aid distribution.

The second example raises issues for rich and poor National Societies alike. In the case of a rich National Society, the policy priorities of its government's foreign aid agency can readily colour Red Cross programming: money can talk. In the case of a poor National Society, donor National Societies can impose, deliberately or unwittingly, the aid priorities of another culture or political persuasion. Either way, independence is at risk. It is obvious, from such cases, that the Fundamental Principles of the Red Cross Movement raise important questions that demand constant re-assessment and interpretation. Despite sometimes bitter debates and critical reviews, collectively they have proven important reference points over time.

The Fundamental Principles of the Red Cross Movement raise important questions that demand constant re-assessment and interpretation.

Relief, Development Cooperation and Peacemaking: Fragile Connections

Especially since the Ethiopian famine of 1984-85,[18] the IFRC, ICRC and many National Societies have devoted considerable attention to ways relief can be more effectively linked to

389

sustainable development, as well as to how international development cooperation can be improved across the Movement. It is well recognized that disaster prevention and preparedness, rehabilitation and development are all activities without crisp boundaries: each hinges on the other. Relief activities cannot be seen in isolation. Recognition of this has now been expressed by, for example, the compilation and endorsement of principles and rules for Red Cross and Red Crescent development cooperation. Provision has been made therein that all National Societies (seeking substantial external support) should draw up frameworks, with long-term strategies clearly articulated, **within which** disaster contingency planning can be situated in as "routine" a manner as possible. These "development frameworks" are signed both by the National Society and the IFRC, as agreements of intent. The concern is that disaster preparedness activities should be reinforced by ongoing programmes and that sudden inflows of aid in response to a crisis should not be allowed to overwhelm longer-term priorities. The reasoning behind this approach has stemmed from experiences following a variety of 'quick-fix' and sometimes inadequately planned projects that have been foreign-aid funded (after several Ethiopian famines, Bangladesh cyclones, and Armenian and Mexican earthquakes). Yet if the logic may seem clear, the application has been far from easy. In large part this is because funding sources have routinely been more sympathetic to immediate disaster needs, nowadays often boosted by a CNN news-bite, than to less dramatic, prevention or developmental requirements. In part it is because some of those within the Movement itself (even at quite senior management levels) downplay longer term dimensions and see themselves as "disaster fire-fighters" in a narrow but focused way.

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Sustainable development requires a context of security. "The Red Cross is not a pacifist but a pacifying movement ... the concept of [development] cooperation strikes a balance between states and peoples ... The Charter of the United Nations reads: 'We the peoples of the United Nations' and not 'We the states' ..."[19] The emphasis of recent peacekeeping has switched from

reducing the tensions that lead to international confrontations to containing intrastate conflicts. But, as Lieutenant-General John Sanderson points out, "we must acknowledge that some never have been modern states and, as a consequence, there is often a severe contradiction between the drive of emerging power groups and the racial and religious balance of the population."[20]

Peacemaking, in the sense of peace-enforcement, is not some new phenomenon. Major colonial powers have practised it routinely. For the UN, however, it represents an "activist" departure, in emphasis, from the historic and proven UN role of peacekeeping. That alone has been far from easy. The former UN Assistant Secretary-General for Special Political Affairs, F.T. Liu, writes, "Throughout the history of United Nations peacekeeping operations, the decision as to whether, when or to what extent force can or should be used has been perhaps the most difficult problem confronting peacekeepers, both at the command level and in the field, both during and after the Cold War."[21] With the exception of the Congo operation, "all other peacekeeping operations..during the Cold War were authorized to use force [only] in self-defence."[22] That limited the field-decision to a definition of self-defence.

Neither Chapters VI nor VII of the UN Charter comfortably cover peacekeeping: indeed Dag Hammarskjold, former UN Secretary General, observed that it must really have been mandated in "chapter six and a half." A number of post-Cold-War events (including the Gulf-War, Somalia, Rwanda and Bosnia) have caused radical review of the UN's role in complex military situations. The same has been occurring in the NGO community and Red Cross Movement.

In the case of the UN, three categories of operations are identified by Kofi Annan, UN Under-Secretary-General for Peacekeeping Operations, in a recent unpublished paper.[23] The first two, he defines as ones "in which the Organization has had considerable success." They are:-

(1) ..."the parties share an interest in a limited settlement consisting of, for example, a cease-fire and separation of forces" (e.g. the Golan Heights and Cyprus);

(2) ..."comprehensive settlements [have been reached] in good faith on the basis of a lengthy political process (e.g. in Namibia, Cambodia, El Salvador, and Mozambique)."

Annan's third category is for cases, as Bosnia and Rwanda, where "soldiers under UN operational authority will be thrust into the violence to do what they can." These situations have been forcing analysis on the possibilities and limits of, in Annan's words "coercive inducement." It also raises dilemmas about carrots and sticks - of great relevance to the NGO community. Humanitarian aid can readily become a bribe or (its withdrawal) a punishment: in either case a political instrument and far from neutral as to distribution or purpose.

Humanitarian aid can readily become a bribe or (its withdrawal) a punishment: in either case a political instrument and far from neutral as to distribution or purpose.

For the Red Cross Movement, peacekeeping and even non-violent peacemaking, in the sense of "behind the scenes" and "quiet diplomatic discussion," have long been practised by International and National Red Cross individuals and groups - sometimes, no doubt, on the fringes of Movement tenets. On numerous occasions, moreover, the ICRC has legitimately and effectively sought to create a climate for peace, one where human rights can be expected and humanitarian aid can be safely distributed to, and received by, the needy. Even the use of armed guards by the Red Cross is not unheard of. Thus the entry to the Jamaican Red Cross headquarters in Kingston, for example, is guarded by armed security; and the ICRC, in Somalia, reluctantly found it necessary to protect humanitarian aid vehicles with armed guards. For the Movement even these kinds of precautionary acts are viewed with discomfort and are far from routinely used. The threat of, or actual use of, force to create peace or, more likely, a temporary cessation of arms, presents an approach from which the Red Cross can be expected to continue to distance itself, given the essence of its Fundamental Principles and the need for trust by all parties in the neutral purposes and methods of Red Cross humanitarian aid.

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But the difficulties endemic in pushing simplistic interpretations of neutrality too far are well illustrated by spokepersons for two other NGOs. Alain Destexhe, as Secretary General of Médecins Sans Frontières, demanded: "How can we think of passing food through the window while doing nothing to drive the murderer from the house, feeding hostages without attempting to confront the kidnapper or, worse still, feeding the murderer after the crime. These are not humanitarian acts. Nevertheless, a purely humanitarian approach acts as a blindfold which allows us to bask permanently in the warmth of our own generosity. A perverse concept of humanitarian action may well triumph in the absence of policy and justice. It is far from certain that the victims are getting anything out of it. Humanitarian organisations which attach some importance to words and deeds will be facing unprecedented challenges in the years ahead."[24] And Jeremy Hobbs, Director of Community Aid Abroad, remarked upon his return from Rwanda, "I found myself in the extraordinary position of lobbying the Foreign Minister and Defence Minister to send in troops or provide aircraft—anything to hasten an enhanced United Nations force. Let me tell you this is a new role for non-governmental organisations—asking to send in the troops. Five years ago that would have almost been unthinkable, both in Community Aid Abroad and many other non-governmental organisations."[25]

A substantial body of Red Cross and other NGO experience suggests that neither disaster relief nor effective development aid can readily be imposed from outside.[26] Vulnerable people must both want external assistance and be prepared to work hard for it—in the context of their own particular priorities, cultures and capacities. If local communities do not participate in defining or collectively seeking whatever the aid may be financing, it is unlikely to lead to sustainable benefits. Sadly, whether in times of natural or man-made disasters, those who frequently suffer most are the children, the women, minority groups, and the older and poorer members of societies[27] - in short, the people least likely to be brought into development planning processes. The

strong in a community must also pay attention to the real needs of the weak.

Peacekeeping has much to glean both from the experiences of complex natural disasters and, less dramatic perhaps, from foreign development aid records.[28] Many points, given emphasis in the continuum between relief and development, also have relevance to the post-peacekeeping/peacemaking process. Thus, for example, even in the initial days of peacekeeping/enforcement operations, post-peace development planning is likely to be a critical ingredient for future success - a finding from countless cases of natural disasters and other situations leading to displaced peoples. Yet development planning, without financial frameworks and reliable funding commitments, can encounter a quagmire of bureaucratic inertia and generate serious set-backs to the whole renewal process. A hiatus readily occurs at precisely the time when the reconstruction and development investments are supposed to be phased in. **In both natural disasters and the re-inforcement of peace, the links with the development processes are fragile.** They represent an area of activity to which the great international development organizations, as the UNDP, World Bank, UNHCR, and bilateral agencies (including USAID and CIDA) could make invaluable further contributions - not so much through the outpouring of huge financial amounts, but in terms of early, routine involvement in the re-construction (including human recovery) processes and, in terms of helping broker pragmatic financial parameters. Token development funds for recovery purposes abound, as do media-sensitive, rapid re-action units. **In peacekeeping, as in natural disaster prevention and renewal processes, tokenism is of little value. Longer-term and substantive commitments are among the essential ingredients for genuine recovery.**

In both natural disasters and the re-inforcement of peace, the links with the development processes are fragile.

In peacekeeping, as in natural disaster prevention and renewal processes, tokenism is of little value.

Endnotes

1. Several more are in final recognition stages and it is probable
    that there will be some 180 National Societies by the year
    2000. A reason for the most recent growth in numbers is the
    break-up of a number of larger nation states. This process
    appears likely to continue. Details of each National Society
    and its address are to be found in the *International Review
    of the Red Cross*, which is now (1996) in its 127th year.

2. The XXth International Conference of the Red Cross
    (Vienna, 1965) adopted the seven Fundamental Principles of
    the Red Cross: Humanity, Impartiality, Neutrality,
    Independence, Voluntary Service, Unity and Universality.
    For a current book on a National Society and the "flavour"
    of its history and approaches, see Pauline Samuelson (ed.),
    *I Owe My Life...British Red Cross Celebrating 125 Years
    (*London: Bloomsburgh, 1995). For a profound and most
    impressive documentation and analysis of the work of the
    Movement, the huge book (pp,. 1438) by François Bugnion
    is highly recommended: *Le Comité International de la
    Croix-Rouge et la Protection des Victimes de la Guerre*
    (Geneva: ICRC, 1994).

3. In recent years, ICRC and IFRC have had delegations
    assisting National Societies with relief operations or
    development programmes in over 100 countries. Emergency
    Appeal Annual Reports of ICRC and IFRC provide detailed
    listings.

4. These numbers, it must be emphasized, are very much
    approximations. The definition of a member and the
    exchange rate to be used for translating currencies into US
    dollars, alone, raise numerous procedural questions.

5. For further discussion and references, see Ian McAllister,
    Sustaining Relief with Development (Dordrecht: Martinus
    Nijhoff, 1993), pp. 5-8 and 138.

6. Turkey adopted the Red Crescent emblem in 1876, instead of the Red Cross, later to be followed by other Muslim countries.

7. Red Cross will frequently be used hereafter; Red Crescent should also be understood in the case of generalizations.

8. For a useful discussion, see Jacques Meurant, *Red Cross Voluntary Service in Today's Society* (Geneva: Henry Dunant Institute, 1984).

9. McAllister, *Sustaining Relief with Development*, pp. 12-31.

10. The first Nobel Peace prize was awarded to Henry Dunant in 1901; subsequently the ICRC received it in 1917 and 1944, with both the ICRC and League being awarded it jointly in 1963.

11. There is a massive quantity of documentation - perhaps the must useful single guide is the *International Review of the Red Cross* (Geneva: ICRC). A somewhat more flamboyant, but nevertheless useful, reference is the Magazine of the International Red Cross and Red Crescent Movement, Redcross Crescent (available from Box 372, CH-1211, Geneva 19, Switzerland). Training varies considerably between National Societies and there is clearly some urgency for further development of this feature of Red Cross work. See McAllister, *Sustaining Relief with Development*, pp. 57-72.

12. There have been strong differences of viewpoint on this issue. Representatives of the Swiss Red Cross Society have argued, for example, that the first duty is to provide help to the victims. The IFRC has, however, taken the position that failure to work with the National Society of a country further weakens its structures and, in the longer run, is counter-productive.

13. David C. Korten, "Third Generation NGO Strategies: A Key to People-centred Development," in *World Development* Vol. 15 (Supplement, August 1987), p. 148.

14. Certainly this was the case when the most recent comprehensive study across the Movement was undertaken. See Donald D. Tansley, *Final Report: An Agenda for Red Cross* (Geneva: ICRC and League, 1975). It is also the author's impression from his work with the IFRC and many National Societies since 1989.

15. See, for example, Susan Faulkner, et al., *The Things We Give* (Geneva: Henry Dunant Institute, 1989); and, Robert Chambers, *An Independent Review and Evaluation of the Africa Drought Relief Operations 1984-86 of the League of Red Cross and Red Crescent Societies* (Geneva: LRCS, 1986).

16. For further discussion and references, see Maggie Black, *A Cause for our Times: Oxfam - the first 50 years* (Oxford: Oxford University Press, 1992), pp. 85-108, and McAllister, *Sustaining Relief with Development*, pp. 93-116.

17. Mary Anderson and Peter Woodrow, *Rising from the Ashes* (Paris: UNESCO, 1989).

18. The impact of the Ethiopian famine and internal strife on the scale of operations and future directions of the ICRC and IFRC was enormous. Not since World War II had the scale of operations been as complex nor the challenges for professionalism been as severe. Robert Chambers' report (op. cit) is an extraordinary exposé of the inadequacies of the Red Cross Movement of those times when it encountered the brutal realities of "modern" conflict and ideological cross-fire. The peasants were the pawns of international power manoeuvres. Certainly the episode jolted the ICRC and IFRC into a major re-thinking of their appropriate approaches.

19. Jacques Moreillon, "The Promotion of Peace and Humanity in the Twenty-First Century: What role for the Red Cross and Red Crescent?," *International Review of the Red Cross* No. 303 (Nov-Dec 1994), pp. 605.

20. Lieutenant-General John M. Sanderson, "Reflections on the Cambodia Experience," in Community Aid Abroad, *Learning the Lessons* (Victoria, Australia: 1994), p. 20.

21. F.T. Liu, (Former UN Assistant Secretary-General for Special Political Affairs), "The Use of Force in UN Peacekeeping Operations: A Historical Perspective," paper for the Tokyo Symposium on "New Dimensions of United Nations Peacekeeping, 19-20 January 1995 (updated 15 June 1995 for the Vienna Seminar), p. 1.

22. Ibid, p. 1.

23. Kofi A. Annan, "Peace Operations and the United Nations: Preparing for the Next Century." Unpublished paper, February 1996 (courtesy of the Lester Pearson Canadian International Peacekeeping Training Centre).

24. Médecins Sans Frontières, *Populations in Danger 1995* (London: MSF(UK), 1995), pp. 14, 15.

25. Jeremy Hobbs, "Closing Remarks," in *Learning the Lessons*, p. 108.

26. See, for example, Cassen, Robert and Associates, *Does Aid Work?* (Oxford: Clarendon Press, (second edition) 1994); and, Harrell-Bond, B.E., *Imposing Aid* (Oxford: Oxford University Press, 1986); Hagman, Gunnar (ed.), *From Disaster Relief to Development*. Geneva: Henry Dunant Institute, 1988; and, International Committee of the Red Cross, *Guide for National Red Cross and Red Crescent Societies to Activities in the Event of Conflict* (ICRC: Geneva, 1990).

27. Irving Brecher (ed.), *Human Rights, Development and Foreign Policy: Canadian Perspectives* (Halifax: Institute for Research on Public Policy, 1989), p. 264 (for some examples).

28. (UN)DHA, *Rwanda* (New York: United Nations, November 1994); see also Michael Pugh, *The Challenge of Peacebuilding: The Disaster Relief Model*, Working Paper Series (Halifax: Centre for Foreign Policy Studies, 1995). Dated: 17 June 1996.

PART VII

INTERNATIONAL DEVELOPMENT PROJECTS AND REGIONAL DEVELOPMENT

PART VII

INTERNATIONAL DEVELOPMENT PROJECTS
AND REGIONAL DEVELOPMENT

In *Windows on the World*, it was concluded that many international linkages were not being connected effectively into the region, representing opportunities lost. While it is far from clear that effective actions have since been taken systematically to overcome this weakness, the three projects in Part VII are excellent examples of how linkages can be effectively forged.

The first paper, by Barry Lesser, illustrates how a most enterprising programme of cooperation with the Baltic States is opening up all kinds of two-way opportunities with the region and identifies some of the resulting benefits.

The second contribution, by Mariette Maillet and Jason Jolley (an MDE graduate student and undergraduate international development studies student, respectively), relates their extraordinary experiences within the framework of Canada World Youth - a programme most effectively hinging Canada's regions with overseas nations, through shared community work.

In the final paper, Burris Devaney and Susan Rolston describe some ten years of imaginative programming between Nova Scotian institutions and counterparts in The Gambia. It began with a high school visit and blossomed into a variety of high school, university and other institutional connections - including a flourishing Nova Scotia-Gambia Society. It is a fitting record with which to conclude this series of case experiences.

21

THE BALTIC ECONOMIC MANAGEMENT TRAINING PROGRAM

by Barry Lesser

It is commonplace to hear the view expressed that universities doing work with countries outside of Canada should be paying more attention to the local community; that the time and effort devoted to international development initiatives represents a diversion of resources away from a concern with regional development at home. In other words, there is a perceived trade-off between international development work and local development involvement. This perception is an overly simplistic one that ignores the important spin-offs that international work can generate for the local community. In reality, international and regional development concerns are not substitutes but complements, as will be demonstrated here by an examination of one Dalhousie international project - the Baltic Economic Management Training Project (BEMTP).

International projects have important implications for the university itself.

International projects have important implications for the university itself, in helping to internationalize the curriculum and the experience of faculty and students. In today's increasingly interdependent world, characterized by increasing globalization, this is an extremely important aspect of the educational experience of students.

But independent of what international work means for the university itself, it can also have important impacts on the local/provincial community of a very immediate nature. First, the problems of developing countries, or simply other countries, may be very similar to those of the local community. Thus, local experience may enhance international work and international experience may enhance our understanding of local problems and our search for solutions to those problems. It is a two-way street.

International projects provide an opportunity to develop local expertise about foreign countries which can be used to advise local business about new trade and investment opportunities.

Second, international projects provide an opportunity to develop local expertise about foreign countries which can be used to advise local business about new trade and investment opportunities. Trade development is an important focus of provincial development efforts across Canada at the present time. But especially in less developed regions such as Atlantic Canada, existing experience with particular countries and markets may be very limited. These problems can be significantly reduced through the international expertise developed through international project work by universities.

Interaction of these individuals with members of the local community may produce important and significant benefits for the local community.

Third, depending on the nature of the project, insofar as international projects bring foreign nationals to Canada/Nova Scotia for some period of time, the interaction of these individuals with members of the local community may produce important and significant benefits for the local community.

This is not an exhaustive listing but it is sufficient for present purposes to underline the potential of international projects to have immediate and significant impacts on the local community. These can be illustrated in a more concrete fashion by reference to the experience of the BEMTP.

The BEMTP is a project currently being conducted by the Department of Economics at Dalhousie University, involving the three Baltic countries of Estonia, Latvia, and Lithuania. Funded by the Programme of Cooperation for Central and Eastern Europe, Canadian International Development Agency, the current phase of the project is a three year effort (March 1994-February 1997) aimed at increasing the understanding of middle/senior level public servants in the three countries of market economics, the operation of market economies and the formulation and conduct of economic policy in a mixed economy setting.

The BEMTP has a number of components, but the centrepiece of the project is an annual training program of two month's duration which takes place in Canada. This training component of the overall project involves twenty-one public servants, seven from

each of the three Baltic countries. Participants are selected through a relatively rigorous process, involving local screening by coordinators in each country and an interview process jointly conducted by the local coordinators and Dalhousie University. Successful candidates must have capability in English, be working in a management position in an area pertaining to economic policy and 50% of the participants, on average, must be women.

The program in Canada involves two major components of approximately equal length. The first month is spent in academic studies at the University and the second in a series of practical work attachments with Canadian federal and provincial (Nova Scotian) government counterparts.

Part of Dalhousie's ability to conduct this program stems from its local environment and the expertise of its faculty, based on their work at the local level. Nova Scotia is an economy with many similar characteristics to the Baltics - small land area, a maritime orientation, a small population base, a high level of trade dependence and an economic structure that has wrestled/is wrestling with the problems of restructuring. The last point should not be exaggerated since the restructuring occurring in the economic transition of the Baltics which is now underway is clearly of a much greater scale than anything experienced in Nova Scotia. But neither is the similarity one to be dismissed altogether.

Following from the application of local experience to international, the international can in turn add to our understanding of the local environment in a variety of ways.

Following from the application of local experience to international, the international can in turn add to our understanding of the local environment in a variety of ways. This is as true of the academic component of the program as of the attachment component.

With respect to the attachments, most Canadian public servants who become involved start out believing they are doing a "favour" for Dalhousie and/or a needy foreign country. What they find after the experience is that typically they have learned

as much as the individuals they have hosted. First, working with any such visitor (having to explain one's job and that of one's ministry/agency and having to answer questions about what is done and why) can cause people to take a fresh look at themselves and their environment. Second, the Canadian public servants involved, in the process of explaining what **they** do, also find out something about their visitors and their jobs and their countries. The Baltic participants are placed in Canadian government offices in order to gain some comparative experience. In the process, the Canadian public servants also gain comparative experience. The Baltic participants need this in part because they have been living for fifty years, the period of Soviet occupation, in a virtually closed system, a system moreover which has been largely discredited and is being changed in a wholesale manner. The Canadians do not have the same problem, at least not to the same degree. But, especially at the provincial level, there is nonetheless not a great deal of interaction between the average Canadian public servant and counterparts in other countries, nor much time to learn about or think about developments in public sector management which may be occurring in other jurisdictions. The interaction between Canadian and Baltic public servants, which the program promotes, benefits both sides by broadening perspectives and knowledge. Third, the relationships which can develop between the two groups of public servants can be of a longer term nature, leading to a continuing exchange of information and ideas long after the attachment has ended and long after the Baltic public servants have returned home. There can also be other impacts from such associations such as trade and investment opportunities and the like. At least one trade delegation from Estonia to Canada has been a direct consequence of contacts established by a BEMTP participant from the first phase of the program in 1992.

The Baltic participants are placed in Canadian government offices in order to gain some comparative experience. In the process, the Canadian public servants also gain comparative experience.

In the process of spending two months in Canada, the Baltic participants also come in contact with a great many other Canadians, including private business people. This may also open up opportunities for exploring trade and investment

opportunities. There is a great deal of interest in Eastern and Central Europe by businesses seeking to expand their export operations in a major new developing market. But there is also a lack of knowledge about doing business in this part of the world and a relative lack of Canadian experience to draw on in this regard. Having the opportunity to meet people from these countries who can provide information and act as contacts after they return home can be of significant benefit. The presence of the project at Dalhousie also allows this role to be played to a degree by the Dalhousie organizers of the program, who become a local resource available to the business community and government trade promotion agencies interested in exploring new trade opportunities in the Baltic region.

Conclusion

International development and regional development work are not, or at least need not be, seen as two solitudes.

The above discussion is not intended to suggest that international project work by universities should be seen as a central part of regional development efforts in Atlantic Canada. What it does suggest is that international development and regional development work are not, or at least need not be, seen as two solitudes. They are in fact mutually re-inforcing in a number of important respects in addition to the purely academic spillovers which international work can produce. When universities do international work, this should not be seen as a failure to do local work or to become involved in the local community. The benefits for university faculty, students, Canadian governments, and Canadian business can be considerable, especially when the project actively promotes interaction with all of these groups. While such interaction may not always happen, the BEMTP is a good illustration that it can and does happen some of the time.

22

CANADA WORLD YOUTH

by Mariette Maillet and Jason Jolley

Introduction

Canada World Youth (CWY) offers the chance to acquire new insights through a variety of programs, linking Canada with other nations in the developing world.

In quest of a greater understanding of the world, many young people search for alternative learning approaches other than school alone. Canada World Youth (CWY) offers the chance to acquire new insights through a variety of programs, linking Canada with other nations in the developing world. Participants share day to day living experiences in a host community and learn important life skills through active participation in particular development tasks, while being immersed in a different culture. Participants across Canada are also able to formalize their experience through an academic credit, pioneered by Dalhousie University, within the umbrella of the *International Development Studies* program. Canada World Youth has continued to evolve since its establishment in 1971 and now reaches across much of the globe. As former participants, the authors welcome this opportunity to outline the history of Canada World Youth and also to describe our personal experiences with CWY, as a way to inject some flavour of the impacts at the individual level.

The Programs

Canada World Youth was launched by citizens as an outcome of concerns about "social unrest, global inequality and cultural misunderstanding" in Canada and overseas. The important role of youth in the process of community and international development was recognized. A crucial element of the way Canada World Youth programs have evolved has been the counterpart component - at all levels of activity: participants, group leaders, coordinators and the organization itself have counterparts from the exchange countries. This has resulted in the

participation of approximately 550 Canadian communities, with each community having an overseas counterpart dispersed among more than 50 countries. To date there have been approximately 20,000 youth from Canada and overseas who have participated in one or other of CWY's programs. The majority of these participants have been in the Youth Exchange Program (YEP), the original and most widely known of Canada World Youth's Programs. However, the past five years have also witnessed the emergence of what CWY terms "Customized Programs". Customized Programs are usually region-specific, use one of the five regional offices as a base, and focus upon a particular area neglected by the Youth Exchange Program. In the Atlantic region there are three customized programs; the Environmental Leadership Program (ELP), the First Peoples Youth Exchange (FPYE), and the Nova Scotia - Jamaica Maroon Bicentennial Program.

The Youth Exchange Program (YEP)

The Youth Exchange Program is designed to be responsive to community needs in Canada and partner countries. Typically, groups of fifty (including two program coordinators) will spend some three and a half months in Canada, then in the particular partner country. More than 50 countries have participated with Canada - in Africa, Asia, Latin America and the Caribbean. Three teams will be formed from each group of some 16 apiece, comprising 7 Canadian youth, 7 youth from the counterpart nation, 2 co-leaders (1 Canadian, 1 from the other nation). Overall guidance will be given by a program coordinator from each nation. These teams will work in neighbouring communities - on community identified projects, as volunteers. Each Canadian youth will be 'twinned' with a counterpart of the partner nation: the pair will reside with a host family. Normally four days of each week will be spent working on the volunteer, community projects; one will be allocated to a group educational activity day (EAD); the remainder of the time will largely be spent learning from the host family. De-briefing sessions, throughout the program, encourage participants to reflect on their experiences in

an analytical manner. Prior to going, the youth engage in fundraising activities: upon the conclusion, they are encouraged to undertake further volunteer work in their home communities, make presentations about their experiences, and so on. The age range for participating in the program is 17 to 20 years. Language training and other orientation sessions help the respective teams to prepare: much of the learning experiences, however, is of a 'hands-on' nature.

The Environmental Leadership Program (ELP)

Established in 1993 and influenced by the Rio Earth Summit, the Environmental Leadership Program is a joint project of Canada World Youth, the Nova Scotia Youth Conservation Corps, the Conservation Corps of Newfoundland and Labrador, and the Asociación de Apoyo y Promoción de Ideas para el Desarrollo (APID). The ELP encourages participants to learn more about the environment by creating links between Canada and developing nations and to acquire important skills in the process such as leadership, teamwork, communication, and adaptability to new situations. The current project has 16 participants (10 from Nova Scotia and 6 from Newfoundland). The counterpart idea, noted to be one of the more crucial concepts of CWY programs, was not a factor in the early days of the ELP. However, 1995 saw the introduction of two Costa Ricans into the team and it is hoped that future projects will see more Costa Ricans enrolled as participants. The ELP contains three phases; the pre-departure orientation, the Costa Rican phase, and lastly the Canadian phase. The pre-departure orientation is approximately one week long and prepares the group for the 7-8 week Costa Rican phase. During this initial week, participants undergo a variety of workshops on: goals and objectives, staying healthy in Costa Rica, leadership techniques, logistical information, cultural adaptation, and Spanish lessons.

The Costa Rican phase involves working closely with the Asociación de Apoyo y Promoción de Ideas para el Desarrollo, a Non-Governmental Organization created by CWY past-

413

participants from Costa Rica. Each year, before the Environmental Leadership Program group arrives, APID chooses a particular project in Costa Rica based upon the need of the host community. In this community, each participant will live with a different host family selected by the Costa Rican organization. The projects vary by year, but are always environmentally oriented, ranging from constructing trails to environmental education.

The Canadian phase involves each participant working in his or her home community, with either the Nova Scotia Youth Conservation Corps or the Conservation Corps of Newfoundland and Labrador. Projects also vary from community to community; as in Costa Rica, each project focuses on an environmental issue, with a crew of approximately four or five people. ELP participants are given a chance in this phase to utilise the skills learned in Costa Rica with respect to project planning, leadership, adaptability, and so on.

The First People's Youth Exchange (FPYE)

Also established in 1993, the First People's Youth Exchange Program is the second of the three customized programs in the Atlantic Canada Region. While it focuses upon a specific area not directly dealt with in the more popular Youth Exchange Program, the FPYE borrows many of the Youth Exchange Program's characteristics that have attributed to its success over the past 25 years. The six month program involves the participation of eight Atlantic aboriginal youth and their eight Ecuadorian counterparts, in an effort to acquire "cross-cultural, leadership training and develop among the participants essential employment related academic, personal management and teamwork skills". As with all CWY programs, the FPYE aims to break down the conceptual barriers between nations and cultures, while instilling understanding and self-confidence in all participants through a mutually beneficial experience.

The FPYE program is divided into four phases: a three week orientation, a ten week period in Atlantic Canada, a ten week period in Ecuador, and a one week re-entry and briefing. These four phases constitute a gradual learning process through which the participants learn a great deal about themselves and the world around them. In both the Canadian and Ecuadorian phases, participants spend four days a week at a volunteer placement, one day a week doing an educational activity in their host community, and weekends with their host families. Much like the Youth Exchange Program, this system not only allows the participants to learn much about their new communities, but also to give something back to the communities.

Throughout the program, one of four educational options is examined from an aboriginal perspective.

Throughout the program, one of four educational options is examined from an aboriginal perspective: women and development, natural resource management, cultural issues, and aboriginal health. By studying any one of these issues, it is the hope of the program's founders (Canada World Youth and Pathways) that participants will gain the necessary skills and abilities to play important leadership roles in their home communities.

The Jamaica/Nova Scotia Maroon Bi-Centennial Youth Exchange Program

Established in 1996, the Maroon Bi-Centennial Youth Exchange Program is the third and most recent customised program in the Atlantic Canada Region, and acknowledges the arrival of the Maroons from Jamaica to Nova Scotia two centuries ago. Similar in structure to the First People's Youth Exchange, the Maroon program offers Black Nova Scotians and Jamaicans (between the ages of 18 and 24) the opportunity to participate in a cross-cultural exchange, with a focus on micro-enterprise development. In addition to the many benefits of the Youth Exchange Program, the Maroon program will "explore cultural, historical and educational connections between Black communities in Nova Scotia and Maroon communities in Jamaica (and) educate Nova

Scotian Communities (through high schools and community groups) about the diversity of Black Nova Scotian Culture".

Throughout the six month program, the 14 participants (seven Nova Scotians and their seven Jamaican counterparts) will take part in four phases: a one week orientation, an eleven week Nova Scotian phase, an eleven week Jamaican phase, and a one week re-entry and briefing in Canada. During these four phases, the participants` learning is focused on themes of micro-enterprise development, historical/cultural connections, leadership training, and electronic communications. This will be facilitated through the participants` volunteer placements (four days a week) and their educational activity days (one day a week).

The Maroon Bi-Centennial Youth Exchange Program is supported by a diverse range of sponsors.

The Maroon Bi-Centennial Youth Exchange Program is supported by a diverse range of sponsors. These are Canada World Youth, the Black Cultural Centre for Nova Scotia, Cole Harbour District High School Black Mentorship Program, Caribbean Association of Nova Scotia, Social Development Commission of Jamaica, and Canada/Nova Scotia Cooperation Agreement on Economic Diversification.

Impact

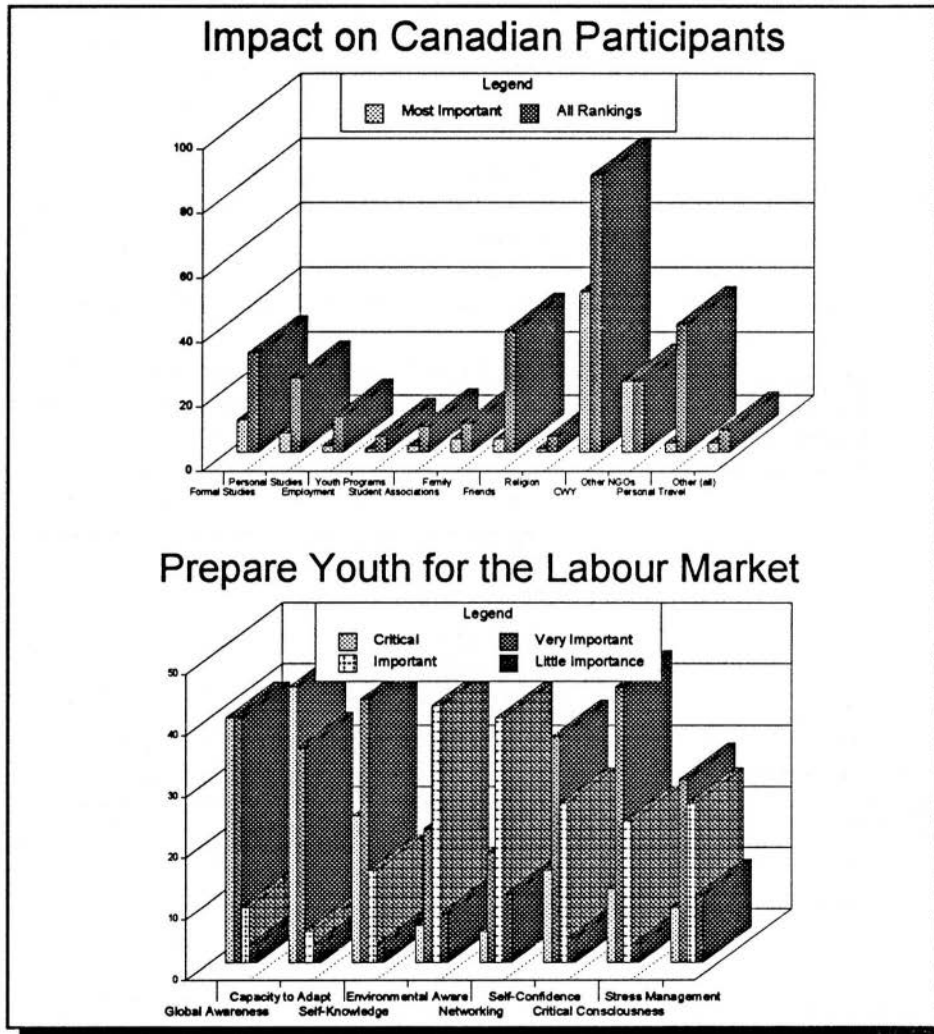*The effects of Canada World Youth programs are widespread.*

The effects of Canada World Youth programs are widespread. Not only do the programs seek to foster a deeper understanding of development issues by the participants, but they also contribute to a more profound cultural understanding in the communities involved, both in Canada and overseas.

Impact on Participants:

Canada World Youth has been labeled by past participants to have been one of the single most important experiences they have ever undergone. In 1993, C.A.C. International, a research company, was contracted by the Canadian International Development Agency to perform an impact assessment on the

416

Youth Exchange Program. A summary of their findings is displayed in the following diagrams.

Impact on Canadian Participants

Legend
Most Important   All Rankings

Personal Studies | Youth Programs | Family | Religion | Other NGOs | Other (all)
Formal Studies | Employment | Student Associations | Friends | CWY | Personal Travel

Prepare Youth for the Labour Market

Legend
Critical   Very Important
Important   Little Importance

Capacity to Adapt | Environmental Aware | Self-Confidence | Stress Management
Global Awareness | Self-Knowledge | Networking | Critical Consciousness
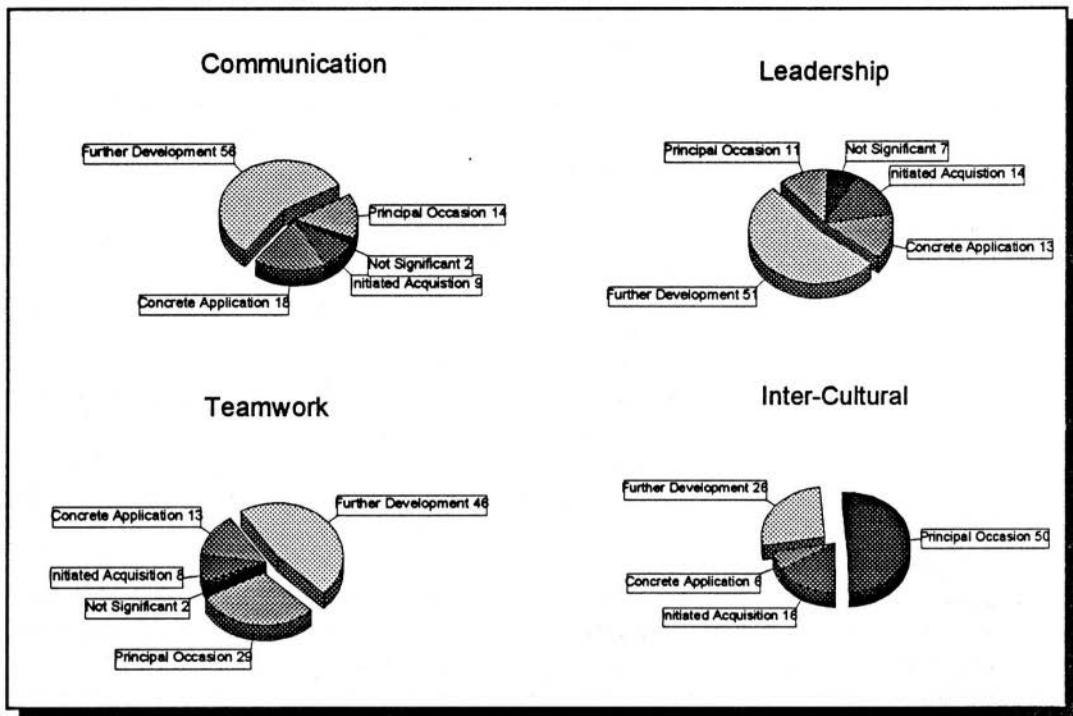
417

The impact assessment of CWY programs found that 93% of former participants considered their CWY experience to be the major factor influencing their understanding of development issues, more than any other factor, including formal education[1]. It was concluded that former participants had a stronger sense of social responsibility and a higher level of social involvement than the general public. Directly working in Canadian and developing country communities was found to have helped participants draw the commonalities existing in a development context. A greater understanding of interdependence was gained. The CWY experience proved important in fostering global awareness, adaptability, self-knowledge and self-confidence. "Employability" skills were also noted to have been developed, such as teamwork, positive attitudes and behaviours, communication and responsibility. The survey found that only 4% of former participants were unemployed, considerably lower than the national average for the age group.

CWY was found to have had substantial impact on its participants in terms of personal development.

CWY was found to have had substantial impact on its participants in terms of personal development. The process of self-questioning and reflection is inherent in all CWY programs. Participants were found to have come to know more about themselves, realizing the scope of their skills, limits, strengths and weaknesses. When participants compared various life experiences attributing to their knowledge of development issues, CWY easily ranked as the most significant.

The following pie graphs display the impact a CWY experience has had in the development of various life skills in participants.

Communication

Further Development 56
Principal Occasion 14
Not Significant 2
Initiated Acquistion 9
Concrete Application 18

Leadership

Principal Occasion 11
Not Significant 7
Initiated Acquistion 14
Concrete Application 13
Further Development 51

Teamwork

Concrete Application 13
Initiated Acquisition 8
Not Significant 2
Further Development 46
Principal Occasion 29

Inter-Cultural

Further Development 28
Principal Occasion 50
Concrete Application 6
Initiated Acquisition 16

It is concluded by the C.A.C. International impact study[2] that the CWY exchange program is "fully coherent with the organization's mission: *To increase people's ability to participate actively in the development of just, harmonious and sustainable societies...achieved by working in partnerships based on integrity and respect for differences*".

Other valuable benefits gained by participants include:

- social awareness

- a better understanding of the world we live in; of issues related to local, regional and international development

- the acquisition of leadership, communication, organizational and cross-cultural skills

- valuable volunteer work experience in fields such as agriculture, community work, social services, co-operatives, education, media and communications, etc.

- the opportunity to learn a second or even a third language

- a clearer idea of future options in terms of career or educational choices

- a new passion for the future which enables them to play a meaningful role in society

- the possibility of obtaining academic credits at the college and university levels.

In addition to the gained experiences, skills and knowledge to participants, the effects of CWY were also felt in the communities involved.

Impact on communities:

Communities involved with CWY programs reported a greater understanding of development issues and deeper cultural awareness.

Communities involved with CWY programs reported a greater understanding of development issues and deeper cultural awareness. Oftentimes, "developed" and developing countries (and their inhabitants) were demystified through hosting CWY exchange participants. Some host families had organized or helped to organize on-going programs with NGOs, for example, relating to development issues following a program in their community. Evidence showed that mature former participants have the greatest impact in their own communities, actively participating and applying their skills gained from their experience.[3]

Former exchange-country participants expressed a change in their attitudes, similar to the former Canadian participants, due to

increased global awareness, understanding of interdependence, concern for equity and social justice and respect for difference. They also displayed more constructive action for the development of their countries. Linkages and activities created during the exchange program have had lasting effects on communities, often in a sustainable framework, after the completion of the program.

Thus far this description has been somewhat "bureaucratic" in style. Of course, for each individual it is a very personal experience. Our two case studies will seek to provide more of the "flavour". We will now write in the first person!

Personal Experience: the Canadian Prairies/Nepal Youth Exchange

by Mariette Maillet

When I first found out I was accepted to do the CWY Youth Exchange Program in Saskatchewan and Nepal, I was both elated and petrified. After the application and evaluation process, I felt very fortunate to have been chosen as a participant. This meant, however, that I was about to begin an uncertain and, what seemed at the time, a very mysterious adventure for at least seven months of my life, leaving behind the security and comfort of my home, friends and family. After a series of inoculations and a physical examination, I set out on a plane bound for Saskatoon. After meeting the other Canadian participants from across the country, together we awaited the arrival of our soon-to-be Nepalese counterparts with great anticipation, while participating in various language and other preparatory sessions. We soon discovered that the Nepalese participants had a better understanding of English than the Canadians had of Nepali, the official language of Nepal.

Once paired up with a counterpart, we then prepared to enter the communities. I was granted my first placement choice: living and working with a common-law family on a farm. This would be quite a challenge for a city dweller. To live in a rural

We soon discovered that the Nepalese participants had a better understanding of English than the Canadians had of Nepali, the official language of Nepal.

421

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Saskatchewan community was to prove to be just as eye-opening for me as living in Nepal. Milking goats and feeding chickens every morning, as well as working in a beautiful large garden every day was a completely different lifestyle than I was used to. Driving a swather, collecting bales of hay, butchering chickens, making cheese and jams, and shingling a garage were a just a few of my newly acquired skills. We felt very welcome in our host-family's home, from whom we learned tremendously. It was during this phase that my counterpart, Sumitra, and I began to develop what would soon be a wonderful and satisfying relationship, based on sharing, mutual support and respect. Being away from friends and family, times of fear and loneliness were often transformed into sessions of exchanging stories, language tutoring, and helping each other to adjust to our new environments, by simply being together. Many things were different and probably quite strange for Sumitra in Canada. The food, male-female relationships, the weather, and day-to-day life were, as I would soon discover, strikingly different from Nepalese customs, practices and ways of life. Basic things we do not normally think about, such as which is the hot or cold water knob, or operating a stove, were, for her, first time experiences. The efforts of support and compromise invested into the counterpart relationship at this point would certainly later be worthwhile, in making the cultural transition in Nepal much smoother by having assistance and support reciprocated. After a touching goodbye to our host families and Saskatchewan community, it was quickly time for the next phase of the program.

The flight to Nepal consisted of countless and tiresome hours in airports, but was exciting nonetheless. Our first night in Kathmandu in the youth hostel was unforgettable, with stray dogs howling all night, cold and dirty showers, accompanied by a smell to the air that was very different. But when I awoke the next morning I was in what seemed like a far-away paradise, which I had previously only dreamed of witnessing. Although economically one of the poorest countries of the world, Nepal is enriched with tremendous natural beauty. The scenic and infamous Himalayan mountain range is truly breathtaking, the

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flora varied and colourful, the Nepalese people most kind and helpful. Poverty, however, is prevalent and quite obvious, both in urban and rural areas. Approximately 90% of the population remains based in rural areas, largely dependent on small scale agriculture, with relatively low life expectancy rates and rudimentary health and education services. Subsistence economic practices prevail in most regions. The host organization had apparently dissolved when we arrived - so funds, projects and host families had to be found, fast! This seeming lack of organization was a true test in dealing with unexpected situations. Things soon fell into place and excellent host families were found. After a 2-hour bus-ride, we hiked into our community, for there were no cars, or electricity.

Some families did not have latrines, thus one of our first projects was to build several pit-latrines, including a double one for the village primary school (which required a little more time, but of which we were most proud). Family and community members, whom we consulted as to what was most needed and wanted in the village, often assisted us in our efforts and advised us on the use of appropriate and accessible resources for our projects. For example they showed us where to get the bamboo and how much to use for the pit-latrines. Working with and getting to know my host family was very enriching, not to mention a challenge - me communicating in Nepali! Long afternoons in the rice or millet fields would have dispelled ideas anyone would have had concerning people in developing countries being "lazy". Women's work, I soon realized, underpinned community survival, producing the majority of agricultural output. The treatment of women, however, was a little difficult to witness at times. Despite performing the majority of tasks which ensure day-to-day family survival, such as collecting water, fuel and food, women did not have the same opportunities as men. Boys often received preferential treatment in terms of education, food and health care.

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The small things most of us in North America take for granted suddenly became quite important in Nepal. Soap and clean water, for example, were not easily accessible. Sickness and disease were rampant and health services scarce. Energy sources were in short supply and the consequences, such as deforestation, blatantly evident. One of our projects consisted of continuing work on an Australian reforestation program. I began seeing things in a different light. At first, I had been stunned at the idea of not using toilet paper, but as time passed, I thought it was not only more sanitary given access to soap and water, but more ecologically sound. I realized that we could learn a lot from the Nepalese, and they from us, and together much could be accomplished. "CWY" is the one event which most affected my perception and outlook on life, and still does. Friendships with people across Canada and throughout Nepal were formed and will, without a doubt, last a lifetime. Whether concerning environmental, cultural, economic or social issues, the experience opened my eyes to concrete development situations, both in Canada and in a developing country. The acquired knowledge and experience are invaluable and render CWY a definite worthwhile challenge!

Personal Experience: The Environmental Leadership Program

by Jason Jolley

During the summer months of 1994, I participated, with 15 other Atlantic Canadians, in the Environmental Leadership Program. Looking back to that time, I did not know what to expect from the months ahead. I knew I was going to work in Costa Rica on some environmental issues, but the nature of the issues and the logistics of the program itself eluded me.

In fact, the project was still in the planning stages, with our project coordinator knowing little more than I did. All that was known was that our stay in Costa Rica would be split in two halves. The first half would be in San Jose (the capital), while the

second half would be in a more rural town, near the Pacific Coast named Nicoya. The lack of planning was at first disturbing, but soon turned out to be a beneficial part of the program. By being prepared for the unexpected, I found myself more open and adaptive to new situations.

The orientation was one of the more important weeks of the program. Learning to recognize when we were going through culture shock, tidbits about the country and society, and Spanish lessons, were among the most meaningful sessions of that first week. Yet of all the activities during that week, the most important for me were the strong friendships I formed with the other participants. Having lacked the counterpart component ingrained in most other Canada World Youth programs, we relied upon the support provided from each other when dealing with tough situations.

Despite the diligent preparations of the orientation week, arriving in Costa Rica still shocked me as I noticed that many of my assumptions of what the country would be like were very wrong.

Despite the diligent preparations of the orientation week, arriving in Costa Rica still shocked me as I noticed that many of my assumptions of what the country would be like were very wrong. Until that time my perceptions of the developing world were heavily biased by the media, with Costa Rica being a far away, exotic land with a strange language and a strange people. The people were no longer strange and exotic, instead they seemed remarkably similar to other people I knew. This idea was only strengthened when I met my host families. Being immersed into a different family often proved to be an exercise in understanding, adaptability and patience, while remaining an exciting learning experience. Any misunderstandings with the families, such as my first and unsuccessful attempt at doing the laundry, showing up late one night after work because I had taken the wrong bus, or hiding in my room because I thought my host mother was telling me to "go away" when she was actually saying "come here", had the potential of becoming even more confusing due to my inadequate knowledge of Spanish.

After listening to Costa Rica's Vice President and several other government officials speak about garbage problems, pollution and deforestation, I realized that we have the same problems here in Canada.

I learned something of the role that industrialized countries like Canada play in the developing world's problems and, by doing

so, learned how my own actions can affect people around the world. After listening to Costa Rica's Vice President and several other government officials speak about garbage problems, pollution and deforestation, I realized that we have the same problems here in Canada. No longer did I see our countries as being so different.

During our third week in Costa Rica, we began planning our main project which would involve the design and implementation of an environmental education program in elementary and junior high schools. Each session in the schools would be several hours long, and thus required an innovative approach due to the language barrier. Through extensive brainstorming and good group work we were able to put together presentations that were very popular with the students, some of whom still write letters to us. As a result of this project, I gained a number of skills such as certain leadership techniques, working well in groups, and project planning which I will always find useful.

Aside from our work with APID, there were many other experiences that left a strong impression upon me. Weekend trips with my host families exposed me to the beauty of Costa Rica's land and culture. Visits to volcanoes, hot springs, ruins of colonial churches, and national parks exposed me to the typical tourist destinations, while trips through the rural countryside, coffee plantations, and dried-up rivers due to the construction of hydro-electric dams showed me a less appealing , but very real, side of Costa Rica.

My last week in Costa Rica offered me one of the most intense days of my life. While staying in Cahuita, a small town on the Atlantic Coast, three other participants and I embarked on a 60km bicycle trip to Sixaola, a town near the Panamanian border. We began by biking through a national park created for the protection of the coral reefs and the nearby rainforests, continued through an area scattered with small-scale farmers, then cycled through 35 kms of banana plantations before reaching our final destination. Throughout the trip we saw the effects that tourists

can unknowingly have on the environment and culture in the region, the company towns built by the banana companies for their workers, the blue pesticide bags covering the banana stalks that have resulted in the sterilization of thousands of men, the working conditions in the plantations, and much more. The links between our actions in the North and the problems in the South became exceptionally clear to me, it was no longer pieces of information found in a school textbook, but real life experience that I could see and feel.

I left Costa Rica nearly overwhelmed by my experiences. Upon returning to Canada we participated in a debriefing process with CWY, which helped put our visit into perspective and gave us time to adjust to being back in the country.

Upon completion of the debriefing, all the participants returned to their home towns for the next phase. For me that town was in Cape Breton.

Upon completion of the debriefing, all the participants returned to their home towns for the next phase. For me that town was in Cape Breton. I was the leader of a four person team working with the Nova Scotia Youth Conservation Corps in Marion Bridge, a small Cape Breton community. For the remainder of the summer we held environmental education workshops, participated in loon surveys, did waterfront development along the Mira River, and trail development for the Mira Pines Campground. This not only provided me with the opportunity to use many of the skills I acquired or reinforced in Costa Rica, but also provided me with the opportunity to become more involved with environmental issues near my hometown. Through this increased involvement, I had the luxury of creating many valuable contacts in the field of environmental issues, which I feel will be useful in future endeavors. In addition, I gained further insight into future goals with respect to university life and beyond as a result of my experience.

In short, I believe my life has been enhanced through the participation in a Canada World Youth Program and encourage anyone interested actively to pursue such a rewarding and challenging adventure.

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Academic Credit

For participants interested in earning an academic credit for their CWY experience and accomplishing "that extra mile" from the program, an excellent opportunity is presented by Dalhousie University. The *International Development Studies* program, in cooperation with the *Department of Economics* has offered (for the past three years) a full and transferable credit course. For those students able to spend time at Dalhousie before and after the CWY field work, the instructor provides special briefing and debriefing sessions. For those unable to come to Dalhousie, written briefs are provided - through the facilities of Canada World Youth.

The linkage with Dalhousie University gives students the further opportunity to reflect upon the CWY experience and to link it into their academic education.

Canada World Youth programs offer a very profound educational experience in their own right. The university course is not in any way a substitute: it is a reinforcement for those who seek to take advantage of the additional opportunity. The linkage with Dalhousie University gives students the further opportunity to reflect upon the CWY experience and to link it into their academic education. After registering in the (INTD 3201.06R) course, there are three requirements to fulfill. First, the participant must write a comprehensive journal, detailing his or her program by way of journal entries, photos, art-work, music, and a critical analysis of the program's workings. The journal is intended to serve as a strong memento of the program, to help the participant understand and further analyse the experience and any new skills that have been gained on a 'daily discipline' basis, while engaged on the activities of the program. This is done for work both in the Canadian and overseas' communities.

The student is encouraged to give talks, in his or her community, based on the CWY experience.

Second, all participants must prepare themselves for their program through readings both on their host country as well as readings on international development issues. It is necessary to confer with the CWY liaison at Dalhousie and the IDS department concerning the choice of these readings. A basic reading list is provided by the professor directing the course. Third, a substantive Field Report must be submitted to the IDS department after the return to Canada. Normally this should be submitted within four months of the return. The Field Report

428

formalizes the student's experience in the form of a research project, with the CWY program serving as the research framework. The report will include information on the social and economic life of both Canadian and host countries and communities, their history and geography, together with a critique of particular problems of development in the respective communities, including lessons learned. A brief annotated bibliography rounds out the written requirements. Finally the student is encouraged to give talks, in his or her community, based on the CWY experience.

Conclusion

The skills and knowledge acquired through CWY have been found significantly to influence participants' understanding of development issues and career choices. The CWY experience was identified by participants as an important factor in their development of life and professional skills, and personal attributes valuable in the labour market. In addition, the programs have been found to have had impact on the host communities and exchange countries involved, encouraging a deeper understanding of both regional and international development issues and a respect for other cultures. As expressed through the authors' personal experiences, CWY offers a unique, profound and challenging endeavour, which has continued to influence our perceptions and personal development.

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Endnotes

1. C.A.C. Internatonal (1993) *Building a Constituency for Development: An Impact Assessment of Canada World Youth Program - Resume of the Assessment Study*, Montreal.

2. C.A.C International (1993), *Summary of the Findings*, p.11

3. C.A.C. International (1993) *Building a Constituency for Development: An Impact Assessment of Canada World Youth Program - Resume of the Assessment Study*, Montreal, p.10.

23

THE NOVA SCOTIA - GAMBIA ASSOCIATION

by Burris Devanney and Susan Rolston

This paper chronicles the history of an NGO, which began in 1985 as a high school-based, one-shot development education project and has grown, through a series of inter-related projects, into an organization which has become a major force in education in The Gambia. Along the way a small army of converts have been attracted to development work.

In 1989, the Nova Scotia-Gambia Association (NSGA) was incorporated under the Societies Act of Nova Scotia with a fifteen member Board of Directors, "as a voluntary non-profit development education and assistance organization, dedicated to establishing linkages between Nova Scotia and The Gambia and creating opportunities for professional, educational and cultural exchanges for Nova Scotians and Gambians for mutual benefit."

To date the Association has successfully conducted a series of 24 increasingly complex and ambitious projects.

To date the Association has successfully conducted a series of 24 increasingly complex and ambitious projects. Over 300 Canadians have been provided with an intense, first-hand experience of life in one of the smallest countries in the developing world, and more than 30 Gambians have had the opportunity to study or be trained briefly in Canada.

The Association has established ongoing linkages between a number of individuals, groups and institutions in the two countries, and has begun to network these into a remarkably complex web of interlaced relationships. In Canada, Dalhousie University has been involved in this network through a teacher training project in The Gambia and participation of the School of Education in a NSGA-sponsored summer school skill development program for secondary school students in The Gambia. The summer school program expanded to include

students from Saint Mary's University and Mount Saint Vincent University. Saint Mary's University, in cooperation with the Gambian Ministry of Education and the NSGA, launched a University Extension Program in September 1995 to provide Gambians with their first opportunity to access university education in their own country. The Program is entering its second year of operation. Both the Nova Scotia Agriculture College and the University College of Cape Breton have longer standing links with The Gambia.

In the Gambia, linkages with secondary schools and the Ministry of Education have expanded and been solidified in recent years. Most recently, the tertiary educational institutions such as the Gambia College, Gambia Technical Training Institute and the Management Development Institute have been involved in the University Extension Program. New partnerships have emerged with the local organizations such as the Islamic Relief Association and UNICEF Gambia.

The Association has operated from project to project, with or without CIDA or other grants, always on a shoe-string budget and with volunteer labour. Nevertheless, it has attracted more than $1.5 million in matching grants from national funding organizations, has raised more than $500,000 through a host of fund raising activities and participants' contributions, and has had the benefit of perhaps a million dollars worth of in-kind contributions. Individual participation has fostered linkages with local community groups such as Lions, Rotary and Kiwanis Clubs, and churches. One person's involvement has often led to a whole family's support in project activities.

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Since 1995 the level of activity has been such that the Association has opened a modest Field Office in The Gambia and a small head office in Halifax. The current projects directly involve close to one hundred Canadians and several hundred Gambians. The Association has begun placing Canadians in the field on one-year contracts to work as partners with Gambians, in a variety of projects in education and health related work.

A Delegation Visits the Gambia

In 1980, a small delegation of Nova Scotians travelled to The Gambia to explore the possibility of linkages with two fledgling Gambian institutions: Gambia College, in conjunction with its expansion to new facilities in Brikama, was seeking to augment its programs in teacher training and agriculture with the assistance of counterpart institutions in Canada; the Gambia Technical Training Institute was still in the conceptual stage but was in the market for Canadian partners.

The Nova Scotians were novices to international development.

The Nova Scotians were novices to international development and scarcely knew what to make of this minuscule country, with its rustic capital city and mud-hut villages, its 500 kilometres of paved roads, its almost total lack of industrial infrastructure. How could they have known that they would be the vanguard of a small stream of Nova Scotians, who over the next dozen years or so would journey here on a series of projects and development education pilgrimages! Certainly they did not foresee that they would be the first link in a complex network of linkages that would be forged between individuals, groups, institutions and communities in Nova Scotia and The Gambia.

The University College of Cape Breton (UCCB) was the first Nova Scotian institution to take up the challenge of working in The Gambia. In cooperation with the Association of Canadian Community Colleges and the Canadian International Development Agency, the UCCB undertook to assist in the establishment of the Gambia Technical Training Institute (GTTI). That institute was to be built (and partially equipped) by means of a long-term, low-interest loan to the Gambian government by the World Bank. It was an ambitious but vital project in a country which, at the time, had an adult literacy level of perhaps 15 percent and only 39 percent of its school age children actually attending school in a country of 700,000 people with seven high schools and no university; a country of massive underemployment in which 90 percent of the workforce was on the government payroll.

The GTTI was the key element of a national manpower development scheme embracing all of the technical training programs and vocational schools in the country. The institute's mandate was not limited to full time students: it was to provide day-release and extension programs in technical teacher-training and secretarial, technical and craft programs. The GTTI was therefore called on to develop a liaison with government departments, parastatals, and private enterprise to determine the training needs of the country, and how best to respond to them.

The first tentative loop in the association with The Gambia came in November 1981.

The first tentative loop in the association with The Gambia came in November 1981 when Burris Devanney responded to a job advertisement placed by the UCCB in the Halifax Chronicle-Herald, seeking teachers and administrators to work at the GTTI. As Department Head of Arts and Commerce, Acting Registrar, Coordinator of the five-member team of Canadian department heads, and general assistant to the Director of the Institute Devanney developed a personal commitment to The Gambia which embraced his family as well. The extensive network of colleagues, friends and acquaintances would support activities years later. At the time, there was not the slightest inkling of these future projects.

Halifax West High School 'Gambia Project 1'

When Devanney returned to Canada in September 1984, it proved impossible to leave the Gambia experience behind. As vice-principal of Halifax West High School, before the school year was out, Burris was exploring the idea of an educational visit to West Africa. The Halifax West High School Gambia Project was initiated in the spring of 1985. It was to involve several months of orientation and fund raising, culminating in a one-week trip to The Gambia in March 1986 by nineteen students and two teachers. Its uniqueness attracted a great deal of media attention in Canada and $13,700 in financial support from the Secretary of State.

The project, subsequently called Gambia Project 1, set out the principles which would govern future projects. It was conducted as a development education experience for the participants. It emphasized the concept of "learning by doing", of learning through active involvement. It included a development assistance component. It set out to establish linkages between groups and institutions in Nova Scotia and The Gambia.

Personal contacts in The Gambia facilitated planning the agenda and liaising with local organizations, providing an opportunity to do what tourists usually cannot do -- visit schools, villages and rural development projects and learn, at first hand, about some of the issues confronting a less developed country. The participants were able to reciprocate this hospitality by contributing, from fund raising, $5,000 in development assistance to the schools and villages which visited -- a not inconsiderable achievement for a group of high school students who had had to find funds for most of their own travel and accommodation expenses.

From a long term perspective, one of the most valuable things the project did was to establish a linkage between Halifax West High School and St. Peter's Technical High School, in the village of Lamin.

From a long term perspective, one of the most valuable things the project did was to establish a linkage between Halifax West High School and St. Peter's Technical High School, in the village of Lamin. This not only brought about a lot of personal interaction between students of the two schools, but brought Principal Ann Therese N'Dong Jatta (currently Chief Education Officer in the Gambian Ministry of Education) and some members of her staff into the network. Some of the students of that original linkage are still involved in NSGA activities, including three Gambians who are now attending the University Extension Program. St. Peter's continues to be an active partner in joint enterprises.

The Project Continues

The students' enthusiasm was infectious. It spread to staff members at Halifax West and to teachers in other schools and then to other institutions, including Dalhousie and Saint Mary's universities. By the fall of 1987, plans were underway for what came to be known as Project 2.

At about the same time, The Nova Scotia Agricultural College (NSAC) in Truro, in co-operation with the Association of Universities and Colleges in Canada (AUCC), embarked on its linkage with the School of Agriculture at Gambia College, a partnership that continues to this day. This would involve the training of Gambian faculty and administrators, the provision of equipment and materials, and sending NSAC faculty and staff to The Gambia to conduct training programs and research into agricultural methods. Members of the Association assisted with the orientation of several NSAC staff as they prepared for The Gambia, and some of these same individuals, at the conclusion of their assignments, returned the favour for groups involved in NSGA projects. Individuals from both Canada and The Gambia have also expanded their involvement into other projects of the Association building upon the network of contacts established under this institutional development program.

Project 2 involved twenty-two adults and three high school students.

Project 2 involved twenty-two adults and three high school students, who participated in a six month development education program, culminating in a two week educational tour and working visit to The Gambia and Senegal in July 1987. The adults were professional or skilled persons, with a particular interest in international development; they were mainly educators, but of varied backgrounds. The nucleus of the group had a direct connection with Halifax West High School and saw their project as an extension of the original initiative undertaken within the high school.

It is exquisitely pragmatic that the primary goal of the project was based on the self-interest of the participants: it was to provide them with experience, insight and understanding of the aspirations, needs and problems of a developing country, both for their own edification and professional development and so that they might share this knowledge with other Canadians. The goal was to learn, and the method was to learn by doing.

A 54 hour development education orientation program conducted in cooperation with the International Education Centre of Saint

Mary's University and involved seven full-day sessions over a six month period from January to June 1987. The program focused on development issues, as well as on the history, cultures, religions, political structures, and educational systems of The Gambia, Senegal, and West Africa in general, and made use of more than two dozen resource persons, including a number of Africans residing in Nova Scotia.

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It is hard to say whether the project made the group or the group made the project! Certainly there was a kind of melding which took place gradually through the six month orientation period, and then a bonding during the two days in London and the first few days on trek in the Gambia which brought almost everyone together with a sense of common purpose. The pace was at times gruelling, but the participants endured the sheer physical demands of heat and humidity, speeches and formalities, and waiting, waiting, waiting....and the inevitable diarrhoea....with equanimity, good humour and an endearing frankness. A lot of what was learned was learned in retrospect, in starlight discussions at the end of the day around the hotel pool or on a wharf along the river, or much later still, back home in Canada.

On returning from West Africa, George Schuyler, Director of the I.E.C. of Saint Mary's University, conducted a full day debriefing session for the participants. Out of this came a decision by at least 15 members of the group to meet as an ongoing committee to consider other activities which might serve the goals of the project. It was decided that immediate follow-up activities could include the following: the participants providing development education workshops for their colleagues at home; the continuing of institutional twinning relationships; teachers making use of development education models and concepts in their classes; and promotion of a better understanding of international development issues by all participants. Some of the participants speculated on the feasibility of establishing such a network of individual and institutional connections between Nova Scotia (or the Maritimes) and West Africa as to provide a broad framework for further projects.

With participants from more than a dozen places of work, including universities, public schools, school boards, teacher unions, non-governmental organizations and communities throughout Nova Scotia, the participants were in a position to reach a significant audience. The project has continued, as it was intended to. All or most of the participants seem to have made space in their individual futures for The Gambia, Africa, the "third world" and international development.

The Projects "Thicken"

One of the branches which grew from this project was Dalhousie University's involvement with the Gambia College. Scott Wood, then research professor at Henson College, undertook his first trip to Africa on Project 2. Two years later he participated in Project 4, a credit course in Development Education conducted through the Dalhousie School of Education. The program was coordinated by Les Haley, at that time Director of the School of Education, and Burris Devanney. It featured a field trip to The Gambia in February 1989 for the 14 registered students, including six teachers with the Halifax District School Board.

While in The Gambia, Professor Wood and Dr. Haley entered into negotiations with Ndondi N'Jie, Principal of Gambia College, to establish a partnership between the two institutions -- one that was to be modeled upon the successful partnership between Gambia College and the NSAC. In 1990, Dalhousie received a five-year CIDA funded, $900,000 linkage project with Gambia College, which would involve training of Gambian faculty, cooperative curriculum development between Gambian and Canadian faculty, and the provision of equipment and education materials.

Clearly, the opportunities for co-operation and networking on both sides of the Atlantic had increased tremendously.

Clearly, the opportunities for co-operation and networking on both sides of the Atlantic had increased tremendously. On 7 December 1989, the Nova Scotia - Gambia Association was incorporated under the Societies Act of Nova Scotia, with a fifteen person Board of Directors. Scott Wood was elected Chair

of the newly-incorporated Association and Les Haley accepted a position on its Board of Directors. In 1995, the Coordinator of the Dalhousie Project, Susan Rolston became chair of the Association.

Peer Health Education Model

Despite the establishment of the formal structure of an NGO and the expanding contacts with the universities, the Association continued to go back to its roots in public schools. Project 5 involved twenty-five students and three teachers from two Halifax high schools, Halifax West and J.L. Ilsley, in an intensive seven day development education visit to The Gambia in March 1990. This project was modeled upon its predecessors in 1986 and 1988. Projects 6 and 7 followed on the heels of this, in the spring and summer of 1990.

The projects were also becoming integrated and organically connected.

The projects were also becoming integrated and organically connected. Projects 6 and 7 were used to train coordinators for Project 8, an ambitious peer health education program conducted in both Nova Scotia and The Gambia. Some of the participants in Project 5 were selected as peer educators in this project. Project 8, the 1990-91 Peer Health Education Project, brought together fifty-nine high school students and teachers from The Gambia and Nova Scotia in the delivery of an AIDS and drug education program to peer groups in both countries. St. Peter's Technical High School, our long-time partner, provided the sixteen students who made up the Gambian contingent. The Nova Scotia group was comprised of forty students and teachers from Halifax, Truro and Cape Breton. As news of the project spread, students and staff from Cabot High School in Cape Breton and Cobequid Education Centre (CEC) in Truro, as well as a health professional and a number of educators from other schools in the Truro area became involved in the project, enhancing the Association's capacity to deliver a development education message throughout the province.

439

With the assistance of a $105,000 contribution by CIDA, the Gambian participants were brought to Nova Scotia for six weeks in August and September 1990. The training sessions took place over a four week period, followed by the delivery of the health education program to 600 students in eleven selected provincial schools. Then in April 1991, with the help of a $10,000 grant from Participation Africa Canada, the Nova Scotian participants travelled to The Gambia, where they rejoined their counterparts and, working in teams of three, provided a similar program to 3,200 students in fourteen secondary schools throughout the country.

As the health education presentations took shape, it became clear that the Association's greatest resource was the enthusiasm of the peer educators and their ability to interact personally with their peers. The interactional, student-centred approach, emphasizing role playing, simulation games, and problem-solving proved to be an effective means of educating youths in both countries in issues of mutual concern.

> I think that you are getting through to us better than teachers. You make it enjoyable to learn about it. I also think that you took some pain away, because my cousin died of AIDS three weeks ago. So I would like you to become a Health teacher....Well I just want to say, I think you guys are O.K. and keep up the good work.

The feedback from Gambian classes was as positive as it had been in Nova Scotia.

The feedback from Gambian classes was as positive as it had been in Nova Scotia. Some of the most flattering comments came, indirectly, from Gambian teachers. On several occasions a teacher would be observed leaving the classroom during one of the presentations to drag in a few of his colleagues to marvel at what was happening, so intense was the level of participation.

Aja Kaddy Jaiteh, a female peer educator at St. Peter's, may have expressed it best:

Life in The Gambia is the same. There are no changes. But I have changed. I read a book about education and the community which said this: each community is a powerful force for effective learning. Students, when encouraged, are tremendously helpful to each other. They are like a cell, a revolutionary cell. It is the cell in which the mutual learning and instruction can occur....This is what the group was like.

Project 8 was nominated, in the spring, of 1992, by the Secretary of State as one of Canada's two official entries for the prestigious Commonwealth Youth Service Award. By this time a group drawn from the participants was already embarking on a spin-off project. Under the leadership of Lorne Abramson and Alfred Manneh, and funded in part by a $65,000 matching grant from Partnership Africa Canada, Project 9 provided about 200 selected Gambian high school students and 20 teachers with up-to-date information on AIDS and drug abuse, as well as training in methodologies of interactional peer education. These teachers and students represented 17 Gambian high schools from throughout the country. The purpose of the program was to empower them to develop and organize meaningful peer health education programs in their own schools.

The training programs were conducted by a joint team of eight Nova Scotian and eleven Gambian "graduates" of Project 8. The trainers were chosen from a large group of applicants on the basis of experience, communication skills, commitment, maturity and leadership.

A clear commitment to carrying on the peer health education program through the establishment of a working committee composed of the Gambian peer educators and some of the most interested teachers from the participating schools emerged from these Projects. This proved to be nucleus from which the NSGA's largest project would emerge.

Counselling Skills Support

At the same time, in the summer of 1992, two Nova Scotian professionals with more than 30 years experience as school guidance counsellors, June Boswell, Head of Guidance at Halifax West High School (and a veteran of Project 2), and Elizabeth Brown, a recently retired counsellor from the Dartmouth, N.S., School Board, spent three weeks in The Gambia exploring with Gambian counsellors, teachers, students and Ministry of Education officials issues related to students' guidance needs and the professional development of counsellors.

In cooperation with the Ministry of Education, Mrs. Boswell and Ms. Brown conducted a one day in-service program for principals, teachers and counsellors from schools in Banjul and assisted in setting out a one-year plan of action for an informal counsellors' association in that city. Some of their other activities, in an ambitious schedule, included conducting a job-survey exercise with the students of the NSGA summer school and following up on initiatives taken earlier by Dr. Jim Manos and Elizabeth Semple of the Dalhousie - Gambia College linkage. While in The Gambia Mrs. Boswell also had meetings with Sebastian N'Jie, an instructor in Guidance Counselling at Gambia College who was to commence a Masters program in Education at Dalhousie University in September 1992, with a work-placement in the Guidance Department of her school. This brief project proved to be the impetus for significant initiatives by these individuals to expand and strengthen the role of counselling and guidance in the Gambian education system.

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Utilizing the University Connection: Education, Counselling, Health, and the Environment

Project 10, a summer school skills upgrading program initiated by Burris and Louanne Devanney, emerged from the personal and academic connections with Halifax universities. The NSGA was

awarded a $92,000 matching grant from CIDA to pilot a summer school in The Gambia during July and August 1992.

Intended to reach 240 students from ten selected secondary schools in Forms I to IV, schools were invited to choose only conscientious students who were educationally at-risk because of skill deficiencies in English or Mathematics and who would benefit from individualized attention, but whose families did not have the resources to provide the tutoring assistance which was commonly available to the more well-to-do students in the urban areas. In fact, the demand was so great that we accepted more than 270 students from 15 schools, and had to turn down many others.

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A group of seventeen Education students from Dalhousie University and an equal number of Gambian teachers, most of them recent graduates of the Gambia College School of Education, were charged with the responsibility of developing appropriate curricula and delivering an interactional, student-centred program which would emphasize skill development and "learning by doing." Instructional strategies were to include team-teaching, small group work, and a lot of attention to the specific needs of individual students. That these thirty-four educators, most of them with very little teaching experience, were able to come together in a team-teaching pilot project and accomplish these goals was a significant achievement.

The only "complaints" registered by students (apart from one who found the wooden chairs hard on his back!) were that the school day was not long enough and the summer session too brief. Clearly the students regarded the summer school as a tremendous learning experience, and were most appreciative of the way they were treated. The unintentional humour of some of their comments does not detract from the value of their perceptions.

Subsequent summer schools were held in 1993 and 1994. The Canadian participants and support from the respective Schools of

Education came from both Dalhousie and Saint Mary's, as well as Mount Saint Vincent University. With the rationalization of the Schools of Education in the Halifax area, the NSGA, in cooperation with Mount Saint Vincent University continues to explore avenues of permanent funding for the summer school skills program.

Project 15 was initiated in February 1994, the largest project to date of the NSGA. This two-year Peer Health Education Project was conducted through a cooperation agreement with the Gambian Ministry of Education and with $730,000 in financial support from Health Canada. Building upon the enthusiasm and network of peer education models, the project established youth health education and counselling centres in ten high schools throughout The Gambia. Each school has an on-going team of peer health educators who use a dynamic, interactive approach in bringing information and strategies concerning major health issues to the attention of their fellow students. Guidance counsellors in each of the schools have been trained to coordinate the activities of the peer educators and to provide personal and health-related counselling services to students throughout their schools. Youth outreach programs to enable the peer educators in the participating schools to reach neighbouring schools and communities with dramatic presentations on health issues have been instituted. The outreach program is augmented by radio phone-in programs and television programming featuring the peer educators. A National Association of Peer Health Educators has been established with a mandate to work with youth in school and out of school. Limited follow-up financial support to date has permitted an extension of the peer health education and counselling programs to other secondary and primary schools.

The outreach program is augmented by radio phone-in programs and television programming featuring the peer educators.

In April 1994, the Association embarked upon a journey into the heart of Islam in West Africa: the Almudo Project. Almudos, young boys in the care of Islamic holy men known as marabouts, were agreed to be the most numerous as well as the most vulnerable of The Gambia's street children. The project sought to improve the lives of these children while respecting the

444

The emphasis of the project has shifted to ensuring adequate economic support in the villages to enable the children to remain there, largely through improvements to agricultural systems.

religious and cultural traditions. With the financial support of CIDA's NGO Fund for Children in Difficult Circumstances, and more recently, the support of UNICEF, the almudos basic health and education needs were addressed. Graduates of previous peer education projects were hired to staff centres where the most basic needs of the almudos could be met. Subsequently, the children have been repatriated to their home villages. The emphasis of the project has shifted to ensuring adequate economic support in the villages to enable the children to remain there, largely through improvements to agricultural systems.

Both of these projects have utilized the resources of the Nova Scotian universities either directly or indirectly. Graduates of health education and medical programs have served as short-term trainers in The Gambia. Facilitating the transfer of current health information to peer educators and counsellors in The Gambia, a number of these participants continue to work in the field of international health. Advisory committees of faculty have facilitated the development of the programs and individual faculty have participated in evaluation of project activities.

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In 1996, the NSGA began the Environmental Education Project in The Gambia with the support of CIDA. Responding to calls for improved delivery of environmental education which came from the Gambia Environmental Action Plan and the Environmental Education and Communication Strategy, the project emphasizes improved delivery of environmental education in secondary schools. "Learning by doing" hands-on activities will emphasize stewardship and appropriate environmental behaviour. Training for secondary school teachers, improved teacher's resource materials, and support of school-based projects, is to be supplemented by expansion of peer education techniques to environmental management issues. Cooperative curriculum development utilizes students from education programs in Nova Scotia. Some peer educators from Nova Scotian high schools will also be involved in the project.

As the University Extension Program enters its second year of operation, faculty and tutors are being drawn from universities across Nova Scotia. Saint Mary's University provides the administrative infrastructure and academic backbone of the Program, but does not limit participation of qualified individuals. Indeed, qualified Gambian academics are being solicited wherever possible. The partnership with Saint Mary's University can be expected to expand as the Government of the Gambia confronts the challenges of developing and expanding higher education in The Gambia.

The Challenge Ahead

The activities of the Nova Scotia - Gambia Association in the area of development education and development assistance in the past eleven years have been significant.

The activities of the Nova Scotia - Gambia Association in the area of development education and development assistance in the past eleven years have been significant. We have stirred the hearts and imaginations of hundreds of Nova Scotians and other Canadians, who want to become involved in this kind of community-based international development work. Our project "veterans" are energized and eager to continue their participation. To those of us who have been intimately involved with the Gambia Project, the whole process seems to have taken on a life of its own. It is an opus based on a shared experience and shared vision, a complex work in progress -- like a novel with many different writers and many chapters still demanding to be written.

The Nova Scotia - Gambia Association is committed to a long-term educational linkage program in The Gambia and to the maintainence if an ongoing partnership with Gambian institutions to sustain all worthwhile endeavours which we jointly initiate. Linkages with Canadian educational institutions, including universities, and community-based organizations are crucial elements in sustaining these activities.

Networking is the lifeline of community development.

Networking is the lifeline of community development, whether the community be a local village or the global village. Networking is, in essence, not only the setting up of new linkages but the recognition and affirmation of parallels and connections

The result of this process is not only to have Nova Scotians and Gambians working together, but Gambians working more effectively with Gambians, and Nova Scotians with Nova Scotians.

which have always been there, waiting to be used. For the Nova Scotia - Gambia Association, networking has involved bringing together for constructive purposes existing parallel groupings in Nova Scotia and The Gambia. The result of this process is not only to have Nova Scotians and Gambians working together, but Gambians working more effectively with Gambians, and Nova Scotians with Nova Scotians. The energy potential of such cross-cultural networks in the sharing of ideas, skills, experience and creative enthusiasm, is immense. The process of sharing is akin to inter-cultural brainstorming.

What we have learned from this is that individuals can become as creatively energetic doing development work as, for example, collaborating on the production of an original stage-play. Working together in a small international "theatre" (a theatre of peace) with imagination, commitment and shared goals, they can bring into existence a whole complex of new and valuable inter-cultural relationships, linkages and institutions. The opportunities for learning and doing provided by the Gambia Project have attracted ordinary (and perhaps a few extraordinary) people of diverse ages, education and backgrounds, who defy the current cynicism. They personally bear witness that practically any of us can become truly energized and effective when confronted with practical ideals, achievable goals and an interesting, challenging process.

PART VIII

DEPENDENCY OR DEVELOPMENT?

24

## DEPENDENCY OR DEVELOPMENT?
TOWARDS AN AGENDA FOR CHANGE

by Ian McAllister

Working in the Region or *Working with the Region?* Guy Neave, in Part One, contrasted the 'regionally committed university' with 'one that, like Mount Everest, is simply there.' Many subsequent papers, drawing heavily upon Dalhousie University cases, demonstrate that a great deal of university-community inter-action has been taking place over a good number of years, but suggest that many of those involved have perceived region-oriented work to have been marginalized and fragmented from institution-wide priorities, strategies or reward systems. Certainly the promotion of sustainable *regional* development has not been an explicit part of any recent Dalhousie senate 'mission' statement, in contrast with, for example, health and ocean studies. At the same time, over 75 percent of Dalhousie's student body is drawn from Atlantic Canada: in numerical terms that is a significant indicator of university-regional linkages, if not necessarily of sustainable *regional* development impacts.

It is hoped that, if nothing else be achieved, this book will generate very serious public discussion - within Dalhousie and far beyond - about the role and responsibilities of the university in support of regional development.

In Figure 1, a conceptual framework of the connections between teaching, research and community/extension services and regional development is sketched. What weight should a university place on the sustenance of the region within which it is located? Can present university-regional relationships be considered satisfactory, or should more, less or substantially different emphasis be attached to the university's regional interface? It is hoped that, if nothing else be achieved, this book will generate very serious public discussion - within Dalhousie and far beyond - about the role and responsibilities of the university in support of regional development. In the context of Atlantic Canada today, I believe this to be a matter of much urgency. Atlantic Canada is clearly at a watershed.

451
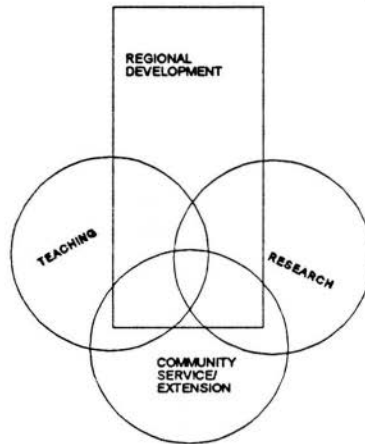
Figure 1

Atlantic Canada

Atlantic Canada, when measured according to such criteria as the UN's human development index (H.D.I.), combines degrees of prosperity, security and general welfare that are of enviable proportions internationally. Many citizens of the region will not be surprised by such findings - it is an area of the world that has attracted immigrants over centuries and, at the same time, has a strong sense of cultural identity within the Canadian federation. The universities, as many other institutions within the region, have both benefited from their location and, in many ways, quietly re-inforced regional strengths.

Yet such general indicators do not tell the whole story. Atlantic Canada's level of economic and social welfare has been routinely dependent on transfers from more affluent parts of Canada, both through federal government instruments (including unemployment insurance) and through numerous policy decisions (for examples, the location of government offices, subsidies to fishing

communities and to the coal industry, and the lengthy retention of some military bases for economic support rather than defence reasons). The provincial governments, bolstered by cost-shared programming, fiscal equalization and heavy borrowing, have built up a physical infrastructure system and community levels of expectation in a manner which has generated capital maintenance, public service and debt repayment requirements which are now dauntingly high. To argue, as is sometimes done, that some of these projects and programmes were 'thrust upon the provinces' as an outcome of ill-considered federal policies, or that, indeed, some revenue tax flows to Ottawa mitigate the net transfer picture, does not change the end result. To make matters worse, some of the natural resources, most particularly the fisheries, have been 'mined' to the verge of extinction - for a variety of reasons, but with serious consequences for future sustainability. The unemployment levels in Atlantic Canada, as might be anticipated in such circumstances, are high by industrial country standards, particularly outside the major cities. Indeed Atlantic Canada displays some characteristics more readily associated with the dual economies of Third World nations. Thus quite large areas (such as Cape Breton and much of rural Newfoundland) have high levels of measured and also disguised unemployment, together with a substantial dependency on seasonally precarious, subsistence rural activities. Despite social programmes, many are caught in a poverty trap. At the same time there are urban areas of considerable prosperity, as in parts of Halifax, St. John's and Moncton. It is to such centres that the region tends to look for future growth and opportunities.

Uncertainties about the sustainability of Canada, given the potential separation of Quebec, can only be viewed with foreboding from, at least, the shorter-term vantage point of Atlantic Canada.

Uncertainties about the sustainability of Canada, given the potential separation of Quebec, can only be viewed with foreboding from, at least, the shorter-term vantage point of Atlantic Canada. Separation by Quebec would cause a chain reaction across the nation and, whatever new configurations might emerge, the Atlantic Provinces would find themselves geographically separated from any re-constructed Canadian federation. Historically the Atlantic provinces have gained much from Quebec's concerns about greater regional equity and, were

Quebec's political voice to be no longer part of federal policy debate, Atlantic Canada's arguments for special regional consideration (especially in a NAFTA environment) would be unlikely to carry much weight. The region could become more fragmented from the Canadian main-stream and, over time, be challenged to explore new kinds of partnerships with, for examples, the North-Eastern United States, the European Union, and the Caribbean. International associations (formal and mostly informal) that have already been forged by some of the Maritime Province universities could, in such eventualities, become important building blocks for regional renewal efforts.

It is perhaps surprising that the universities are not in a ferment about alternative strategies for a more sustainable future for Atlantic Canada.

Given such potential scenarios, and noting again the high unemployment and under-employment levels that already exist in large segments of Atlantic Canada (affecting especially the younger members of the society and including university graduates), it is perhaps surprising that the universities are not in a ferment about alternative strategies for a more sustainable future for Atlantic Canada. That, however, is not apparently the case. It is argued, in this conclusion, that it should be and it is hoped that this book will encourage the process.

A Call for Action

As an outcome of informal discussions among some of the authors and invited participants to a workshop, it was decided to conclude this book in somewhat the same manner as the preparatory conference to the Rio Earth Summit, which spawned this process - with a proposed Declaration or mandate and the skeleton of a 'Plan of Action'. The Plan of Action has two parts: short and longer term. Various universities, including Dalhousie, might see fit to 'buy into' such a Declaration and, at the same time, put flesh onto the bones of the rudimentary *Plan of Action* draft.

In Figure 2, the university is depicted as one contributor to the sustainable development of the region within which it is situated:

the challenge is to determine how best to move from the present to a desirable future state.
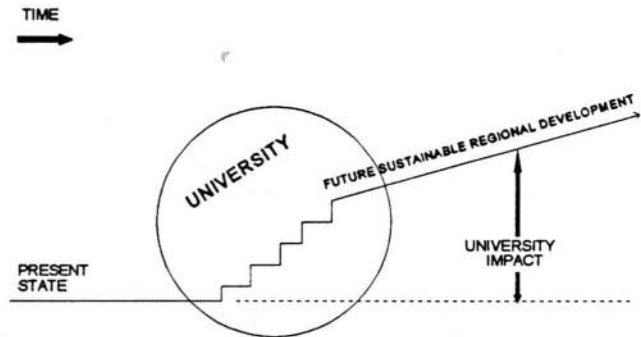
Source: Redrafted from ideas in FINNIDA, *Guidelines for Project Preparation and Design.*, 1990

Figure 2

Declaration

It is suggested that the universities in Atlantic Canada should commit themselves, as institutions, to a Declaration in support of Sustainable Regional Development.

It is suggested that the universities in Atlantic Canada should commit themselves, as institutions, to a Declaration in support of Sustainable Regional Development. This would be built upon key principles, serving as guides to the conduct of teaching, research and community service. It would be consistent with the Talloires Declaration and the Halifax Declaration (the latter is reprinted at the back of this book), presented at the Rio Earth Summit. Figure three suggests six principles.

> ## Declaration of Commitment of the University to the Welfare of the Region
>
> - Concern for the welfare of the people and environment within the region will play a major influence in the planning processes throughout the university, including in the manner priorities are set and resources allocated;
>
> - The university will seek to establish strategic partnerships, not only with sister universities but public bodies, businesses and non-governmental organizations, in an endeavour to strengthen its contribution to the sustainable development and welfare of the region;
>
> - Teaching, research, community services and extension activities will routinely be appraised in order both to review their contributions to the region and to search out lessons for future application and sharing between institutions;
>
> - Administrative structures, mandates and procedures relevant to more effective regional development contributions will be routinely examined and adjusted as deemed necessary;
>
> - Encouragement will be given, both through informal and formal procedures (including in tenure and promotion guidelines), to work (teaching, research and community service) that clearly demonstrates a contribution to sustainable regional development;
>
> - National and international activities by the university will, wherever reasonably practicable, include specified regional development dimensions.

Figure 3

Regional Development Plan of Action

It is suggested that the universities in Atlantic Canada should design (and commit themselves as institutions to) a <u>Strategic Plan</u> in support of Sustainable <u>Regional</u> Development. Such a plan should identify short and longer term goals and strategic activities. It might be along the following lines:-

(1) <u>Short-term goals and strategic actions</u>

Teaching

To identify and encourage <u>teaching initiatives</u> (both through formal and informal programmes) that are demonstrably focusing on regional development and connecting with the problems, experiences and opportunities associated with the sustainable development of Atlantic Canada. These would be selected from across disciplines and in cooperation with representatives from the region and its communities.

Initial actions might include:

• Collect and review human resource inventories;

• Collect and review a sample of pertinent curricula to explore how they could become more 'relevant' to the region; and highlight 'good ideas' that are uncovered through the process. It must be emphasised that these curricula are as likely to be found in departments of health administration, history or music, as in more 'obvious' candidates for attention such as business studies, economics or political science. Care should be taken to balance this process. The emphasis would be on sharing good ideas - not on interfering with course design;

• Re-inforce a select number of existing programmes as pilot projects (e.g. the Masters of Development

457

Economics, Masters of Environmental Studies, Masters of Marine Management, Outpost Nursing programmes and Henson College's work in support of micro enterprises);

- Provide incentives (e.g. prizes and specific resource allocations) to faculty and student initiatives on regional development issues. These, it must be emphasised, could be in such fields as library studies, music, health, sociology and social anthropology, public administration, earth sciences, international studies and ocean studies;

- Re-inforce co-op programmes, which enable students to gain experience within regional institutions as a part of their academic programmes. Graduate as well as undergraduate programmes should be eligible;

- Examine tenure and promotion guidelines to ensure regional development contributions by faculty are given substantial weight.

Research

Identify and encourage research (through student theses, student term-papers and field research, faculty research and sabbaticals, student papers submitted for prizes allocated for regional development themes). The paper by Ray Côté is illustrative of how much research is going on already - within just one programme; yet, as he points out, much of this is not surfacing nor being harnessed effectively. Were a number of departments initially to write research-review papers (along the lines of Côté's), that alone could be a useful step forward, provided they were then publicised and a follow-up approach was put in place.

Initial actions might include:

- Construct a series of public panels and lectures on regional development topics that are currently either being researched or could usefully be studied;

- Establish a university research fund for studies pertaining to the development of Atlantic Canada. This might be resourced through a development appeal, some reallocation of existing university resources and a cost-shared agreement with the Atlantic Canada Opportunities Agency. It might have both student and faculty/professional divisions. A separate division for student support is suggested to ensure students do not get marginalised from this opportunity. (It should also be designed to encourage retired public servants, former politicians, business people, those on leave-of-absence etc. to record some of their experiences). It might be managed by a Board of Directors, at least two-thirds of whom should be from government, business and the non-governmental organizations and, overall, gender equity should be practised in its constitution.

- Designate a section of existing university papers (e.g. *Dalhousie News*) as a "regional development page" and include research-in-progress reports, research findings and also research needs items. This should be supplemented through electronic media.

Extension Services with the Community

Identify and encourage extension education and community outreach activities in support of regional development. The various universities in the region are already doing much individually - but there is opportunity for a great deal more sharing of information and greater collective action.

459

Initial actions might include:

- Each department write a brief paper (along the lines of those by William Birdsall and Nancy Minard on libraries and by Walter Kemp on music) indicating the present community linkages and also suggesting 'plans of action in support of regional development', in which the department might itself (often with others) engage;

- A series of co-op projects that are 'regional development oriented' might be identified and embarked upon;

- A number of local programmes (such as Canada World Youth) might be further re-inforced by university support activities;

- Each substantial international project might be reviewed specifically to see how it could contribute more to the development of the region.

(2) Longer-term goals and strategies

A coherent vision is essential. Main goals and strategic actions should obviously not be lost sight of by a busy series of apparently worthwhile (but fragmented) activities. Some hard discussion about the appropriate kinds of regional development goals to which universities could usefully contribute is a precondition for substantive programme re-inforcement or development. A strategic, not piecemeal, process is being advocated. Some of the goals might be:

- To enable more students to acquire working experiences, as part of their degree and professional programmes, in organizations within Atlantic Canada;

- To make it easier for mid-career government, business and N.G.O. officials to access University classes through more evening classes and other means;

- To sensitise more faculty members to the problems, institutions and prospects of the region;

- To encourage more inter-disciplinary and inter-institutional research, in particular, on longer-term regional opportunities and basic vulnerabilities.

Actions might include:

- Adding, re-inforcing or redirecting contributions through relevant courses, through regional development oriented research support, through the secondment of faculty to regional institutions, through direct services (a number of the papers illustrate activities that are already in place);

- Developing a series of twinning agreements to provide frameworks and impetus for partnerships between particular communities and institutions, with the university-at-large and segments thereof. These could facilitate additional research, two-way exchange projects, student internships, as well as local community, national and international institution 'pairing', with the university as a catalyst and bridge;

- Substantially improving opportunities for those who (often for financial and employment reasons) can only engage in part-time studies;

- Establishing more systematic connections between the international links already in place and the region - normally at municipal and provincial government, local business and N.G.O. levels. The universities and some local businesses have a number of international projects and connections, but they are frequently working in isolation from each other and thereby missing opportunities for more extensive, more effective and more regionally supportive programming;

461

- Encouraging new local university-business, university-government and university-N.G.O. joint-ventures, bringing university connections and expertise, local business capacities and interests more closely together. There are a limited number of such ventures in place, but there is scope for many more, including in fields that are not normally involved;

- Establishing an annual independent 'progress audit' process, whereby public reports on the university and its contribution to regional development are routinely compiled. This should be entrusted to a body external to the university.

Conclusion

Altruism apart, it is argued that universities neglect the region within which they are located at their own peril.

This book has brought together a cross-section of insights and experiences. As institutions, many universities have extensive mandates: a contribution to regional development is but one responsibility in a context of many competing claims for scarce resources. Altruism apart, it is argued that universities neglect the region within which they are located at their own peril. When that region is relatively poor and its prospects far from secure, so the level of risk can be correspondingly greater. In the case of Dalhousie University, located in a scenically beautiful but (in Canadian terms) far from prosperous region, the future interactions between the region and the university will be of critical long-term importance both for the region and the university. Dalhousie is, regardless of its many other interests and linkages, very substantially in and of the region. The papers in this book demonstrate that numerous contributions have been, and are being, made by many segments of the university to the region. The challenge is to do a great deal more.

Contributors

Richard Beazley, Professor, Health Education at Dalhousie University, has been collaborating in research and program evaluation since 1987, with a consistent focus on adolescent sexuality and the prevention of pregnancy and sexually transmitted infections. This work, which is exemplified by the Amherst Initiative for Health Adolescent Sexuality, now integrates community development with a participatory action research approach to the study of factors that influence adolescents' sexual health.

John Benoit, Associate Professor - Research, Henson College, is a sociologist studying the application of the sociology of complex organizations to management issues in the fire service. His recent research has been on the power relationship between volunteer fire departments and local governments. His current major project is to identify effective management practices in fire departments that include paid and volunteer firefighters.

Robert Bérard, a former faculty member in the School of Education at Dalhousie University, is currently Associate Chair (Teacher Education) of the Department of Education at Mount Saint Vincent University in Halifax.

Keith Bezanson is President of the International Development Research Centre, Government of Canada, Ottawa. Previous posts have included those of Director General, Multinational Programs of CIDA; Vice-President of the America's Branch, CIDA; Canadian Ambassador to Peru and Bolivia; Administrative Manager of the Inter-American Development Bank, Washington. Earlier experiences have included working as a teacher in Nigeria (CUSO) and as project director of the School Learning Research Project in Ghana.

William F. Birdsall is the University Librarian, Dalhousie University Libraries. He has been involved in various cooperative library initiatives at the regional and national level including serving as Chair, the Novanet Management Committee, Novanet Inc., a consortium of Nova Scotia university libraries.

Michael Bradfield has been a Professor of Economics at Dalhousie for over twenty years. His present research interest is in the area of technology transfer and he is currently revising his text (1988) <u>Regional Economics: Analysis and Policies in Canada</u> and extending his work on market imperfections (e.g. 'Long-run equilibrium under pure monopoly.' <u>Canadian Journal of Economics</u>, 1990).

Raymond Côté is currently Director and Associate Professor of the School for Resource and Environmental Studies at Dalhousie University. The School offers a graduate program leading to the Master of Environmental Studies degree. Professor Côté's teaching and research interests include coastal and marine environmental issues, management of chemicals and wastes, business and the environment, and industrial ecology.

Burris Devanney is Executive Director of the Nova Scotia-Gambia Association. He was a school administrator with the Halifax District School Board and has worked in educational institutions in Nigeria, Ghana and, most extensively, The Gambia.

Contributors

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Emery Fanjoy is an adjunct professor in the School of Public Administration at Dalhousie University. Prior to this appointment he was the Secretary to the Council of Maritime Premiers for 18 years. He also held a related position in a body that included the Government of Newfoundland and Labrador. For 17 years in a parallel position he served the Atlantic governments and the Government of Quebec in their joint relations with the six New England states.

Jason Jolley has participated in the Environmental Leadership program of Canada World Youth in Costa Rica in 1994. He is currently an undergraduate student, pursuing degrees in Physics from Acadia University, and a degree in International Development Studies from Dalhousie.

Walter Kemp is Chair of the Department of Music at Dalhousie, and Professor of Music, University of King's College, where he also is Music Director of King's Chapel. He is Director of Dalhousie Chorale, Dalhousie Chamber Choir, the Gregorian Singers and the Nova Scotia International Tattoo Choir. For over a decade, he has presented a weekly radio program on Dalhousie's community radio station, CKDU, "The Saturday Morning Musical Box." He is a Fellow and National Past President of the Royal Canadian College of Organists. He holds music degrees from the University of Toronto, Harvard and Oxford Universities where his doctoral thesis was on 15th century French music.

Donald Langille is a Professor in the department of Community Health and Epidemiology at Dalhousie University. His areas of interest include community -based interventions, adolescent sexual health and physicians' clinical practice and efforts at prevention of teenage pregnancy and sexually transmitted disease.

Barry Lesser a Professor of Economics and chair of the Economics Department at Dalhousie University. He originated the Baltic Economic Management Training Programme and has served as director of the project since its inception in 1992. He has worked considerably on regional and communication development themes, including with the Institute for Research on Public Policy.

Janet Lord has been the project coordinator for the Centre for International Business Studies since 1990, when the European Business Program began. She manages this program and the International Business Internships, and plays a role in other outreach initiatives of the Centre.

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466

HALIFAX DECLARATION

Human demands on the planet are now of a volume and kind that, unless changed substantially, threaten the future wellbeing of all living species. Universities and their graduates must be significant actors if those demands are now to be shaped into the sustainable and equitable forms necessary for a wholesome future environment.

As the international community marshals its endeavours for a sustainable future, focused on the United Nations Conference on Environment and Development (UNCED) in Brazil in 1992, universities in all countries are increasingly examining their own roles and responsibilities. At Talloires, France in October 1990, a conference held under the auspices of Tufts University of the United States issued a declaration of environmental commitment that has attracted the support of more than 100 universities from many countries. At Halifax, Canada in December 1991, a gathering of university representatives addressed the challenge of environmentally sustainable development at the call of the International Association of Universities (IAU), the United Nations University (UNU), the Association of Universities and Colleges of Canada (AUCC), and Dalhousie University.

The Dalhousie meeting added its voice to those many others worldwide that are deeply concerned about the continuing widespread degradation of the Earth's environment, about the pervasive influence of poverty on the belief that solutions to these problems can be effective only to the extent that the mutual vulnerability of all societies, in the South and in the North, is recognized, and that the energies and skills of people everywhere be employed in a positive, cooperative fashion. Because the educational, research and public service roles of universities enable them to be competent, effective contributors to the major attitudinal and policy changes necessary for a sustainable future, the Dalhousie meeting invited the dedication of all universities to the following actions:

1. To ensure that the voice of the university be clear and uncompromising in its commitment to the principle and practice of sustainable development within the university, and at the local, national and global levels.
2. To utilize the intellectual resources of the university to encourage a better understanding on the part of society of the physical and biological and sonal dangers facing the planet Earth.
3. To emphasize the ethical obligations of the present generation to overcome those current malpractices of resource utilization and those widespread circumstance of intolerable human disparity which lie at the root of environmental unsustainability.
4. To establish whatever programmes are necessary within the university to generate the capability and the capacity necessary to diminish environmental illiteracy and enhance ethical awareness on the part of all graduating students.
5. To cooperate with one another and with all segments of society in the pursuit of practical, effective revision and reversals of those current practices which contribute to environmental degradation, to South-North disparities and to inter-generational inequity.
6. To employ all channels open to the university to communicate these undertakings to UNCED, to governments and to the public at large.

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