Continued from page 24

Kingdom, U.S.A., will have the opportunity to compare the educational use of new communication and information technologies through a study being undertaken by the national commissions for Unesco in the countries of the European region. The first meeting of the three-year joint study was convened by the Canadian and American commissions in collaboration with the Canadian lead agency — TV Ontario (TVO). On behalf of the Canadian commission, TVO is coordinating the first year of the study aimed at surveying the educational use of the new technologies, studying their impact and identifying areas in which further development, research and evaluation are indicated for pursuit at the national, regional and international levels. For further information contact: Mariette Hogue, Programme Officer, Education, Canadian Commission for Unesco, 255 Albert St., P.O. Box 1047, Ottawa, Ontario K1P 5V8 (613) 237-3408.

The International Council for Educational Media (ICEM) has announced the theme of its 1982/83 visual literacy series competition for students. The theme is "Monster". Entrants in the competition must create a 4-7 minute film, videotape, or slide programme that will tell a story without words. Speech may be used but the plot must not depend on words. Further information is availabe from:
International Council for Educational Media,
c/o Hans G. Kratz,
145 Voyageur Estates
52152 Range Road 210
Sherwood Park, Alberta T5G 1AS

"Database publishing", the field which supplies archive information to professional customers — pharmacists, patent attorneys, stock analysts — has a new storage medium. Microfiche discus can contain 6000 documents or 4-megabytes of data. Laser and electron beam lithography is used to reduce the images, which are stamped onto a clear plastic disc. A workstation, with Apple II computing power, is used to locate the indexed information and to display it on a high resolution video screen.

The Toronto International Centre is the site for Computer Fair 1983 on June 23rd through the 26th. Computer Fair will stress microcomputer applications in telecommunications, education, word processing, graphics, music, games, languages, database management. Lectures, seminars, and a large exhibit display will highlight the fair.
For further information contact:
Debbie Bannon
Cam MacDonald
Computer Fair 2283 Queen St. E.,
Toronto, Ont. M4E 1G6 (416) 690-9666

SaskMedia, a Crown corporation established in 1974 to produce and distribute educational materials, will be dissolved March 31, Gary Lane, the minister responsible, announced Jan. 19.
The government will continue to distribute educational materials, such as films, slides, tapes, video-tapes and transparencies, but the private sector will be invited to take over production, Lane said.
Cabinet decided to get rid of the Saskatchewan Educational Communications Corporation after receiving recommendations from an internal advisory committee established in September to assess the corporation's performance.
Elimination of SaskMedia will save the government about $1 million a year, Lane said. The corporation's assets, including the film and tape library, and 40 of the 64 employees will be transferred to the education department.
The distribution services will be maintained as a separate unit within the department until more permanent accommodations can be made, and attempts will be made to accommodate the remaining 24 employees elsewhere in the government, Lane said in a release.
The government will try to encourage private production of educational programs by allowing Saskatchewan film producers to use SaskMedia's production facilities at a favorable cost, the minister said.
"The private sector can effectively fulfill many of the government requirements for the production of educational programs, whereas the production services of SaskMedia have for some time been the object of severe criticism on the part of dissatisfied customers and private sector competitors alike."
—Reprinted from the Saskatoon Star-Phoenix, Jan. 19, 1983.

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Guest Editor: Kenneth Osborne, University of Manitoba

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MEDIA NEWS

About this issue

This final issue of volume 12 focuses upon educational technology and Canadian Studies. Prof. Kenneth Osborne, Coordinator of Canadian Studies at the University of Manitoba is our guest editor. As you will see, he has collected a cross section of papers dealing with Canadian Studies of particular interest to educational technologists.

The journal opens with Professor Osborne's own in-depth examination of Canadian Studies, stressing the role of media and technology within that domain. Dr. T.R. Morrison, assistant deputy minister for the Province of Manitoba provides a thoughtful and challenging piece relating Canadian Studies to technological change. Then, Robert Anderson, director of the Canada Studies Foundation discusses TEACHING CANADA FOR THE NINETIES. To conclude our papers, Jean Claude Mahé discusses a program which integrated Canadian Studies with media at the University of Alberta, and Inger Smith examines the problem of media selection for ESL classes.

In addition, we have our usual columns. All in all, we hope you will find this issue useful, provocative, and an exciting overview of Canadian Studies. Special thanks go to Professor Osborne for his dilligent and methodical work in selecting and editing the papers for this issue.

We have an index!

For the first time CJEC provides an annual index summarizing what we have done in Volume 12. Prepared under the careful scrutiny of David Thirlwall, the index is as good a barometer as any of what this journal has achieved over the past year. And, as always, this is a good time to remind members that CJEC needs wider distribution. If you know a library which does not subscribe; if you have a friend who should be a member; tell them about CJEC and AMTEC.

Coming soon

Volume 13 of CJEC is in the planning stages, and you will be informed in the next issue of exciting new developments, upcoming theme issues, and more news, more columns, and more information. Our goal is to make CJEC the voice of educational technology in Canada.

Educational Technology in India

India is using the "new" electronic technology to deliver education and instruction to its population even as it looks to other countries for ideas on how to use the technology, a Canadian delegation to that country found out earlier this year. The eight Canadian scholars included Dr. William Winn (chairman), and Dr. Barry Ellis from the University of Calgary; Dr. Iain Taylor, Athabasca University; Dr. Glenn Cartwright, McGill; Ms. Judy Roberts from the Royal Ontario College of Physicians and Surgeons; Dr. Michel Cartier, Quebec; Dr. Geoff Potter, University of Victoria, and CJEC editor Dr. Denis Hlynka, University of Manitoba.

The workshop/seminars were sponsored by the Shastri Indo-Canadian Institute and the Indian University Grants Commission to coincide with the World Communication Day and the recent launching of India's second communication satellite INSAT 1B.

The Canadian team worked primarily in New Delhi. A highlight of the Delhi visit was a 45 minute audience with Prime Minister Indira Ghandi concerning the future of educational technology in India. The prime minister expressed an awareness of the value of educational technology, but pointed out the uniqueness of the Indian situation, particularly the more significant informational needs such as dissemination of weather information.

The visit with Mrs. Ghandi was indicative of the high profile given the Canadian visit. Sessions were inaugurated by the Minister of Education and the Chairman of the University Grants Commission there. Many other senior officials were involved in the workshop as well.

Following the Delhi workshop/seminar, the Canadian visitors met with Indian television authorities and visited the

Continued on page 8

Canadian educational technologists in India. Left to right: Potter, Hlynka, Taylor, Prime Minister Ghandi, Ghosh (Shastri Institute), Cartwright, Winn, and Roberts. Standing, left to right: Malik (Shastri Institute), unidentified, Ellis, and Cartier.

COMPUTER NEWS

This column is intended to be mainly a vehicle for informing members of current happenings on the Canadian and international educational computing scene. If you have news items you would like to submit, please forward them to:

Rick Kenny
Media Services Group
Calgary Board of Education
3610 - 9th Street S.E.
Calgary, Alberta
T2G 3C5

Alberta's Computer Technology Project (Update)

It was reported in the Winter (Vol. 12 No. 2) edition of CJEC that Alberta Education has established a Clearinghouse to evaluate software and courseware. In April, the Clearinghouse published its first set of evaluations, having reviewed over 200 titles in the areas of Mathematics, Special Education, High School Biology and Business Education. Educational resources which receive the blessing of Alberta's Department of Education are given a designation — supplementary, recommended — or prescribed — and are made available to schools through the School Book Branch. Material which is designated "recommended" is supplied at a 15% discount (of negotiated price) while "prescribed" material receives a 40% discount. Of the courseware evaluated, only nine packages, all in the area of mathematics, were considered of sufficient quality to receive designations. Of these, seven were recommended and two were supplementary. While no Business Education courseware had reached the final stage of evaluation, a variety of Biology and Special Education packages had, and were judged as unsuitable for provincial needs.

The reason why small numbers of titles received designation had to do with the age of the material according to a letter accompanying the report. Apparently, the courseware evaluated to date is fairly old (1979 - 1981) and represents material produced in response to original demand. It is the judgement of Clearinghouse staff that such courseware was produced in a vacuum and without proper development time. They noted that major companies are now investing the time and energy to produce quality materials and, indeed, have included educators on their design teams. They feel the quality is improving and that the number of designations will increase.

Reports from the Clearinghouse are to be published every three to four months and will be circulated to Alberta schools and school district offices. Copies may be obtained by contacting Mr. Dave Wighton, Clearinghouse Manager, Computer Technology Project, Alberta Education, Devonian Building, West Tower, 11160 Jasper Avenue, Edmonton, Alberta, T5K 0L2.

ANSI Basic Draft Standard:

The Draft Standard for ANSI (American National Standard Institute) BASIC was made available for public comment during the period of March 15 to July 15, 1983. It is a version of BASIC which has been developed to answer the concerns of educators that the language was in need of greater structure and capability and, consequently, incorporates a variety of new features.

A copy of the draft standard can be obtained by sending $20.00 U.S. for duplication and requesting document X3J2/82-17 from:

X3 Secretariat
Computer Business Equipment Mfrs. Assn.
311 First Street, N.W.
Washington, D.C. 20001

Apple Launches Its New Model

Apple Corporation has released the Apple IIe (for enhanced) at a price lower than a comparably configured Apple II Plus. The new machine has a variety of new features to recommend it including a standard 64K memory (expandable to 125 K), an 80 column display card, upper and lower case, and an expanded, full ASCII Keyboard.

A complete "Starter System" will be available for $1995.00 U.S. and will include the Apple IIe computer with 64K of memory, the Disk II floppy disk drive with controller card, a 12" monitor with standard, and the 80 column card. Apple will, apparently, continue to support owners of older systems with service and parts and the new systems will retain the full capabilities and software library of the Apple II.

International versions of the Apple IIe are to have special power supplies and logic boards as well as local-language keyboards and manuals. Apple IIe's destined for Germany, France and the U.K. use the International Standards Organization (ISO) on the same keys and can be changed by means of an easily accessible switch. Other "foreign language" keyboards include French—Canadian and the Owner's Manual, Apple Writer II and Quick File II are available in French.

ERIC Searches on Microcomputer

The ERIC Clearginghouse on Information Resources has developed a program for Apple II which allows ERIC users to search portions of the ERIC database. The program is called MICROsearch and can be used to search specially prepared diskettes containing subject-related segments of the database. Each diskette contains 200 to 300 bibliographic records selected from RESOURCES IN EDUCATION (RIE) or CURRENT INDEX TO JOURNALS IN EDUCATION (CIJE). Each record includes an accession number, author, title, journal citation, and indexing terms, but omits abstracts because of limited storage. It uses a formatted screen to guide the user through the process of the search and the aids on the screen are supplemented by a 29 page manual.

Software for other brands will be made available in the future as well as an editor that will allow users to create data-base diskettes of their own material which can also be searched using MICROsearch.

The current software is written for the Apple II with 48K RAM, APPLE DOS 3.3 operating system, and at least one disk drive. A demonstration package is available for $10.00 U.S. from Information Resources Publications, 130 Huntington Hall, Syracuse University, Syracuse, N.Y. 13210. The package contains the MICROsearch software, the manual, and a demonstration diskette containing 208 records from CIJE (Jan. to Sept. 1981) on educational technology.

Knowing Ourselves

By Ken Osborne

The Emergence of "Canadian Studies"

The last fifteen years have seen the emergence of a new subject in Canadian schools and universities: Canadian Studies. There are Canadian Studies courses and programmes in schools and universities; directors, coordinators and centres of Canadian Studies in colleges and universities; there are institutes of Canadian Studies; there is a Canada Studies Foundation; and, of course, there is an Association and a Journal of Canadian Studies. Indeed, in the schools some people are now asking whether we are not overdoing Canadian Studies. In Ontario, for example, students study Canadian topics in their social studies courses in Grades 7, 8, and 9; in Manitoba in grades 9, 10 and 11. Not surprisingly, some eyebrows are being raised at what is seen as an overemphasis on things Canadian to the exclusion of the rest of the world — a world that includes Central America, the Middle East, South-East Asia and other regions about which no one can afford to be ill-informed.

In colleges and universities, there are more courses devoted to Canadian themes and topics than ever before. Most faculties include at least some Canadian courses in their calendars. In addition, of course, there are the traditional staples of Canadian history and geography, not to mention the distinguished Canadian tradition of political economy, although it is often submerged by its more positivist North American social science rivals. And, in recent years, a few universities and colleges have developed interdisciplinary courses with such titles as Canadian Identity; Culture in Canada; Land, Environment and Culture; the Canadian Experience.

As if all this were not enough, the federal government has also closely involved itself in Canadian Studies. The Social Science and Humanities Research Council of Canada has declared Canadian Studies to be an area of strategic grants, to the concern of some academics, who worry about the threat to university autonomy and scholarly independence posed by direct government sponsorship of research. The Department of the Secretary of State has also funded Canadian Studies activities, initiating in 1982 a $1,500,000 programme of support to selected organizations and, in addition, being heavily involved in the support of language training in English and French and of multicultural activities and programmes. Less well known, the Department of External Affairs is also active in sponsoring Canadian Studies activities — seminars, conferences, displays, development of materials and so on — beyond the borders of Canada.

And, finally, various non-governmental organizations are actively involved in the promotion of Canadian Studies, the most conspicuous being the Canada Studies Foundation, the Association of Canadian Studies, the Association of Community Colleges of Canada, and the Association of Universities and Colleges. The first three of these are in fact subsidized by the Department of the Secretary of State, at least so far as their Canadian Studies activities are concerned. And, of course, the lower established scholarly organizations such as the Canadian Historical Association, the Humanities Association, and the rest, continue their interest and activities.

This catalogue could be extended, but it does illustrate a considerable growth of interest in the concern for Canadian Studies in Canada. In one sense, this is not new, for Canadians have long pondered their country's prospects. As Joseph Levitt has recently reminded us, "For at least a century thoughtful Canadians have reflected on their country's destiny. What would be the outcome of its political development? Would it remain a British colony, become part of the United States or somehow turn into an independent country?"[1] An English historian, reviewing the state of Canadian historiography in 1977, called upon Canadian historians "to write about Canadians without being constantly preoccupied with the mystery of what is Canada."[2] Nonetheless, despite this long tradition, there is something new about the attention being paid to Canadian Studies in the last fifteen or so years. In the first place, the term itself is new, at least as a more or less accepted academic designation. In the second, there is a greater attention paid to institutionalizing Canadian Studies in courses and programmes. In the third, despite the problems faced by Canadian publishers, there is a greater output of Canadian writing, research and scholarship, if only because of the university expansion of the late 1960's.

Key Events

The key events in the process, although it is a matter of personal judgement to select them, can be fairly easily established:

1965 The establishment of **The Journal of Canadian Studies** at Trent University
1968 The publication of **What Culture? What Heritage?**
1970 The creation of the Canada Studies Foundation
1973 The establishment of the Association for Canadian Studies
1975 The publication of the Symons Report, **To Know Ourselves**
1978 The publication of **Teaching Canada For the '80's** by the Canada Studies Foundation
1979 The publication, by the Science Council of Canada, of a position paper, **Science in a Canadian Context**
1982 The declaration by the Social Sciences and Humanities Research Council that Canadian Studies was a strategic grant area, and the establishment of a Canadian Studies programme by the Department of the Secretary of State.

What Culture? What Heritage?, which appeared in 1968, was a report on the teaching of Canadian history in schools across the country. It was a devastating indictment. It found the content of history curricula to be outmoded, dull and even dangerous. The textbooks were worse but even they were better than the atrocious teaching that was found to exist in the great majority of Canadian history classrooms. The report, however, dealt with more than just history teaching and, as a result, had an impact on many people besides teachers. For one thing, it blamed a wide range of institutions for the depressing state of affairs it described: faculties of arts, teacher training institutions, departments of education, school boards, publishers — all took their lumps. In other words, if the schools were bad, it was not their fault alone. For another, the report linked the state of history teaching to questions of citizenship, to the "quality of civic life" in the phrase of its author, Birnie Hodgetts. In his words: "The majority of English-speaking high school graduates leave the Canadian Studies classroom without the intellectual skills, the knowledge and the attitudes they should have to play an effective role as citizens in the present-day Canada."[3]

These findings and the alarm created led directly to the creation of the Canada Studies Foundation in 1970, an organization which devoted itself — and continues to do so — to the production of better Canadian Studies materials and curricula in schools and which has sought to involve university scholars working cooperatively with teachers to this end. This is not the place to review the role and record of the Foundation but its influence has been profound in putting Canadian Studies on the agenda of discussions about schools and curriculum reform.

What **What Culture? What Heritage?** did for the schools, the Symons Report, **To Know Ourselves**, did for colleges and universities. Symons was commissioned by the Association of Universities and Colleges in Canada to investigate what was and was not being done in Canadian Studies in post-secondary institutions. Though more diplomatically worded, his report was just as devastating. He concluded, more in sorrow than in anger, that Canadian universities and colleges were simply not devoting enough time and energy to the study of the society that sustained them. In brief: "the result of the Commission's examination of about fifty areas of academic work, teaching and research is that there is no area . . . in which a reasonable balance is being given to Canadian matters."[4] Even more disturbing, "there was a tremendous doubt about whether it was academically appropriate or worthwhile or legitimate or dignified for scholars and teachers to pay attention to Canadian questions. Also there was downright hostility or disdain . . ."[5] Since 1975 there has been a tremendous change of attitude, due in large part to the impact of the Report itself and the discussion that ensued. Equally important were two of Symons'other arguments. First, he insisted that Canadian Studies was more than a Faculty of Arts responsibility, that is concerned all faculties and schools in the university. Thus, he reported on Home Economics, Architecture, Social Work, Engineering, Law — in fact, every part of the modern university. Second, and this promises to be perhaps the most enduring influence of the Report, Symons offered a justification of and a rationale for Canadian Studies which has been widely, though not universally, accepted. His fundamental argument rested on the importance of self-knowledge:

> . . . the most valid rationale for Canadian Studies is not any relationship that such studies have to the preservation or the promotion of national indentity, or national unity, or national sovereignty, or anything of the kind. The most valid and compelling argument for Canadian Studies is the importance of self-knowledge, the need to know and to understand ourselves.[6]

This formulation has its problems but it did and does offer a convincing, reasoned and reasonable argument for the necessity of Canadian Studies.

Reference should also be made to a third report which has not received the attention which it should have, although it has been influential with the Department of the Secretary of State which has largely accepted it as the framework for its programme of support for Canadian Studies. The report is entitled Teaching **Canada for the '80's**, and one of its authors is the same Birnie Hodgetts who earlier wrote **What Culture? What Heritage?** In that book he indicated what was wrong; in Teaching **Canada** he (and his co-author Paul Gallagher) suggests what should be done to put it right. It suggested an overall framework for a Canadian Studies curriculum designed to enhance what it described as "pan-Canadian understanding" and to produce "the skilled and sensitive public opinion needed to resolve deep-seated difference in the Canadian political community before tension levels became dangerously high."[7]

And lastly, to indicate how seriously Canadian Studies is being taken at least by some people, it is worth noticing a 1979 position paper issued by the Science Council of Canada and called, interestingly enough, **Science in a Canadian Context.** Even the allegedly international, or at least a national sphere of science has to be to some extent redirected, for, in the words of the Science Council, "adequate recognition of a Canadian context for science education ought to be a basic educational objective."[8]

Forces Promoting Interest in Canadian Studies

The question arises: what lies behind these developments? Why the interest and concern on the part of educational institutions, government and some sections of the public? As with most phenomena, one can trace antecedents back almost indefinitely. There is a long Canadian tradition of seeing education in terms of citizenship. In Quebec the issue has been one of "la survivance" and education is regarded as crucial to the preservation and enrichment of a living French culture, with its strong emphasis upon "notre maître, le passé." As Ramsay Cook has pointed out, however, survival is more than a Quebec preoccupation. It has obsessed English-speaking Canada also.[9] And it is no coincidence, after all, that Margaret Atwood called her study of the themes of Canadian literature, **Survival.** Survival, however, depends upon a committed citizenry and thus we return to education. As Vincent Massey put it in 1936: "To the schools we must look for the good Canadian"[10] However, the origins of Canadian Studies in their present form are to be found in the 1960's when a combination of problems focussed attention on questions of Canada's future — what it would be and even whether it had one.

The Quiet Revolution in Quebec obviously had this effect. In Anglophone Canada, the often-heard question was, "What does Quebec want?" and the standard Quebec response was to refuse to answer the question in those terms (beyond the slogan, "maîtres chez nous"), since to do so implied that English Canada was somehow in a position to grant or to refuse the "request." In any event, as is well known, there arose, not for the first time, the phenomenon of separatism or, at the very least, a revised federalism and the Pearson government set up the Royal Commission of Bilingualism and Biculturalism and embarked on its policy of cooperative federalism. To simplify a complex question: Whenever the dominion government was perceived to be doing something to "satisfy" Quebec, some other region of the country would embark on a me-too campaign. Out of the whole debate emerged a central question, or really two questions: What kind of country was Canada and what kind of country should it become?

One of the many effects of the Quiet Revolution was the rise to conscious political power of the "third force" — all those Canadians of neither English nor French descent, who objected to the implicit designation of Canada as a bilingual and bicultural country. Some argued for multilingualism and multiculturalism, but most settled for the latter without the former. And, indeed, the Royal Commission on Bilingualism and Biculturalism came out in favour of bilingualism and multiculturalism, a policy which was written into statute in 1971 when parliament accepted the Prime Minister's state-

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ment that Canada was pledged to

> a policy of multiculturalism within a bilingual framework . . . National unity, if it is to mean anything in the deeply personal sense, must be founded on confidence in one's own individual identity: out of this can grow respect for that of others and a willingness to share ideas, attitudes and assumptions.[11]

One important aspect of the current interest in Canadian Studies is the urge to come to grips with implications of cultural pluralism.

The questions of what kind of country Canada was and could be were sharpened in the 1960s' by increasing concern over the extent of United States' control over the Canadian economy and of its cultural apparatus. It is, of course, obvious that World War II saw the end of Britain as a major world power and the emergence of the U.S.A. and the U.S.S.R. as superpowers. This posed problems for Canada, which was located between the two rivals and which had to accustom itself to a no-longer isolationist U.S.A. Concern over U.S. influence was not especially new, dating back at least to the Loyalists. As the Rev. A.W.H. Rose wrote in 1849:

> Portraits of Her Majesty, Prince Albert and the royal children, Wellington and Nelson, views of Windsor Castle, the Houses of Parliament, our wooden walls and such like, are greatly wanted to be disseminated in Canada, to supplant, as far as possible, the influx of tawdry sheets portraying "the signing of the Declaration of Independence," Washington, General Taylor, the Capitol, the Mexican battles, etc.[12]

There is something engaging about the prospect of Canadians being seduced into accepting Yankee republicanism by the portrait of General Taylor, but this concern about U.S. influence remains a vital part of Canadian life. In 1970 a Senate Committee on the Mass Media speculated that Canada might not be around ten years hence unless something was done about the media. 1980 has passed and we are still here, but the problems remain and the issues of Canadian content and regulation of the airwaves remain high on the political agenda, especially in the age of cable TV and satellite communications.

In the 1960's this concern about Canada's increasing dependence on the U.S.A. took several forms. One was an increasing awareness of the extent to which Canada's economy was not only tied to but dominated by U.S. based multinational corporations, as documented for example in the Watkins Report on **Foreign Ownership and the Structure of Canadian Industry.** A second was the realization that the Canadian media were becoming too American in their content and control. As a result, new legislation was enacted stipulating Canadian ownership and content regulations for both print and non-print media. The National Broadcasting Act of 1968, which included both private and public systems in its definition of the broadcasting system, declared that

> the Canadian broadcasting system should be effectively owned and controlled by Canadians so as to safeguard, enrich and strengthen the cultural, political, social and economic fabric of Canada

with the aim not only of providing "a balanced service of information, enlightenment and entertainment" but also of contributing to "the development of national unity and provid(ing) for a continuing expression of Canadian identity."[13] A third form of the general concern appeared in the criticism, in some circles, of what was regarded as the Americanization of the Canadian university system as the university expansion of the 1960's led to the hiring of U.S. trained graduates and the use of U.S.-oriented materials.

The 1967 centennial of Confederation also played a part in the emerging Canadian awareness of the 1960's, inevitably giving rise to countless speeches, articles and books celebrating Canada's past and speculating on Canada's future. Perhaps Laurier's prediction that the 20th century would be Canada's century would come true at last. Alternatively, as Donald Creighton suggested, perhaps Canada's first 100 years would also be her last. If nothing else, the centennial provided a seemingly never-ending occasion for displaying the new Canadian flag, created in 1965, amid considerable controversy. The flag debate of 1964-65 was itself a prolonged teach-in on the nature of Canada, since all the different designs, colours, symbols and insignia that were suggested reflected different conceptions of the country.

And, as if all this were not enough, the 1960's also played their part in the endemic debate over the nature of Canadian federalism. With the end of the second world war, the provinces began to re-assert themselves and the economic boom of the 1950's and 1960's greatly increased the sources of wealth available to the provinces. The Pearson government responded to this with a policy of "cooperative federalism" but the whole issue raised questions of the division of powers between federal and provincial governments and, more fundamentally, of the kind of society that Canada was to be. The question is, of course, very much alive, as defined in the debate between Pierre Trudeau's insistence that Canada is more than the sum of its parts and that the federal government speaks for a national interest that no collection of provinces can, and Joe Clark's definition of Canada as a community of communities.

These questions of the 1960's have not gone away. If anything, they have become more intense. And, of course, they antedated the sixties. They are the defining questions of Canada's existence. But they did create a sense of uncertainty about the future. Despite the economic growth, the large-scale immigration, the sweeping changes that occurred in Canadian life between 1945 and the early 1970's, taking the period as a whole, many Canadians were unsure what the future held.

In any event, the study of Canada became a matter of some importance: either to investigate where we were and where we might be going; or to hold on to what we had and prevent erosion; or to promote some particular vision. Some conservative intellectuals felt that it was already too late: in this spirit George Grant wrote his **Lament for a Nation** and Donald Creighton pointed to **The Forked Road,** arguing that we had taken the wrong turning. Others felt there was still a chance: "For the members of a country or a culture, shared knowledge of their place, their home, is not a luxury but a necessity."[14] On this, everyone agreed; Canadians simply did not know enough about themselves and "without that knowledge we will not survive."[15]

The Purpose of Canadian Studies

There are some, though only a few, who argue that Canadian Studies is or should be directed to the pursuit of Canadian unity. One suspects, for example, that one reason why the federal government supports Canadian Studies arises from its understandable commitment to Canadian unity. At the time of the Quebec referendum debate it established an Office of National Unity. The National Broadcasting Act speaks of it explicitly. The problem is, of course, that to speak of unity smacks of uniformity and, given the strength of regionalism in Canadian society and given the historical tensions, implies an assimilating homogenizing impulse. As Cole Harris has put it: "Canada is sustained by nationalism based on experience and destroyed by nationalism based on cultural belief."[16]

In any case, for those involved in educational work to commit themselves to national unity is to commit themselves not to education but to propaganda, not to opening minds but to closing them. As Symons put it, "The function of the university is to train the critical intellect not to inculcate belief."[17] Indeed, this holds true at all levels of education: "Patriotic appeals to preserve and develop Canadian identity do not constitute, in practice or in principle, an adequate rationale for Canadian Studies at any level of education."[18]

Nonetheless, it is clearly not quite this simple. There exists in most Canadianists a commitment to the continued existence of Canada. For them Canadian Studies is not simply an academic interest to which they can devote dispassionate scholarly commitment. There is also a feeling there, a sense of urgency. With the important exception of the native peoples, after all, Canada is a land of immigrants, there more or less by choice and not compelled to stay. Having chosen to live there, it is not surprising if they wish to see their chosen land sustained.

More widely acceptable, and in fact more generally accepted, than national unity as a goal of Canadian Studies, is the concept of national identity, a phrase which is much used by Canadians. The problem is, of course, that there is nothing beyond the most general agreement concerning what the Canadian identity is or should be. Many are concerned about it, but there is no agreement as to what it is. Further, it is not completely clear what it means to have an identity anyway. Armour distinguishes between two meanings. On the one hand are those common beliefs, traditons, assumptions, conventions (often not consciously thought about) shared by people in a given society. On the other, are those things which people think about when they think of themselves as Canadian, for instance flags, constitutions, anthems.[19] Proponents of Canadian identity have usually thought in terms of the second rather than the first.

Without pursuing this further, it is obvious that there are many contenders for the title of Canadian identity. There are still those, for example, who think in terms of a unitary and probably unilingual nation-state in the classic nineteenth century sense. There are also those who favor the existing bilingual and multicultural society, or some variation of it. There are those who prefer the vision, once derided by Lord Durham, of two nations within a single state and there are those who want not only two nations but two states also, with whatever association may be created between them. And there is the vexed and complex question of the extent, implications and desirability of regional identities in Canadian society. There occurred a revealing episode at one recent federal-provincial conference when, opening the meeting, Prime Minister Trudeau looked at all the provincial Premiers sitting around the table and asked, "Who speaks for Canada?" His question was presumably meant to be rhetorical, implying the answer that only the federal government could. He did not bargin upon Premier Lougheed of Alberta, however, who quickly leaned forward and, on behalf of his fellow Premiers, replied. "We all do, Mr. Prime Minister, we all do."

The importance of local and regional identities in Canada can hardly be denied. Canada, after all, is "a multicultural, three-party, two-language federal state of ten provinces, two territories and three major aboriginal groups."[20] Northrop Frye has put it the most eloquently:

> It is not often realized that unity and identity are quite different things to be promoting, and that in Canada they are perhaps more different than anywhere else. Identity is local and regional, rooted in the imagination and in works of culture; unity is national in reference, international in perspective, and rooted in a political feeling. . . .
>
> The tension between this political sense of unity and the imaginative sense of locality is the essence of whatever the word "Canadian" means. Once the tension is given up and the two elements of unity are confused or assimilated to each other, we get the two endemic diseases of Canadian life. Assimilating identity to unity produces the empty gestures of cultural nationalism; assimilating unity to identity produces the kind of provincial isolation which is now called separatism.[21]

Maurice Careless made a similar point when he drew attention to the saliance of "limited identities" in the Canadian experience. As he put it, "the nation-building approach to Canadian history neglects and obscures even while it explains and illuminates, and may tell us less about the Canada that now is, than the Canada that should have been — but has not come to pass."[22] In the same vein, the geographer Cole Harris, pointed out that Canada is really a series of "islands," settled at different times, in different geographical contexts and with different cultural traditions.[23]

Whether one thinks of identity or identities, however, there are certain common, shared conditions which have also to be taken into account. Northrop Frye has often shown how the sparsely populated vastness of Canada has affected its cultural expression. W.L. Morton argued for the centrality of the north: "The Canadian Shield is as central in Canadian history as it is in Canadian geography and to all understanding of Canada."[24] The Canadian Studies Foundation has defined certain "basic features" of Canada. Leslie Armour has drawn attention to a common tradition of an organic society, although it is now being eroded.

One could go on, but the point is clear. If Canadian Studies is concerned with questions of identity and, above all, with self-knowledge, the question arises: what is it that is to be known? Or is it simply too late? George Grant implies this. George Woodcock makes no bones about it, having concluded that Canadian federalism no longer has anything to offer: "There is no point in Canadians becoming late arriving nationalists in a world where the nation-state. . . is already obsolete."[25] Whatever the answers, they raise considerable problems of definition, for if one question is, what are Canadian Studies for?, another is, what is it that they are?; and it is a question which has caused a good deal of puzzlement for

those developing curricula and programmes of study.

What Are Canadian Studies?

It is generally agreed that the call for Canadian Studies is not simply a call for more Canadian content in the curriculum. The lack of such content was a problem in the 1960's and early 1970's and remains a problem in a few topic-areas, but by and large it has been overcome.

There are those who differentiate between Canadian Studies and the study of Canada. The latter includes anything and everything dealing with things Canadian, be it history, literature, geography, botany or whatever. It therefore includes all approaches based upon a single discipline. The former term Canadian Studies, on the other hand, is reserved, in this view, for an interdisciplinary, integrated attempt to see Canada whole. It is an attempt to come to terms with the totality of the Canadian experience, arguing that reality is multi-faceted and complex and that no single academic discipline can do more than present one slice of it. There is, in reality, no one royal road. The goal is that the curriculum, at all levels of education, should "help Canadians in some way to understand the physical and social environment that they live and work in, that affects so profoundly their daily lives, and that in turn is affected by their actions."[26] Given this goal, there are obviously many ways of attaining it.

The particular difficulty is to do justice to all facets of the Canadian environment in a reasonably comprehensive way, while at the same time striking a reasonable balance between the regional and the national. In regard to the former, there are still gaps. Symons not long ago pointed to important areas that remain inadequately studied.[27] They included the north ("an academic desert"); broadcasting, especially its historical records ("obscured by decades of inertia and neglect"); science and technology ("Canadians have little knowledge of their notable engineering heritage and of the considerable contributions which have been made by our engineers to science and technology"); and education ("the most neglected Canadian Study.") In addition, in areas which have long paid a good deal of attention to Canadian concerns, new methodologies are being applied and new discoveries made.

As for the regional-national balance, the Canada Studies Foundation has made distinction between Canada Studies and Canadian Studies. The former are defined as those which are of national ("pan-Canadian" is the Foundation's term) application and import; the latter deal only with local or regional concerns. Since the priority is that Canadians see their country whole, in all its diversity, and in its international setting, the emphasis, argues the Foundation, must be placed on Canada Studies.

Educational Technology

In all of this, educational technology obviously has an important part to play. One of the fundamental goals of Canada, or Canadian, Studies, after all is to explain Canadians to one another and this is no easy task in a country which is so large and so diverse. It is a commonplace that Canada is a country of regions and that these regions are not well-informed about each other. In any given place in Canada, for example, the flow of news is usually national, in the sense that it deals with federal politics, and local, in the sense that it deals with events of immediate interest in that particular place. What is lacking is any sustained account of other regions and their particular concerns and outlooks. This can be demonstrated by an elementary analysis of almost any newspaper, radio or television programme despite the commitment to "national unity" described in the National Broadcasting Act. Educational technology can play a major role in remedying this state of affairs. Educational television, satellite communications, locally produced programmes made available for national distribution, films, radio hook-ups — the possibilities are endless. Beyond these more or less commonplace technologies lie the mind-boggling possibilities of the communications revolution. If the Canadian Studies movement is to achieve its full potential of informing Canadians about themselves and each other in order to produce a richer and more rewarding sense of community, then the potential of educational technology cannot be ignored, as the articles in this special issue of **Canadian Journal of Educational Communication** all in their different ways suggest.

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Media News
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sophisticated space research applications center at Ahmedabad. They also visited the community science center which provides laboratory facilities and experiments in elementary science to young students in a model similar to Canada's Ontario Science Center. The tour concluded with visits to the Department of Communication at Poona and a brief wrap-up in Bombay.

AMTEC Media Festival Awards

The results of the 1983 Media Festival Awards were not available for publication at press time for this issue. AMTEC members should be interested to know
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"Canadian Eh!"
Technological Change and Canadian Studies

By T.R. Morrison

We are currently living in a world in which the products of our own human genius are simultaneously the source of both our most pressing problems and enlivening opportunities. The world we have created, and particularly the maps we have drawn to guide us through the resultant maze, has now become the obsession of our lives. To an extent heretofore rare in history, the ways in which the human mind *invents* reality, ***acts upon*** this invention and analyses the relation between each, is the central problematique of society. We have not only become conscious, but conscious of our consciousness. Indeed, the new science of artifical intelligence is founded on efforts to "model" this awareness.[1] The result is a world of increasing complexity, much of it human-generated.

Let me provide you with a "concrete abstraction" of what I am talking about. Today, the most dominant focus in social discourse concerns the deplorable state of the economy. Undoubtedly, this is a disturbing situation, one filled with human tragedy. That being said, what can this discourse reveal to us. How does it relate to the theme of human-generated complexity?

When we discuss the economy today, a number of patterns can be noticed. Firstly, we talk of the "economy" as if it existed apart from the invention of man. The economy can be anything we want it to be. Within it, for example, we can raise GNP, by conventional counting methods, by adding and valuing the work in the so-called informal economy, particularly the household.[2] Secondly, when we discuss our economic problems, we do so within abstract models, that is, intellectual inventions of them. We talk of inflation rates, price, interest rates, demand, consumer confidence through the use of models we have created. We also reify these models. We invent them, forget that they are not reality but representations of it, and discuss economic reality as if the models were reality.

Our problems today, economic or what have you, have increasingly less to do with reality, than with our minds' representation of them. This is exacerbated by the fact that the time gap between representation of an image of reality and having others share and think through it, has narrowed immensely. This has been brought about primarily by the rapid impact of "compunications technology" (CT) in our society.[3]

The word compunications may strike one as rather strange. Let me briefly elaborate upon its meaning and significance. The concept deals essentially with a fundamental process currently at work in society: the merging of hard and soft technologies. Throughout the nineteenth and up to the mid-twentieth century, communication could be divided, roughly, into two distinct realms. One was mail, newspapers, books and magazines, printed on paper and delivered by physical transport or stored in libraries. The other realm was the telephone, radio telegraph and television. Coded message image or voice sent by radio signals or through cables from person to person.

Technology, which once made for separate industries, is now erasing these distinctions, so that a variety of new alternatives are now available to information users. Consider the following:

1. The meshing of telephone and computer systems, of telecommunications and teleprocessing, into a single mode.
2. The substitution of electronic media for paper processing. This includes such developments as electronic banking, electronic mail, fascimile delivery of newspapers and magazines.
3. The expansion of television through cable systems, to allow for multiple channels and specialized services and the linkage to home terminals to direct response to customer or home from local or central stations.
4. The reorganization of information storage and retrieval systems based on the computer to allow for interactive network communication in team research and direct retrieval from data bank to home or library terminals.
5. The expansion of computer-managed and mediated instruction.

Technologically, then, telecommunications and teleprocessing are merging into a new mode called "compunications." The distinction between processing and communicating is becoming increasingly indistinguishable. This technological merging, moreover, is leading to the development of integrated human and social technologies: management information and strategic planning systems are prime examples.[4] These integrative soft systems, as the compunications technologies which underpin them, are generic innovations, since they are intended to be used and applied at a system-wide level. Strategic planning systems, in other words, are applied to the corporate, voluntary and public sectors alike. The lesson is clear: the model is more important than that to which one applies it. This new era of the "triumph of the model" can, as will be discussed later, either liberate or entrap mankind. In any event, any serious discussion of Canadian Studies must, if it is to have any relevance, address the origins and consequences of this emerging "mind set" of a new society.[5]

A young baby today faces a world in which images of reality are rapidly created, codified, modelled, analyzed, acted upon, evaluated, altered, or dispensed with, and linked increasingly to other such images. And, this is an increasingly intentional and deliberate process. Moreover, we have emergent labels for the sciences which propel the process: systems analysis, information science, decision-theory, operations research, artificial intelligence and cognitive science.[6] For educators, people who presumably are the most future-focused of all — that is, they help prepare people to understand, adapt to, and change the world they live in — a perennial question emerges anew: what is it that people should be encouraged to learn and how should that learning occur?

In approaching this question, a fundamental principle must be grasped: There is no meaning apart from context. One's hand has meaning in context of one's body. Education, and similarly schools, have no meaning apart from context. Grasp the context and the assignment of meaning of those things within it is a simple matter. In the following pages, an effort will be made to sketch briefly a particular context within which the meaning of education, and hence any approach to Canadian Studies, might be understood.

Of the various forces which are likely to alter the context of education in the future, two are of vital importance. These are, firstly, the social impacts to be generated by the application of increasing sophisticated innovational technology to the world around us and secondly the interpretation given by man to these processes and developments. Both factors are critical and integrative: technological change and man's interpretation of it each determine action if any. Education, it follows, must attend to both. Let me turn first to technological change.

Technological innovation proceeds in roughly three stages. Currently, we are

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experiencing the impacts of developments in each stage. All stages, particularly as each applies to the impact of compunications technology, involve the replacement, amplification and modelling of the mental and physical labour of man and the resultant transformation of human society.

The first stage is that of automation in which man's mental labour is increasingly accomplished through the application of compunications technology. Automation has traditionally been understood to involve the assumption of various kinds of mental activities (recognition, computation, memory, judgement) by computers or computer-driven mechanisms. Current technology pushes this concept even further. Consider the following scenarios:

1. Compunications technology will likely bring about the complete automation of industrial production. In the future, particularly in areas such as energy and materials (electric power generation, iron, cement), factories will emerge which require no manual labour at all.[7]
2. Compunications technology (CT) will bring about automation of knowledge-oriented services and operations. Whenever man's knowledge-oriented activity is carried out in fixed, logical order, a CT can be used to perform this function (e.g. medical diagnosis, cash disbursers). Many clerical duties fall into this category.[8]
3. Compunications technology will lead to major systems innovation. It allows the creation of unified systems that combine sub-automatic functions (e.g. traffic flow systems).

The social consequences of such automation, however, are of equal importance. Two examples of this should suffice. Firstly, there will be increasing emancipation of people from labour for subsistence. For example, since a large portion of office and production work will be replaced by CT, there will be less need for people to serve as mediums for the storage of information and communication.[9] Free time will increase — that is, all the time which may be disposed of freely by an individual. How this will be used is a critical issue for any society. The naive assumption that such "free time" will somehow flow effortlessly into an engagement with learning, the arts and other forms of reflective contemplation, however, flies in the face of a rise in more hedonistic and "antisocial" pursuits which have characterised recent decades. The rise in "free time," then, may pose a political problematique for modern society. This is due, in part, to the fact that many of our institutions and "social control systems" rest, ultimately, on the absence of "free time" among the populace.

A second impact of automation is increasing social restraint. Unlike overt political control, this restraint refers to the limitations which accompany a world guided by designed functions and systems. Management information systems, for example, will increasingly relate each person's activities within organizations closely through various functions of management, while on-line, real-time, control systems will establish very strict schedules and performance evaluations. Talking cashier systems in supermarkets provide an archetypical example of this development. When such automatic management control systems become commonplace, functional and systematic restraints will replace those of place and time.[10] Whether alienation follows from such developments is an open question hinging on the values and adaptive capacities of people. The "managed society," however, is around the corner. Ironically, many of the calls for improved planning we hear today, lead unknowingly in this very direction.

The second stage in CT innovation relates to knowledge development. If automation supplements man's mental labours by CT, then knowledge-development leads to the amplification of that human capacity. There are two subcomponents of the knowledge-development capacity of CT which are worth highlighting. These are problem resolution and opportunity search.

Problem resolution systems of all kinds have emerged recently. These systems, supplemented by CT technology, aim to eliminate risks which may stand in the way of accomplishing goals. These problem resolution systems exhibit three general characteristics. First, they are anticipatory, attempting to detect problems before they become serious and, by predicting future trends, project alternative solutions. The second characteristic is that they focus on discovering hitherto unknown problems. The third trait is that the problems to be resolved by these systems are very complex and the systems for solving these add, in spiral fashion, to the complexity itself. The ability of people to understand the self-generating complexity associated with such emergent problem resolving systems is a critical questions mark for the future.

The second aspect of the knowledge creation function of CT is opportunity search. Opportunity search involves inquiry into the possibilities of future time usage. In this regard, the emergence of what has been called the "information utility," perhaps the late twentieth century archetypical educational institution, will be of critical importance.[11] Information utilities will arise when information becomes a public commodity, similar to water and electricity. The populace will have access to it on an "as needed" basis. This development will substantially increase the opportunities for education for the entire populace and likely force a redefinition of the role of existing public educational institutions. It is likely, as well, that a whole new industry, the opportunity industry, will emerge to assist people in achieving their informational and educational needs and goals.

The third aspect of the CT revolution will involve, indeed require, systems innovation in society. This means that, in order to accommodate the new capabilities and problems generated by CT, new socio-economic and cultural systems will be required. Many of these, unlike earlier changes, will be "by design." System innovation, in fact, will be the most far-reaching dimension of the information epoch.

Those of us involved in the educational system, proponents of Canadian Studies included, are on the precipice of a major era of social innovation. At this point in time, the educational system faces three options:

1. To continue the development of educational systems in accordance with principles which were born of the nineteenth century. This I call the ***"linear response."***
2. To attempt to take within the system, on a piecemeal basis, elements of the new information era. This I call the ***"absorption response."***
3. To begin the process of re-designing the educational system in accordance with principles inherent in the new information era. This I call the ***"anticipatory response."***

The future of the educational system, its eventual shape, role in society and vitality, depends largely on which of these three options are exercised. Let me comment briefly on each and its implications.

The linear response is based on the assumption that society in future will continue to progress or move in accordance with the same principles which were operative for the last fifty years. In education, this would lead to the continuance and refinement of a number of central organizing principles:

1. The use of formal educational institutions, defined in space and time, as primary delivery mechanisms for societal learning.
2. The continued use of the group as the basis for the organization of teaching and learning.
3. The continued designation of educational institutions as centers for knowledge transmission.
4. The continued pattern of participation and investment in education as a preparation for work and living.
5. The continued role of curriculum as an analytic device for breaking reality down into its supposed component parts.

This scenario would lead, over time, to the building of more and more schools, sub-divided into various groupings for learning, in which people would attempt to learn about separate aspects of reality. Those who urge the establishment of Canadian Studies departments or courses fall squarely within the tradition.

The absorptive response is based on the view that certain changes are occurring in society which depart substantially from the past and which must be grafted onto ongoing programs in schools. In education, this leads to the following:

1. The incorporation into schools, on a random basis, of certain elements of new CT technology; e.g. microcomputers as devices to extend traditional teaching functions.
2. The separate use of group and individual-centered learning.
3. The modification of knowledge transmission with projects undertaken by "gifted students" who would be encouraged to create knowledge.
4. The development of segmented policies for the investment in tertiary or continuing education as additional opportunities beyond formal schooling.
5. The use of technologically-mediated instruction as a method of achieving traditional education goals in a more efficient manner.
6. The development of technological literacy programs of all kinds.

Both of these responses rest on the global assumpiton that society today is merely experiencing the impact of an ***acceleration*** in an evolutionary change process. We are witnessing change within the system, not change of the system. By and large, from this perspective, the assumption is that work, leisure, values and knowledge will co-exist in much the same way as they currently do. Many of the processes I have discussed earlier will not occur and are not really occuring. The external environment into which we pour students will be largely the same as that into which we entered: the only difference is that there exists more technological junk to contend with. Basic systems will not change.

As one can surmise, I believe that this assumption is faulty. At minimum, it is tremendously risky. As an example, consider the following. As we know, there are large numbers of people currently being unemployed in industry. Consider plant x which produces product y and, in today's world, has unemployed 1,000 of its work force. The commitment is made to "consider" rehiring when a "recovery" occurs. The lay-off period is one year. What does company x do during the lay-off period? It introduces robotics and micro-computer-based systems to its operation. This, plant x calculates, will allow it to increase its production, reduce its costs, improve its design efficiency and allow a new work and management system to be developed. When recovery comes, plant x will call back 500 employees, of the higher skilled variety. These 500 employees will have to learn how to re-orient to new systems and the company will provide for this. However, 500 employees will be excluded from this development and learning and, since other companies will be doing the same thing, will find it difficult to obtain work. Moreover, the training available to them will be of a short-term variety. A two-tiered labour market, thus, develops: one group receiving work and ongoing learning opportunities; the other on revolving and temporary training and work assignments. As technological and development further increases, the unemployed, currently defined as "marginal," becomes "mainstream" in the flow of work opportunity. This example suggests, and others can be put forth, that change today exerts multiple impacts which drive to the core of what we understand of social life and its associated values.[12]

In thinking within the anticipatory mode, image is everything. The problem facing education today is that the images currently used to grasp reality were born of a different era and are no longer congruent with the post-industrial world. To use a pathological metaphor: the imaginary universe of the educator is impairing his/her vision of the world as it is. The first step to the future, then, is to rediscover the imaginative capacities within us and to assist others in this process. Canadian Studies, since it is in the fetal stage in the educational growth process, is in a unique position to contribute to this imaginative reconstruction. The tragedy, however, is that proponents of Canadian Studies have developed their organizing principles around images of reality central to the segmented social world of the nineteenth century rather than integrated pan-national systems of the late twentieth century. The very idea of using nationhood as a boundary-making device in the design of education, for example, presumes that such technological and social development, as is implied in compunications, will be significantly affected by and channelled through national cultural experience. Indeed, it may be possible to posit the reverse proposition: that the cultural experience of nations will be channelled through broadly similar and generic technological systems. To draw a line of distinction between technology and culture, Canadian or otherwise, may be more mythological than real.

Generic processes of technological and systems change require the development of parallel and equally generic educational concepts. Even if one wished to illustrate or perpetuate variations on a theme, as many Canadian Studies proponents appear to, the theme itself must be understood. In this regard, Canadian Studies, since it is not bounded by the constrictions of disciplines, can, by focusing on generic change rather than cultural reflections of it, assist in an understanding, not only of where we have been, but where we are going. What, then, are these generic processes?

The complex society we face in the future, particularly because of the CT which underpins it, rests on the interaction of and demands facility in each of three interacting processes: decision-making, implementation and path-finding. The problem with the conventional image of education, essentially a rational and mechanistic one, and the absorptive and linear responses which flow from it, is that it addresses only the middle element: decision-making. Much of what schools foster, through both the formal and informal curriculum, is the ability to make decisions on a rational basis. Rational decision-making, is of course, important. However, it is not sufficient as a base upon which to educate people for the society of tomorrow. Why is this?

First, the numerative and analytic component of rational decision-making has a built-in conservative bias. In society, this leads to an obsession with cost and quantity; not quality and value. It also focuses attention on patching up the old rather than exploring the new. Moreover, rational decision-making leads people to analyse what can be most readily analysed, spend more time on it, and ignore the rest — the "fluffy in life."

Second, the exclusively rational decision-making mode, when it runs wild, as I believe it has today, leads to an abstract and heartless approach to the world. The ultimate expression of this can be seen in a designation of "body counts" in Vietnam, a concentration of "inflation and unemployment rates" as drivers of economic policy, and fixations on "cost per student" calculations in education policy. A purely rational decision-making mode takes the living element out of situations; an element which is of increasing importance in affecting the social patterns of today.[13]

The rational decision-making mode is, thirdly, often negative. Peter Drucker has commented, for example, that "professional management today sees itself as often in the role of judge who says 'yes' or 'no' of ideas as they come up. This inevitably leads to a vetoing of new ideas. New ideas are always impractical."[14] And, I would add, seemingly irrational. It is inherently easier to develop a negative argument than to advance a constructive one. Fourth, the rational decision-making mode downplays experimentation and abhors mistakes. This leads, often, in educational deliberation, to years of "study groups" which help people to avoid what they must confront: having to make, eventually, one big bet. "Paralysis by analysis" is the result. Fifth, the rational decision-making mode does not celebrate informality. Analyse, plan, specify, and check-up, are the verbs of the rational process. Interact, try, test, fail, stay in touch, learn, shift direction, adapt, modify, and see are some of the verbs of the informal processes in society. It is out of these processes, moveover, that frequent societal innovation emerges.

Rational decision-making is, as I argued earlier, an important skill in a complex society. Students need, however, to be acquainted with other processes if they are to adapt to an integrated society. Indeed, this society, demands it. In this regard, there are two additional processes which schools must foster in future. These are path-finding and implementation.

Path-finding is essentially an aesthetic, intuitive process, a design process. There exists an infinity of alternatives that can be posed as design problems. From that infinity, there are plenty of bad ideas and here the rational decision-making approach is useful as a sorting process. The problem in education today is that we are teaching people "how to sort" before teaching them how to generate the universe from which they should sort. The ability to carve out and explore new pathways to understanding, to see, as Gregory Baterson has suggested, the multiple patterns which connect us to each other and nature, is an essential ability in the information age.[15] Much of the attraction of video games to the young, today, is precisely due to the fact that they appeal to and stimulate path-finding processes. And, it need not be over-stressed, this engagement with alternatives is occurring outside of school. Mere entertainment could not, in my view, hold the attention of the young in the video arcade. It is interesting to note, as well, the number of "three-piece suits" one sees in the arcade during the noon hour. The video arcade, indeed, is, ironically, one of the few situations left in our society in which activity is not structured on an age-segregated basis.

Innovation is the third social process of critical importance to the future. It involves the process of translating ideas into practice in multiple settings. Many good ideas never see the light of day due to lack of understanding of our attention to implementation. Creativity, which is the heart of path-finding is the process of creating new things; innovation is the process of doing good things. This is the "how" of life. Within the net of complexity which characterizes our society, innovative processes can no longer be taken for granted. Traditional curriculum, based as it is on decision-making, by and large prepares the young for bystander rather than innovative roles. In what ways can we provide the young with experience in innovation?

To summarize, I have suggested that there exists, in light of technological developments in modern society, at least three critical processes with which both young and old alike need to become acquainted. These are path-finding, decision-making and innovation. Moreover, these processes, by definition, cannot be "taught" separately. They are intimately intertwined. Creative ideas need evaluation. Creative ideas which are positively evaluated need implementation. Mindless innovation can lead to disaster. Decision-making in a vacuum is a vacuous skill.

All of what is transmitted in school, then, needs to be assessed to the degree to which it is fostering people's path-finding, decision-making and innovative capacities. The use of computers in schools is a case in point. Currently, only the decision-making mode in computer usage is being explored, and even here it is a narrow logic which is dominant. The latent consequence of this pattern of development will be to convince the user that the world behaves like a computer. Socio-logic, however, is not equivalent to computer-logic. Have we explored the path-finding and innovative dimensions of the computer? Seymour Papert is one who, in his efforts to have children program computers and reflect on the thought processes which generated their programs, has begun to explore the path-finding dimension.[16] Regrettably, the innovative aspects of computer technology have not been probed in an educational context.

Canadian Studies programs in schools should provide students with a context in which to invent, evaluate and act upon emergent realities. Creating alternate visions of reality, path-finding if you like, is a central process in this regard. Canadian history, like other histories, is replete with examples of "successful" and "failed" social and technological inventions. Students need to be aware of these path-finding endeavours as well as the processes and context which produced them. As well, students need to be acquainted, on a first-hand basis, with path-finding endeavours currently underway in our society. Within all sectors of society, business, government, labour unions, alternate images of physical and social reality are being created and discussed. Finding ways to engage students with the creative and imaginative processes of modern society is a signal challenge to all of education, Canadian Studies included.

Developing the innovative capacities of students is an even more heady challenge, for to strive toward it requires a reintegration of the young into social life. The ability to translate "good ideas" into action is not something which can be learned solely within the confines of a school and its analytic culture. The young must confront, in order to acquire this capacity, such things as the inertia of bureaucratic structures, the interacting web of decisons, the power and prestige orientations of people, the lag between attitudes and technological feasibility, and the "bottom lines" of corporate and public institutions. They must learn how to shape consensus, plan and modify plans in light of experience, motivate and energize others, to learn to achieve objectives in a social and political world.

Innovation is, by definition, a social and political process. It cannot be learned apart from society. If Canadian Studies purports to teach the young about our society, and if that society currently and in future rests on and demands continual innovation, then the opening up of opportunities for the young to learn about and be engaged in innovative activity is of paramount importance.

Schools, if they are to remain as central educational institutions, must also be designed with the emergent patterns of society in mind. By and large, the structure of schools still conforms, to the social context of industrial society, in which one could assume that information was a scarce good requiring only transmission and analysis. The structures of schools, based on these premises, continue to emphasize hierarchy, specialization, disciplines, sender-receiver models of teaching, and absorption and codification of "content." In an information-rich society, these basic premises of schooling must be radically rethought.

If schools are to play a role in fostering the three processes inherent in our emergent society, new organizational forms will be required. An organizational form which rests solely on decision-making will not provide, for either teacher or student, an environment conducive to the stimulation of path-finding and innovation. Rather than, as is our tendency, to consider decision-making as *the* focal principle around which to design the organizational structures of schools, this over-arching structure must be seen as one of three pillars which will make up a new, more dynamic organizational form.

In developing path-finding and innovative pillars within schools, it must be recognized that they will rest on different principles than those of decision-making. The path-finding pillar should be based on a number of small, cross-disciplinary units and problem-solving groups. These groups should establish close links between teachers and students. Their objective is the development of path-finding capabilities in both students and teachers. The close tie between students and teachers is critical, since, as in the case in industry, many new ideas have been born from what has been called "customer innovations" based on direct experience with and modification of the product. These path-finding pillars cannot report through their parallel decision-making structures, for the objective is not to analyse and decide on but to create new ideas. Democracy and free-wheeling exploration must be their definitive characteristic.

The creation of innovative pillars within the overall organizational structure of schools presents yet another challenge. Schools must find ways to develop and monitor their innovative capacity as organizations. Experimental and strategic planning units, devoted to testing and introducing new ideas, need to be developed. Students should be directly involved in such processes. The introduction of computers in schools, for example, can provide a classic laboratory for the development of an innovative capacity. One of the best ways for schools to develop innovative capacities in the young, then, is to model the process itself.

Conclusion

The field of Canadian Studies, although vaguely defined, has been characterized largely by a quest to obtain, through education, an elevated awareness of the roots of the Canadian cultural experience, and thereby, foster and preserve our nationality. The introduction and application of new technology, particularly micro-computer based compunications systems, does not strike one as something which falls immediately within the domain of Canadian Studies per se. If one broadens the definition of Canadian Studies to encompass the study of those forces which have and are shaping Canadian society, however, then technological change, particularly in the current era, must be a central concern.

In addressing the issue of technological change, within the context of Canadian Studies, the perspective one brings to bear is of critical importance. It has been the argument of this paper that the technological changes which we are witnessing today are generic and will lead, over time, to the evolution of a society which is radically different from that of the past. Accordingly, any program of Canadian Studies, which seeks to help introduce the young or old to this emergent society must also be generic; that is, it must be based upon principles which transcend current educational practice and, indeed, depart substantially from many of the core ideas of Canadian Studies itself. There is, in other words, nothing uniquely "Canadian" about the current compunications revolution. In fact, the changes which are associated with compunications, and the underlying processes which drive them, are pan-national in nature. Their rhythm and tempo do not flow form the exigencies of nations, but are inherent within the technology itself.

If Canadian Studies is to address the question of technological change as a generic phenomenon, as I believe it must, then it will have planted the first seeds of its own destruction as a unique field of inquiry. Decision-making, path-finding and innovation are processes essential to an information society. Their importance derives, not from any roots in the Canadian experience, but from their integral relationship to emergent compunications systems. To understand, and use for human benefit, these new systems requires the engendering in people of a trans-cultural viewpoint; an attitude which transcends the boundaries of nationality and national identity. Ironically, due to its lack of definition and marginal status in education, Canadian Studies is uniquely positioned to accomplish just this goal.

FOOTNOTES

1. See J. Haugeland, ed., **Mind Design** (Cambridge: MIT Press, 1982).
2. See C. Brown, "Have Production for Use in a Market Economy," in B. Thorne and M. Yabon, ed., **Re-Thinking the Family** (NY: Longman, 1982), pp. 151-167.
3. See Daniel Bell, "The Social Framework of the Information Society," in M. Dertonzas and J. Moses, ed., **The Computer Age: A Twenty Year View** (Cambridge, MIT Press, 1981), pp. 164-182.
4. See Russell Ackoff, Creating **the Corporate Future** (NY: John Wiley, 1982).
5. See W.I. Thompson, **The Time Falling Bodies** Take to **Light** (NY: Harper, 1982).
6. Morton Hunt, **The Universe Within** (NY: Oxford University Press, 1982).
7. See J. Botkin, Global **Stakes** (Cambridge, MIT Press, 1982).
8. See J. Weizenbaum, **Computer Power and Human Reason** (San Francisco: W.H. Freeman, 1979).
9. See H. Menzies, **Computers on the Job** (Toronto: James Lorimer, 1982).
10. See M.J. White et al., **Managing Public Systems** (NY: Duxbury Press, 1983).
11. See Y. Masuda, **The Information Society** (NY: World Future Society, 1982).
12. This process is described at length in B. Bluestone and B. Hanson, **The De-Industrialization of America** (NY: Basic Books, 1983).
13. See F. Capra, **The Turning Point** (NY: Scribners, 1982).
14. Peter Drucker, Managing **in Turbulent Times** (NY: Harper-Row, 1981), pp. 1-22.
15. G. Bateson, **Mind, Nature and Rality** (NY: Oxford, 1979).
16. S. Papert, **Mind Storms** (NY: Basic Books, 1979).

Teaching Canada for the Nineties

By Robert M. Anderson

Canadian Studies and the new information technologies should be linked. Canadian studies programs should prepare students to use the potential of the "wired society" for personal improvement. To simply exist in this wired society is not enough. Students must also come to understand it so that they do not simply become its victims. The Canadian Studies programme outlined in Teaching **Canada for the '80s** must be interpreted so as to give proper emphasis to the impact on Canada of the communications revolution.

The Canada Studies Foundation has long postulated that the Canadian political community has been and continues to be formed and influenced by a number of readily identifiable characteristics or basic features that in combination make Canada a unique country. The most important of these basic features are:

1. Canada is a northern, vast, and regionally divided country.
2. Canada has a broad natural resource base composed of both renewable and non-renewable resources.
3. Canada is an industrial, technological and urbanized society.
4. Canada is a culturally diverse, multi-ethnic country with two "official" linguistic groups.
5. Canada is exposed to a multitude of external economic, political and cultural influences.

Three points must be noted about these basic features, particularly by those who debate the content and context of Canadian studies programs. First these features are not merely subjective. They do exist. One may add to the list, but these features are an integral component of Canada as it is today. Second, these features interact with each other and it is this interaction which most strongly influences the development of Canadian Society. Third, the impact of each of these features is felt to varying degrees at different times and in different places within Canada. One can argue forever about an ideal Canadian studies program, but no program should ignore these features, their origin and their continuing impact on our society.

They form the basis for the argument in Teaching **Canada for the** '80s, where Hodgetts and Gallagher present a set of guidelines for Canadian Studies curricula. After raising the major issues involved in teaching about Canada, they proceed to outline a proposal for an optimal program of Canadian studies. Their proposal, although widely accepted, has also generated further inquiry across Canada concerning the nature of Canadian studies and its pedagogical implications, as can be seen at any teachers' conference and in many curriculum guidelines. In turn, this discussion has generated concrete activities. Many curriculum or material developers implicitly or explicitly refer to Teaching **Canada for the '80s** at some point, although they do not always utilize all its ideas.

The book is exclusively addressed to the question "What should young Canadians understand about their own country?" This question arises from two concerns: 1) a conviction that we need more positive attitudes towards Canadian society as a whole; and 2) a recognition that our society is becoming unbelievably more complex than in the past. Today's students must exist in an increasingly complex society yet their schooling has often failed to prepare them adequately. The pedagogical imperative thus becomes clear: to design a program of Canadian Studies that will reflect and clarify this complexity while at the same time fostering more positive attitudes towards Canada as a whole.

Teaching Canada for the '80s has made a start. Understandings have been outlined that are considered essential to an informed knowledge of Canadian society, the structure and functioning of its economic and political systems, and the problems or issues that have been and will continue to be of continuing concern to Canadians.

These understandings emphasize the pluralism and diversity of Canada and the opportunities and difficulties that Canada's regional, economic, social, cultural and linguistic differences present. One basic premise is that conflict of opinion, controversy and stress are inevitable in all societies and especially in Canada, but that these tensions can also be a constructive force in any society. At the same time, an overemphasis on our differences in a narrowly Canadian context will obscure that fact that many Canadian regional or national issues are manifestations of world-wide concerns and that they transcend purely domestic considerations. In short, we cannot be too inward looking. Canadian Studies must be concerned with issues such as the population explosion, world-wide inflation, world food and water shortages and energy problems, to give only a few examples.

This concept of Canadian Studies largely equates them with citizenship education. Initial preparation for citizenship education must begin in the elementary school and continue through the school program. This can be done by concentrating on those aspects of the environment — or the basic features — discussed in **Teaching Canada for the '80s** that are appropriate for the early grades regardless of the particular content at each grade level. In later grades the four separate, but interrelated, components of Canadian studies described by Hodgetts and Gallagher can be emphasized: the Canadian environment, the Canadian political system, the Canadian economic system and Canadian public issues. There is no one way to do this. The challenge is to integrate these components into feasible courses — a not-so-simple challenge, particularly when it is maintained that the present, past and future form three aspects of a good program and that all three aspects must be stressed.

Courses have been developed based upon these five basic features as explained in **Teaching Canada for the** '80s. Materials have also been developed, particularly by the Canada Studies Foundation, and the work is continuing. Of greater import, there is some evidence to indicate that the goals outlined in **Teaching Canada for the '80s** are being achieved. The major conclusion of Kirkwood and Nediger (1982) after surveying almost 11,000 students in ten provinces and two territories was as follows: "Students included in this survey do indeed possess a basic level of knowledge about Canada and do possess positive attitudes." (p. 36). This conclusion does not mean that reform in Canadian studies education should cease. Far from it, for this is only one study, albeit a large one. The conclusion does allow for at least limited optimism however. The conclusion is far different from one of the major conclusions of Hodgetts' (1968) landmark study which was as follows:

> . . . the legitimate national interests of this country are not being served by our present Canadian Studies programs and that the need for radical reforms is urgent . . . Not only are the schools failing to serve the interests of the wider society, but the reasonable expectations of the individual student while he is in school — as distinct from the role he may play as a citizen after graduation — are not being fulfilled either (pp. 15-16).

Little reference is made in **Teaching Canada for the '80s**, however, to the information technologies that are affecting our lives in so many ways — both visible and invisible, an omission which illustrates the speed with which these technologies have advanced upon us. Obviously, Canadian Studies must still continue to emphasize the structure and functioning of Canada's economic and political systems and the issues that are of continuing concern to Canada. However, the issue of technology, particularly the new information technologies, must be integrated into the Canadian Studies program more explicitly than it has been. It is obviously too important to be ignored. "What has been called the "quiet evolution" is going forward, inexorably, day by day. Whether we like it or not, whether we lift a finger to control and direct them, we will use and be affected by the new technologies." (Smith, 1982).

This last phrase, "the new technologies," is worth noting. It highlights what is perhaps the most important characteristic of the new information technology, a characteristic that many people choose to ignore: there is no single new technology; there are several. This is the important point. As Elmes (1981) has so aptly described it, it is the chronological juxtaposition of a number of developments in technology that have produced a situtation where each of us will witness a rate of change heretofore described only in science fiction. These developments obviously will have profound impacts on society and on education. In turn, the impacts of each will impact one another.

Although the information is reasonably familiar, it is useful to summarize it here, if only to establish just how immense the technological advances are and how revolutionary their implications.

The electronic tube that cost two dollars in 1950 became a transistor that cost ten cents in 1960. Today, one hundred thousand transistors have been reduced to one silicon chip which, if it sells for ten dollars, reduces the price of a single transistor to one hundredth of a cent. If the rate of progress of chip technology continues as predicted, an additional 10,000-fold increase in performance will occur over the next ten years at no additional cost.

Combined with the reduction of cost, there has been an incredible miniaturization of information technology. Robert Noyce, president of INTEL, a leading manufacturer of microprocessors, said in 1978 that his company had the technical capability of putting an IBM 370 on a single microprocesor chip, but he didn't know if there was a market for such a thing. That chip, actually an improvement on the IBM 370, has been produced.

Video discs are with us and indeed are being used in education, private industry, business and the home. With a self-indexing video disc playback unit capable of playing one-half metre discs, an instructor can index and display on a TV set any one of 16 million pages within two to three seconds. A recent pilot project of the Public Archives of Canada demonstrated that images of all its holdings could be stored on video discs. This involved the storage of a wide range of holdings: prints, paintings, drawings (both artistic and architectural), photographs (black and white and colour, positive and negative), paper documents, medals, posters, maps and motion pictures. This project took place at a time when the technology of video disc recording and playback was still at the prototype stage. Yet all the goals of the project were achieved and almost 40,000 images of holdings were recorded and played back.

A single wafer-thin disc, half a meter in diameter, can include images of 32,500 books or the equivalent of 16 million pages. Approximately 19,000 discs could store the complete holdings of the Public Archives of Canada and occupy the space of one standard filing cabinet.

Self-indexing video disc playback units have been available since 1980 for $12,000 to $15,000. This price includes minicomputer, video disc player and TV set. The cost will drop drastically as the micro-chip industry becomes even more proficient and these units go into large scale production. It will then be economically viable to consider them as permanent installations in classrooms, learning booths, resource centres and obviously homes.

Laser beam self-indexing playback units are now widely used. They have been proven to be extremely durable through extended use in the U.S. Air Force. The life expectancy of these discs, because no gramophone-type needle touches them, is estimated at a minimum of 50 years with regular use.

To date, the most phenomenal rate of growth in the new information technologies has been in the microcomputer field.

It is obvious that, given the decreasing cost of microcomputers, their use in the home is increasing, both for recreational and learning purposes. Eventually, these microcomputers will be linked to central data banks and to other homes via optic fibres and Telidon.

This home use will impact drastically on arts and culture and on the education system. Already, some elementary and secondary schools in California rely heavily on microcomputers for instruction. Some Canadian colleges and universities have been heavily involved in Computer Assisted Learning (CAL).

Until recently, most educational computer uses have been on time-sharing systems with per terminal capital costs of $10,000 to $20,000. Personal microcomputers of equal capability are available today for $1,000 to $2,000 and the cost is continuously decreasing.

The decreasing cost brings this enormously powerful technology within the reach of every student. The ability to program and use microcomputers is becoming as important as being able to read, write, type, drive or use the telephone.

A single glass fibre with the diameter of a human hair can carry 800 voice conversations, tens of thousands of data messages, or 50 million bits per second — in short, it has enough capacity to carry the contents of four books from Ottawa to Vancouver in one hour. Linked to satellite transmission, the carrying speed is increased again.

Eventually, optical technology will utilize the visible light laser which will permit a carrying capacity of 100 million times today's fibre optics.

Videotex is one of several terms used to describe the display of textual information in graphic or written form on a video screen (TV).

Telidon, as is well known, represents Canada's entry into this field. Developed by the Communications Research Centre of the Federal Department of Communications, Telidon is the most technologically sophisticated second-generation videotex system in the world due to its enhanced graphics reproduction ability. This high resolution is accomplished by Picture Description Instructions which describe graphic images as basic shapes, thus permitting their combination on the same frame with textual material.

Input is accomplished via a special terminal which utilizes an alphanumeric keyboard for text and a "Joy-stick" for free-form graphic creation. The system utilizes an eight-colour pallette plus a grey scale in addition to a number of special effects such as polka dots. No special knowledge of computer language is required to input graphics.

Large scale trials are now underway in Alberta, Manitoba, Ontario, Quebec, New Brunswick, Switzerland, Venezuela, Oregon and Washington, D.C.

Once one accepts the premise that a videotex communication revolution is inevitable, then the rationale for the federal government's push behind Telidon becomes obvious. If Canada is not to continue to be relegated to branch plant status as we move into the Information Society, then Telidon must succeed.

Questions of Canada's cultural, political and economic sovereignty are closely linked to our ability to control the hardware market and in turn, the compatible software and data banks.

At present, Telidon is very much a technology in search of a content. This explains why the telephone carriers and high level technology industries are so interested in developing educational programming alongside their commerical interest in news services, catalogue shopping, distance banking and the cashless society.

This also highlights the need, once the premise of inevitability is accepted, for Canadian educators to become intimately

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involved in the decisions surrounding the introduction of Telidon. The need for this involvement to be independent of the telephone carriers and industrial interests is self-evident.

As indicated earlier, it is the chronological juxtaposition of these technological developments which are creating an extremely accelerated rate of change. Elmes (1981) is representative of most writers in the field of "high technology" when he describes the resulting effects.

> This (change), in turn, will impact on education not only in terms of methods of delivery but also in terms of the subjects taught, percentage of time spent in a physical plant; the degree of interpersonal reaction; thought processes; problem-solving processes; and so on. One of the most important skills to be acquired will be the ability to relate disparate pieces of information to one another, to draw linkages. Power will increasingly rest with individuals who know how to access information and to synthesize it. (p. 3).

If Elmes is correct, and I believe that he is, the participant at a recent Computer Aided Learning Workshop who stated "As far as I know, people never had so many debates on chalk education, but it worked for a long time" (Science Council of Canada, 1981, p. 32) has surely underestimated the potential impact of the new technologies. The new technologies represent alternative aids to teaching. However, these alternative aids are so unbelievably more complex than chalk that many debates are not only necessary, they are vital to the survival of the education system. It follows, therefore, that they were also crucial to the future of Canadian Studies.

Teaching Canada for the '80s argued that we must teach students the knowledge, skills and values that will enable them to compete in an ever increasing complex society. The pressure is infinitely greater as a result of the technological advances described above. All indications point to the fact that, by the 1990's, technological advances that we consider science fiction today will be commonplace. Canadian Studies educators must prepare students to cope with these technological advances. Hopefully, a Canadian Studies program that acknowledges the reality of the "quiet evolution" can utilize that knowledge to improve the program and its delivery. Students must be taught the skills necessary to use the potential of what has been referred to as a "wired society" for personal improvement. Obviously, many important subjects within Canadian Studies can be taught in this way.

More than this, however, it is imperative to teach students about the communications revolution, so that they understand it. To demonstrate this point at one ridiculous level, PAC MAN disease is now documented in medical journals and described in the public press. Computer technology has become a part of everyday life in Canada. Furthermore, the computer is common in the classroom; in few classrooms can pocket calculators or multi-function digital watches not be found. When one also considers interactive teaching machines in the home, video games, Speak and Spell toys, electronic arcades and Star Wars robots, it is clear that the electronic revolution is commonplace to today's children. More complex than even these developments is "telematics." Telematics, as described by Ryan (1981), is another illustration of the growing complexity of our society. Telematics — the transmission of information over a distance — is the logical result of the juxtaposition of all the technologies. According to Ryan, telematics signifies the merger of information, information technology and communications. It is a combination of subject matter, as expressed in language; of computers and computer technology; and of communication systems such as telephones, radios, televisions and telecommunications linkages. Telematics is here. It is its impact that is an issue. There are very obvious risks and benefits to Canada's national sovereignty, to privacy and access to information.

These issues have been resolved at the present time. That they should be, and quickly, can be illustrated by again presenting the most important of Canada's basic features as described by Hodgetts and Gallagher and then asking a series of questions that relate the basic features to the implementation of the new information technologies.

1. Canada is a northern, vast, and regionally divided country.
2. Canada has a broad natural resource base composed of both renewable and non-renewable resources.
3. Canada is an industrial, technological and urbanized society.
4. Canada is a culturally diverse, multiethnic country with two historically predominant linguistic and cultural groups.
5. Canada is exposed to a multitude of external economic, political and cultural influences.

Some questions that are now relevant are: How "northern, vast and regional divided" need we be given the potential of instant interaction between our home and anywhere in Canada?

Will our resources be better controlled given the increasingly more sophisticated power to predict as a result of our current computer technology?

Will our "industrial, technological and urbanized" society enable Canada to become a leader in the field of high technology?

Will our "culturally diverse, multiethnic country with two historically predominant linguistic and cultural groups" become more or less diverse as a result of the widespread use of telematic techniques?

Will the "multitude of external economic, political and cultural influences" that Canada is exposed to overwhelm us as a result of the impact of the new technologies, especially those based outside Canada's territorial borders?

These questions, linking Canada's basic features and the new technologies, illustrate the potential impact of telematics, both positive and negative, on Canadian society. They also illustrate how technology and its present and future impact can become an integral component of a Canadian studies course. It is possible to continue and design an entire curriculum around these questions, an exercise that likely would be worthwhile.

If "PAC MAN disease" and certain recent decisions concerning Canadian content on Pay TV are any indication, there is reason for pessimism concerning the "benefits" Canadian citizens will derive from current technological advances. Without considering the issue of the use of technology for Canadian Studies endeavours (although it is difficult to imagine teaching this topic without the use of examples), a strong case can be made to include the "new information technologies", "telematics", "the wired city", "the electronic highway", or any other phrase one wishes to utilize in any Canadian studies curriculum. Increased knowledge is vital. A long-standing assumption of the Canada Studies Foundation is that increased knowledge about Canada will bring about an increased understanding of our society and assist a person to postively and actively participate in it. This positive and active participation implies more than simply coping in a complex technological society (although as has been stressed repeatedly that might be difficult enough), it implies the education of a person who is able to make reasoned and intelligent decisions vital to the very survival of our country as we know it. Canadian Studies should prepare for these tasks. As one of the authors of **Teaching Canada For the '80s** recently remarked: "It is not teaching Canada for the eighties that should be concerned with, but teaching Canada for the nineties."

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Media News

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that our awards are gaining recognition as a sign of quality in Canadian educational media productions. In Winnipeg, the CBC-TV outlet presents a weekly series entitled "Manitoba Filmmakers". Films are chosen on several criteria, one of which is the AMTEC Media Festival Award. And in Toronto, the University of Toronto 1983-4 video film collection catalog makes specific mention of the AMTEC awards.

NFB Reorganizes Distribution Offices

The National Film Board announced today that it will close eight of its thirty distribution offices as part of an overall plan to reduce administrative costs. During the next two years the offices in Chicoutimi, Saskatoon, Trois-Rivières, Thunder Bay, Kingston, Corner Brook, Hamilton, and Sydney (Nova Scotia) will be closed, as well as NFB offices in Chicago and Sydney, Australia.

The funds saved will be channeled into the development of new communication systems such as video cassette and cable-tv distribution, and into ensuring the continued relevance and quality of NFB films.

According to William Litwack, Director of Distribution, the reorganization will affect 20 employees "but we have been planning the consolidation of our services for the past year, and will be able to offer most of our staff comparable positions in other NFB offices. We will work closely with employees who are unable to relocate to ensure that they leave the Film Board under the fairest conditions possible."

NFB clients affected by the closings will be encouraged to receive films by mail from the nearest NFB office.

"These were difficult decisions," Litwack said "and we regret that a certain amount of personal contact with our film borrowers will be diminished, but we will do everything we can to maintain close contact with the public and to provide efficient service."

In connection with the foreign offices Litwack said, "the Chicago operations will be transferred to our offices in New York and Los Angeles and film distribution in Australia and the Far East will be handled by our head office in Montreal. This reorganization leaves us with 22 distribution offices in Canada and 4 international offices, which will continue to serve our clients," Litwack said.

Office	Date Closing	Clients will be served from
Chicoutimi	August 1983	Quebec
Saskatoon	September 1983	Regina
Trois-Rivières	October 1983	Montreal
Thunder Bay	October 1983	Winnipeg
Kingston	March 1984	Ottawa
Corner Brook	August 1984	St. John's
Hamilton	November 1984	Toronto
Sydney, N.S.	January 1985	Halifax
Chicago	April 1984	New York and Los Angeles
Sydney, Australia		September 1983 Montreal

NFB Update

One of the priority items at the meeting of the National Film Board's Board of Trustees in Halifax, June 17 and 18, was to review the recent decision to close eight of the Film Board's Canadian distribution offices. The offices which were destinated to close during the next two years are Chicoutimi, Corner Brook, Hamilton, Kingston, Saskatoon, Sydney, Thunder Bay and Trois-Rivières.

"Due to strong public reaction and the deep concern of the communities affected, we felt a review of the situation was called for," said Government Film Commissioner and Chairman of the Board James Domville. "During the past two months we have received hundreds of letters and thousands of signatures from users of our films and have met with various groups that sprung up to protest this decision after the closings were announced. This overwhelming support by our users clearly shows that the NFB is playing a crucial role in the cultural life of Canada's regions," he said.

In the light of the public response, the Board of Trustees directed the management of the NFB to modify implementation of the decision to close the eight offices. Mr. Domville is pleased to say that the Board directed that the offices remain open until such time as the NFB has been able to establish adequate alternative arrangements to serve the communities or until the new policy directions for the Film Board have been accepted by government and announced. In either case, the NFB will ensure that the specialized audiences in the community are adequately served by our films.

Conference on Instructional Technology

"Computer Technologies for Productive Learning" is the theme for the Fourth Canadian Symposium on Instructional Technology which will be held on October 19-21, 1983 at the Westin Hotel, Winnipeg, Manitoba.

This series of symposia is sponsored by the Associate Committee on Instructional Technology of the National Research Council of Canada for the purpose of informing the academic and business communities of recent advances in computer-aided learning technology and their applications.

This Fourth Symposium is designed for education and training professionals and others interested in computer-aided learning for the entire population — from the young child to the retired adult.

Topics of the current Symposium include:

- Computer-assisted training and retraining for business, industry and government.
- Within the educational context: learning with, from and about computers.
- Computer awareness and literacy in schools and society.
- Telecommunications: learning opportunities for the public.
- Productivity improvement methods.
- Productivity analysis.
- Systems technology.
- Equipment and language standards.

A circular containing a list of papers to be presented and registration information will be published in July 1983. Those interested in receiving this publication are requested to contact:

Ken Charbonneau
Conference Services Office
National Research Council of Canada
Ottawa, Ontario, Canada K1A 0R6
Telephone: (613) 993-9909 or 993-9628 Telex: 053-3145

Bell and Howell Draw

At the recent AMTEC conference in Montreal, Dr. Gary Boyd drew the lucky winner of the Bell and Howell draw.

The winner of the Bell and Howell 850 Ringmaster II was:

Steven Counter
Lakeshore School Board
Pointe Claire, P.Q.

From the Media Periodicals

By Patrick Wright

PROGRAMMED LEARNING AND EDUCATIONAL TECHNOLOGY, 20:1, February 1983

Elder, T.J. (et al.), "Microcomputers in primary education"
Taylor, D.B., "Computer-based testing in an introductory marketing course"
Biji, Aart, "BADGER: building appraisal and development with graphic evaluative routines"

PROGRAMMED LEARNING AND EDUCATIONAL TECHNOLOGY, 20:2, May 1983

Brien, Robert, "Sequencing instruction: a cognitive science perspective"
Davis, B. (et al.), "A comparison of the effects of film and videotape presentation on student recall"
Webb, Graham, "The tutorial method, learning strategies and student participation in tutorials: some problems and suggested solutions"
Duchastel, Philippe C., "Independent study strategies: reactions to study guide components"
Winer, Laura R. & de la Mothe, John R., "Computers, education and the 'dead shark syndrome' "
Megarry, Jacquetta, "Educational technology: promise and performance"

INSTRUCTIONAL INNOVATOR, 28:3, March 1983

Butler, David W., "Technological horizons"
Murphy, Peter J., "Educating students"
Leonard, W. Patrick. "Educating media professionals"
McJulian, Wes, "The 20th century dilemma"
Withrow, Frank B. & Roberts, Linda G., "Video with razzle-dazzle"
Long, Sandra M., "What's up, Alvin Toffler?"
Gordon, Alan, "The impact of the baby boom"

INSTRUCTIONAL INNOVATOR, 28:4, April 1983

Beebe, Thomas H. & Mizell, Al P., "Software languages: how to talk to your computer"
Fox, Annie & Fox, David, "Armchair BASIC"
Schneider, F.C. & Schwieder, A.W., "Make a character generator from your personal computer"

INSTRUCTIONAL INNOVATOR, 28:5, May 1983

Special issue: Association for Educational Communications and Technology convention report: Meeting the need to know.

EDUCATIONAL COMMUNICATION AND TECHNOLOGY, 30:4, Winter 1982

Levie, W. Howard & Lantz, Richard, "Effect of text illustrations: a review of research"
Cuba, Egon G. & Lincoln, Yvonna S., "Epistemological and methodological bases of naturalistic inquiry"

EDUCATIONAL COMMUNICATION AND TECHNOLOGY, 31:1, Spring 1983

Williams, F., Coulombe, J., & Lievrouw, L., "Children's attitudes toward small computers: a preliminary study"
Lamberski, R.L. & Dwyer, F.M., "The instructional effect of coding (color and black and white) on information acquisition and retrieval
Baffett, P. & Ehrenfeucht, A., "Encoding and retaining information in the visuals and verbals of an educational movie"
Stone, Verlon L., "Effects of color in filmed behavior sequences on description and elaboration by Liberian schoolboys"
Turner, Philip M., "Anxiety and cueing in a visual concept learning task"

EDUCATIONAL TECHNOLOGY, 23:3, March 1983

Cacha, Frances B., "Glamourizing and legitimizing violence in software: a misuse of the computer"
Lee, Mildred K. & Lee, Granville W., "Wanted: a business/school consortium to promote computer education"
Lovell, Paulette, "Staff development for computer literacy"
MacPhail-Wilcox, Bettye, "Fast forward with a plan for cost-efficient statewide computing"
Klingstedt, Joe Lars, "Contracting for individualization: let's take a fresh look"
Hoover, Todd & Hoover, Janice, "Enhancing the parent-teacher conference with the microcomputer"

EDUCATIONAL TECHNOLOGY, 23:4, April 1983

Gallini, Joan K., "What computer-assisted instruction can offer toward the encouragement of creative thinking"
Marcus, Stephen & Blau, Sheridan, "Not seeing is relieving: invisible writing with computers"
Mass, John & Bahn, Theodore I., "Service improvements for state computer systems: an approach used by Minnesota"
Cole Dennis D. & Hannafin, Michael J., "An analysis of why students select introductory high school computer coursework"
Cross, Thomas B., "Computer tele-conferencing and education"

EDUCATIONAL TECHNOLOGY, 23:5, May 1983

Coder, Ann, "Why do community college faculty resist media as an instructional delivery system?"
Morris, John M., "Computer-aided instruction: toward a new direction"
Palmer, John, "Computerized learning in higher education: are the machines more 'user friendly' than the process of instruction?"
Tiene, Drew, "Japan sets the pace in educational television"
Swift, David W., "Telecommunications in the classroom: Can it be done? Should it be done? An essay on possibilities and frustrations"
Offir, B., "Attitudes of university instructors and students toward using computers for learning: discrepancies between thought and action"
Hoover, T. & Gould, S., "The many roles of the school district microcomputer coordinator"

EDUCATIONAL TECHNOLOGY, 23:6, June 1983

Wartella, E., & Reeves, B., "Recurring issues in research on children and media"
Fleig, Gail S., "Media basics: a bridge to successful mainstreaming"
Bratton, B., "The instructional design specialist-subject matter expert relationship"
Robinson, Jack E., "Can 'soft' data be used to evaluate the effectiveness of educational technologies?"

FOR YOUR INFORMATION

Mediography

Media on Technology

by Nancy Lane

Media on Canadian Studies

"Canadian Studies" is a broad and extensive subject. Many media programs are applicable, particularly in the field of Canadian History. I have listed below a number of new programs dealing with a variety of Canadian lifestyles and educational innovations, all of which contribute to the multiculturalism of Canadian life.

CANADA TODAY Motion Picture, Crystal Bear Films, 1982 30 min. sd., col.
This film depicts Canadian people and lifestyles, it is a general overview.

CHILDREN OF CANADA SERIES Motion Picture, NFB, 1976, 9 films., 16 min. ea., sd., col.
This series is about children whose backgrounds, cultures, and lifestyles depict the variety in Canadian culture.

CREE WAY Motion Picture, NFB, 1977, 26 min., sd. col,
This innovative school at Rupert House is geared to the Cree way of life, including teaching materials drawn from Cree legends and history, and a school year which allows pupils to hunt and fish with their families.

DENE FAMILY Motion Picture, Goldi Productions, 1981, 20 min., sd., col.
Narrated by a ten year old Indian girl, the film portrays the day-to-day life of a Dene Family.

THE HUTTERITES Motion Picture, Bortnick Film Productions, 1977, 15 min., sd., col.
This program studies communal Hutterite life. The NFB also has an older film with the same name.

JOURNEY WITHOUT ARRIVAL: A Personal Point of View from Northrop Frye Motion Picture, NFB, 1976, 57 min., sd., col.
From the **Images of Canada Series;** Northrop Frye appears in various Canadian locations, commenting on Canadian attitudes and their origins.

MYSELF, YOURSELF Motion Picture, Mobuis International 1980 30 min., sd., col.
This film deals with multi-culturalism and prejudice. A number of interviews focus on personal cases of prejudice in the social and school system.

THE NEW CANADIANS Motion Picture, Bortnick Prod., 1980 28 min., sd., col.
This is Canada through the eyes of New Canadians — new culture and language; sometimes prejudice.

WHO ARE WE Motion Picture, NFB, 1974, 10 min. sd., col.
An animated cartoon analyzing the Canadian character.

OH CANADA Motion Picture, NFB, 1978, 7 min., sd., col.
A tongue-in-cheek look at "established" prejudices. This film is set to the music of Oh Canada.

PLAIN PEOPLE Motion Picture, NFB, 1976, 28 min., sd. col.
This film portrait of a Mennonite community near Elmira, Ontario includes both history and philosophy.

PROPAGANDA MESSAGE Motion Picture, NFB, 1974, 13 min., sd., col.
Canada, Canadians, federalism — these are the subjects of this cartoon.

RIDLEY: A SECRET GARDEN Motion Picture, NFB, 1981, 27 min., sd., col.
Using Ridley College, in St. Catherines, Ontario, as an example this film shows the private schools rooted in British tradition.

SUMMER OF THE LOUCHEUX Motion Picture, Tamarack Films, 1982 28 min., sd., col.
The film portrays four generations of the Andre Family working together on the shores of the MacKenzie River.

WANDERING SPIRIT SURVIVAL SCHOOL Motion Picture, NFB, 1978 28 min., sd., col.
Besides the academic subjects required by the Ontario Ministry of Education, the curriculum for this school includes Indian legends, tradition, language and crafts.

THE WAY OF THE WILLOW Motion Picture, Magic Lantern, 1981 29 min., sd., col.
A family of Vietnamese boat people who settle in Canada is the subject of this film — the program shows the problems and prejudices they encounter in their new homeland.

EDUCATIONAL TECHNOLOGY, 23:7, July 1983

Perry, P.J. & Hoback, John R., "An essay for budding computerists: the loose connection, or how we wrote the Gettysburg Address"
Stoloff, David L., "Teaching social sciences with television"
Ogunmilade, C.A., "The role of educational technology in teacher education in developing countries"
Rasmussen, R.V., "Training PSI proctors to do formative analysis"

MEDIA AND METHODS, 19:7, March 1983

Powell, John T., "Guidelines for off-air taping of copyrighted works for educational use"
Johnshon, Christopher, "Problem-solving: your key to creative thinking"

MEDIA AND METHODS, 19:8, April 1983

Sokoloff, M., & Muskat, L., "Cable in the classroom"

MEDIA AND METHODS, 19:9, May/June 1983

Wold, Allen L., & Hunter, C. Bruce, "The eclectic educational computer primer"

BOOKS

Anton Powell
Londonwalks
Holt, Rinehardt, and Winston
1981
Reviewed by Denis Hlynka

CJEC does not review travel books. Yet **Londonwalks** by Anton Powell is very different from the run-of-the-mill travel book, and holds special interest to the educational technologist.

Whether Anton Powell realizes it or not, **Londonwalks** is grounded firmly in that most basic of all educational media paradigms, the "Cone of Experience" of Edgar Dale.

First, the theory. Back in the 1940's, Edgar Dale of Ohio State University put together what has since become one of the classic formulations of our field. The "cone of experience" postulated that the value of media lay in its ability to provide realism. Different media provided different degrees of realism. The basic assumption was simple: learning will be more complete as the number of cues within the learning situation increases. Thus, Dale was able to suggest that learning could be conceived as a cone of media experiences ranging from the abstract to the concrete. Most abstract was verbal communication, followed by audiotape, pictures, etc. And at the bottom of the cone, we approach direct purposeful experience itself. Although Dale would hasten to add that his cone does NOT imply that concrete media are always better than abstract media, nevertheless, there is no doubt that the emphasis is that teachers need to keep that abstract-concrete dichotomy firmly in mind.

Anton Powell is not an educational technologist; rather he has a PhD in history. But today, while most educational technologists are thrusting themselves into contemporary high technology, Dr. Powell is re-discovering the mast basic medium of them all . . . direct purposeful experience.

He suggests, in **Londonwalks** that the way to see London, indeed the way to *know* London, is to walk its streets. His book is a solid guide providing four such walks: The London Dickens Knew, Legal and Illegal London, The Old Palace Quarter (St. James), and London's Latin Quarter (Chelsea). In addition to the four walks, the author provides us with some 17 introductory pages of "information and advice."

The introduction sets the stage for the lucid commentary to follow. The text contains

> "four walks, each taking about 2 ½ hours, a pace which allows you to look at places in proper detail — at metal cones by house doors used for putting out torches in the eighteen century, at tiny windows barred against nineteenth century child thieves, at forgotten courtyards, and eccentric business. London has to be discovered on foot."

Most important, the book works. It is a unique combination of polite chat, of erudite history; of popular legend, and of necessary tourist information.

I had the good fortune to meet the author in London on a cold miserable Sunday in November of 1982. I was enjoying the tail-end of a sabbatical and found myself with a few hours to spare. The newspaper informed me of a walking tour of early Roman London to begin from the Embankment tube station within the hour. I grabbed my coat and umbrella, then headed for the subway. There were a dozen others huddled together when I arrived. The wind was chilling, the rain intermittent and cold, but at precisely the pre-announced hour, Dr. Powell straightened up, introduced himself, then proceeded to lead us on a fascinating walk tour of Roman London. It was a highlight of my visit, conducted by a man who loved his city, and who knew its history intimately.

The book reflects the man and his enthusiasm.

My stay in London was exciting and rewarding. As an educational technologist from Canada, I had much to learn. From the British Open University I saw how that institution conducted a vast university program via television and print distribution systems across the entire country. From the CEDAR project at Imperial College, I saw some of the most up-to-date developments in CAI in Britian. From the Council for Educational Technology I saw PRESTEL in action, and glimpsed something of its educational potential.

But author Anton Powell brought me back to the basics. From him, I saw London . . . living, dead, past, present, and even future. No educational technologist could have done it better.

FICTION ABOUT TECHNOLOGY: THE CLASSICS

Capek, Karl (1920)
R.U.R.
Various editions available
An early exploration of the theme of artificial intelligence, this is the book which introduced the word "robot" to modern useage.

Huxley, Aldous (1932)
Brave New World
Various editions available
A scenario describing the potential condition in which the world might find itself, in the year 632 After Ford.

Butler, Samuel (1872)
Erewhon
Various editions available
A utopian satire. Erewhon is the word "nowhere" spelled backwards.

Dickens, Charles (1854)
Hard Times
An in-depth critique of the effects of industrialization on British society. Thomas Grandgrind is the unforgettable teacher who believes that children should learn facts and only facts.

Orwell, George (1949)
1984
Various editions available
Another future scenario. Orwell's two-way television is suspiciously similar to the promise of today's information systems. And 1984, of course, is only 3 months away!

Verne, Jules (1892)
Carpathian Castle
A little known Verne novel which predicts television.

Forster, E.M. (1928)
The Machine Stops
Various editions
Another classic future scenario, this short story uses a sophisticated two way communication system which looks like videotex.

Andersen, Hans Christian (1844)
The Nightingale
Various editions available
This is the classic fairy tale of a mechanical nightingale which replaces a real nightingale.

— D.H.

REVIEWS

FILM

Taking Care of Our Own

Reviewed by Terry Kolmeychuk

Traditionally, Indian children requiring care have been placed in non Indian homes. Eventually, the result is alienation and loss of cultural identity for these children. The Dakota Ojibway Child and Family Services (DOCFS) of Manitoba is the first Indian run child welfare system created to reinforce Indian cultural identity by answering not only the physical needs of children coming into care situations, but their emotional needs as well.

Taking Care of Our Own was made in order to share with other emerging Indian child welfare organizations the experience of the DOCFS during its first highly successful year of operation.

The film seeks to promote an understanding of the traditions and values around which the DOCFS operates. Detailed information is provided through a series of interviews, meetings and candid comments. This technique works well, however the film length of 54 minutes, makes the film often seem repetetive and tedious. The absence of a voice-over narrative to set scenes and tie them together leaves the viewer with a disjointed perspective and no sense of where the film is headed.

The detail provided through these scenes does however lend an insight into the feelings and reactions of the parents and children involved in these dilemmas.

A statement made by a band elder summarizes succintly the film by saying "Indians are going back to solving their own problems." Indians are trying to establish their own social welfare systems and not be dependent of a white welfare system that does not serve the interests of the Indian community. The feeling that there is more to a child welfare system than apprehending and placing children in foster or adoptive homes is brought out time and time again.

The film itself is loaded with information and content, but slight on cinematic quality. It is ideally suited for the audience that wants information on this subject. The film has few redeeming cinematic qualities as most of the images are head-and-shoulders shots. The film conveys little sense of urgency or emotion evolving around these issues, save for one scene as a father relates his personal experience about his 3 sons being shipped to the U.S. for adoption. However, as the film unfolds we come to understand the philosophy, structure and operation of the Dakota Ojibway Child and Family Services.

For further information and previewing please contact:

Bortnick Film Productions Ltd.
670 Osborne Street, South
Winnipeg, Manitoba
R3L 2B9

Canadian History and Media

By J.C. Mahé

In July 1982 four agencies collaborated to offer a new course in the Department of Secondary Education at the University of Alberta.

Ed CI 497 **Canadian History and Media** received a very positive reaction from its participants. The purpose of the present article is to suggest possible answers for the course's success. Moreover the article encourages different educational agencies to re-think and re-question the technological orientation attributed to film in education. Film has to be replaced in a theoretical mode beyond the practical and the strategical.

Will education accept the challenge of looking at film in an innovative way?

Judging from the number of new cinemas that recently opened in Edmonton (31 in 1981-82 alone), one must conclude that film increasingly reaches more and more people. This proliferation of delectation in films influences the educational system at some time or other. However, it is noteworthy that film remains, despite its popularity, isolated from curriculum and pedagogical thinking in education. Consequently, it is common to see educational exercises which encompass mini-courses, conferences, workshops and units on film with a strictly technological and strategical orientation. All these efforts seem to happen devoid of integrated and theoretical foundation, of questioning the nature of film as experience and as medium.

In July 1982 twenty secondary teachers participated in a **Canadian History and Media** credit course offered at the University of Alberta.

Ed CI 497 was co-sponsored by agencies such as the National Film Board/L'Office national du film, Access, CBC and the Department of Secondary Education of the University of Alberta.

Classes were offered in an immersion environment which ran from 9:30 to 22:00 every day for a period of two weeks. The syllabus contained among others the following presentations:

- The History of the Documentary
- New Orientations in Curriculum Thought
- Get the Chicken not the Facts: Film in the Classroom
- Research, Development and Production of **The Champions**
- Overview of Traditional Historical Research Techniques
- The Development of Critical Viewing Skills
- Impact of Media on Political and Economic Issues.

Written course evaluations indicated that Ed CI 497 was a resoundingly success full experience: participants were eager to recommend this innovative course to their colleagues in the teaching profession. Why was such an experience in the trenches of Kiva Room at the University of Alberta evaluated so positively?

The purpose of the present article is to suggest some possible answers. Furthermore, the aim is to uproot greater possibilities for the re-happening of film in education.

Innovation vs Evolution

Institutions in general want to be part of progress, movement towards a higher state, evolution, innovation.

The four agencies that collaborated in offering Ed CI 497 this summer were seeking new ways of reaching 'their people' thereby assuming an innovative role.

To begin with, it is necessary in education to distinguish between two concepts, ***innovation*** and ***evolution.***

Evolution implies innovation (something new) but is characterized by a slow and continuing process, desirous of change. It is often informal and conscious-less. Innovation on the contrary is conscious, voluntary, thought-full (réfléchi). It is a call for change based on a firm foundation: a revolutionary enterprise.

Innovation by its very nature requires time, thinking, research and a willingness to change something. The above definition also allows us to distinguish between true innovations and those that merely arise from a desire to ameliorate the efficacy of a system or its idealized counterpart of practicality. Evolution therefore has it that education adapts film within this practical and efficacious model.

If educational institutions (universities for example) were to redefine educational objectives relating to the innovative teaching of film, the question would become: Is it possible for a University to realize innovative objectives without changing certain structures of its system?

The above question would lead us to a lengthy discussion on different types of innovations. Suffice it to establish that for innovation to become significant we need to look beyond course content, methods, pedagogical limits or educational environment. We have to redefine all of these, however, and we must also look at a global definition of innovation which implies a commitment to change the system, which in turn embraces new and different ways of thinking and reflecting on film.

Innovation, then primarily implies an integration of thinking between disciplines where art and philosophy bring a fresh orientation beyond the practical and the strategical. The structure must explode and re-formulate pedagogy to the what-ness of film. Ed CI 497 gave us an "avant-goût" of this explosion. As one teacher expressed it recently, "I have a feeling we were served something unusual and extra-ordinary in your course."

Theory vs Practice

In an era of E.T. and PAC-MAN (word directed at a specific ideology), where have all the chess players gone?

The classical dichotomy in education finally becomes: theory versus practice, 'Art' versus 'Education'. Different bodies or departments have different ideas, so different that they can't or won't make the effort to understand the differences each of them possesses.

Education in general has not questioned (remettre en question) the technology of film or media. It has blindly asked for more hardware, rationalizing that the more cassettes, films computers, students and teachers would encounter, the greater the learning that would result.

Universities and audio-visual agencies have followed suit in manufacturing audio-visual specialists and consultants who travel the country delivering the latest Sony machine to assigned teachers. Feeling guilty for not disposing of more than a few minutes to explain the wonders of the new anti-glare screen they then call for workshops. These have to be practical, for teachers shouldn't think, be knowledgeable or resourcefull.

Specialists in technology are also masters at handing out statistics, for statistics equals information, information equals knowledge. In some ways technology has become the overpowering ideology. It has virtually stopped all redefining and requestioning of the 'image'.

To counterpoise the above mould of technology which annihilates thinking, reflecting, and creation, we will have to learn to innovate in education. James Macdonald, in his article **How Literal is Curriculum Theory** (1982) views theory and practice in a larger framework. Theory and practice become one. He calls this integration an act of creation. It's then possible to think and talk about 'doing theory' which encompasses our faculties of imagination, intuition, analysis and creation.

The question is now launched, "How can we begin to look at film in an innovative way?"

Vainement ton image arrive à ma rencontre
Et ne m'entre où je suis qui seulement la montre
Toi te tournant vers moi tu ne saurais trouver
Au mur demon regard que ton ombre rêvée

Je suis ce malheureux comparable aux miroirs
Qui peuvent réfléchir mais ne peuvent pas voir
Comme eux mon oeil est vide et comme eux habité
de l'absence de toi qui fait sa cécité
("Contre-chant" du Fou d'Elsa, d'Aragon, cited in Lacan, 1973, 29)

With the present technical orientation inherent to film and media usage we presume in education (like in Aragon's idiot), that teachers and students are only mirrors. We need to avoid the continuous perpetuation of film and media into the 'modulus' of E.T. and PAC-MAN.

Our eyes have to see again.

The experience of Ed CI 497 at the University of Alberta was partly evolution but mostly a step towards innovation. It must continue. . .

Jean-Claude Mahé, B. Ed, is a distribution representative for National Film Board in Edmonton, and has had over 10 years experience in the field of teaching and media.

Selecting Films for ESL

By Inger Smith

While a film can certainly enhance an English as a Second Language (ESL) lesson, using it effectively isn't as simple as one might think. Getting a projector, screen and film to the same room at the same time is only a small part of the process a teacher must complete in order to make the effort worthwile at all. The most complex, time-consuming part of using film is selecting an appropriate film.

Consider film literacy. For most Canadians, seasoned film and TV viewers, the complex language of the cinema poses few problems. We easily untangle the time distortions of the medium. We recognize flashbacks and dream sequences for what they are. Strange shooting angles, unusual lighting, distortions of scale, montage, collage, animation techniques don't confuse us — we grew up with them as we did with our mother tongue. The analogies and cultural symbols of western cinematography speak a language which we absorb automatically, to such a degree that we want our film fast, with so many jolts per minute, and if the screen doesn't deliver we turn off.

However, ESL students come from varied cultures and many haven't logged the number of viewing hours we have. For some of them, the language of film may present as many difficulties as does the English language. The fact is that people do have to learn how to put the pictures together to create a story, how to "read" a film, as Robert Flaherty said he had to teach native Samoans to do. Flaherty's experiences while making *Nanook of the North* tell an ESL teacher much. While making the film, he screened part of it for his Eskimo subjects who had never seen film before. They called to the figures on the screen, ran to them and tried to touch them. When a frame contained only part of an arm, they assumed the arm itself had been cut off.

Depth perception also is learned. Studies in which Zambian illiterates were asked to interpret line drawings (Hudson, 1962, and Holmes, 1964) revealed that the interpretation of perspective cues isn't automatic — just because something is smaller doesn't mean everyone will think it's further away. Pieter Bruegel's paintings show a lack of awareness of additional cues — color and tonal contrasts which diminish in intensity as they recede from the viewer's eye.

This is not to suggest that all ESL students are film illiterates, but rather that an ESL instructor must not assume a consistent level of film literacy in a class, and must be constantly sensitive to situations where explanations of cinematic technique are needed. Such sensitivity can be developed by watching a variety of foreign films and studying the differences in pacing, symbolism and technique. Or considering one's own difficulty with other visual languages — how many of us relate to abstract painting, or to the symbolism in the work of Norval Morrisseau, the Ojibway painter?

No two people experience a film in the same way; nowhere is this more true than in an ESL class. Perception is filtered in ways which we can often not predict. We can guess at some of the filters — age, sex, intelligence, formal education level; the degree to which the viewer can identify with the people in the film depending on their skin color, body language, dress and role in society. Certainly the viewer's experience as well as present emotional state affect what is perceived.

In our department we've used the NFB film, *Steel Blues,* successfully for years. It's a realistic portrayal of the problems of a Chilean refugee in Canada. It contains a very short scene from a Chilean prison. Recently I showed it to a class containing a large proportion of refugees from Eastern Europe, many of whom were outraged — why was this "Communist propaganda" allowed in the capitalist school system? They petitioned the head of the department to have it removed from the school. Tremendous material for class discussion, certainly, but no teacher would want to arouse such emotions in students who don't have the language capabilities to discuss the issues. Instead of inspiring them to learn English, this film turned these students off.

Violence in film can have a similar effect by causing students who have recently come from war-torn areas to relive traumas. A case in point is *Neighbors,* the well-known NFB short. It's a superb teaching tool in many ways, but the violent scenes with which it tells its story sometimes contradict the message of the film.

Humor also demands careful selection because it's so easily outdated and highly cultural. Certainly the NFB films made especially for ESL, *The Heatwave Lasted Four Days* and *Star* are oblivious to this fact.

It's also important to remember that some students may simply not be accustomed to sitting quietly and paying attention to a film. Some of the first teachers to work in remote Eskimo communities reported that their students often got headaches from the rapid eye movement and nightmares from the violence. A student may not like film at all, but be too polite to say so. Huge amounts of effort and enthusiasm on the teacher's part might develop some appreciation for the art, but will this further the cause of teaching ESL?

Film selection takes a great deal of sensitive previewing, as well as a considerable knowledge about the intended audience. In addition, it requires having a clearly-defined teaching objective and a plan for meeting these objectives. Some films can meet many objectives — stimulate discussion and research, give cultural information; act as starting points for practicing grammatical structures, notions, idioms, vocabulary. Some objectives may require elementary film dialogue, others complex. Yet others may require that there be no dialogue at all — perhaps the objective is to allow students to create suitable dialogue.

Of course, just watching a film isn't going to meet a lot of objectives. After all, for many people film is an escape, a passive entertainment, not a teaching tool. Students may wonder how it relates to learning English. Indeed, it may not, unless ways have been provided for them to interact meaningfully with the medium. Unless their focus is directed and they know precisely why they are watching a film and what they are expected to gain from the experience, that film's impact will be minimal.

For this reason, I suggest planning film use in three stages: preparation, viewing and follow-up. (See chart on next page for details.) When this general framework is used, specific ideas follow — types of written or oral exercises, activities, role plays, discussions... I am always excited by the endless creativity a discussion of film use stimulates in workshops I do with ESL teachers. No other teaching aid does this to such a degree. Therefore, in spite of the drawbacks, I can't help feeling it's worth the effort.

The more I use film, the more aware I become of the complexities involved (not to mention the hours of labor). But the challenge is an exciting one. For those who wish to accept it, I offer two aids. One is the chart on the next page with which teachers may wish to start a department film file to share viewing experiences and save viewing time. Secondly, the NFB teaching handbook, *Teaching ESL with the Aid of Selected Films,* discusses 60 NFB films (20 in detail with exercises) which can be used in the adult classroom.

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Title: _____ Order Number _____

Length: _____ Style: ____ Drama ____ B&W ____ Animation
____ Documentary ____ Color ____ Stills
Other: _____

Language Level:
____ **Without** words
____ **A few** words which **need** not be understood to understand **film**
____ **Low** level vocabulary
____ Intermediate vocabulary
____ Advanced, complex vocabulary which must be understood to understand film
____ Other _____

Problems to Anticipate:
____ Dated content
____ Poor sound track / Poor quality print
____ **Dream** sequences, flashbacks, etc. needs explanation
____ Too violent or otherwise offensive
____ Too long
____ Doesn't meet teaching objectives
____ Other _____

What teaching objectives can I meet by using this film? _____

How can I use this film?

I. **PREPARATION**

____ Teach grammar, idioms, vocabulary, gambits, conversational fillers which will be reviewed in the film, eg. _____
____ Study, read, dramatize parts of dialogue or narration
____ Discuss/research themes/ opinions which will be seen in film
____ Give out specific exercises about film which will direct students to look for specific answers
____ Other _____

II. **VIEWING EXERCISES**

____ Take notes
____ Complete a partially written outline
____ List specific types of items seen in film, ie. animals, verbs, etc.
____ Turn off sound, create your own
____ Turn off sound, hold frame, ask questions, discuss, repeat words
____ Stop film, let students predict outcome
____ Show film to only half the class who will explain it to others; then show it to others
____ Complete blanks in written narration
____ Look for answers to questions assigned in preparation
____ Other _____

III. **FOLLOW-UP**

____ Make questions for other students about film
____ Write summaries, outlines, paragraphs, compositions
____ List/classify things seen in film
____ Re-tell story (changing person, tense. . .)
____ "Eye-witness". Describe a scene from memory. Write on board. Check as a group.
____ Do research/find newspaper articles about subject
____ Discuss title, think of other titles
____ Discuss, debate different or opposing views in/about film
____ Create/act out skits
____ Other exercises: matching, filling-in blanks, sequencing, true/false, sentence completion, giving opinions, organizing ideas, interpreting charts/additional information
____ Other _____

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