An Ethical Examination of Public Policy Intervention in Canada: A Case study of "ALEX"

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Abstract

An Ethical Examination of Public Policy Intervention in Canada: A Case Study of "ALEX"

This thesis asserts that the intervening practice of the Canadian Radio-television and Telecommunications Commission (CRTC) displays a lack of ethical conduct. A case study of Bell Canada's ALEX (an interactive videotex device) submission to the CRTC reveals the Commission's frame, or perspective, in judging how the public is to be offered an innovative technology. The CRTC's frame, called Technology Assessment, is defined by the ability of corporate interests to influence decisions. A historical glimpse into the CRTC shows that the Commission was repeatedly responsive to the needs of capital. The CRTC's decision supporting Bell's application limited the accessibility of ALEX on a mass basis because of high charges. Consequently, the Canadian public was denied access to an important knowledge-providing device. If the CRTC had adopted a different frame, one enriched with an enlightened set of values, its decision would have more adequately reflected the needs of all Canadians. ALEX would have been made available to all telephone subscribers, regardless of income.

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CHAPTER ONE

INTRODUCTION

A problem challenging modern capitalism concerns the "control dilemma," a predicament arising from the need to guide and plan the socio-economic formation. (Thompson, G.B. [quoting Harman], 1979, p.15). The problem concerns limiting the harmful, perhaps malevolent, aspects of a free market system with rules and regulations for civilized behaviour. The need to plan and guide, to frame and shape institutional conduct, arises from the view that contemporary problems-- from major industrial developments such as the Great Whale to debilitating privacy intrusions-- can be traced, in part, to technological innovations.

Recognizing the need to mitigate "change" the state institutes mechanisms to modify technological impact in the realm of economic activity. As a result, the notion of Technology Assessment was conceived so that a power representing state concerns could alter any (perceived) deleterious technological impact. Translated into practice, these mediating forces are structured as regulatory bodies and instituted, ostensibly, to uphold the public good.

In democracies, as a legal requirement, these regulatory bodies convene public hearings to formulate policy and directives on issues brought before them. They might range, for example, from a hearing to assess the environmental impact of a new electrical

plant to a public monopoly introducing a new informational device on the market that may well impact on charges to the consumer. Sometimes these commissions are designated by government as the state representative empowered to affect policy or they may be committees or bodies that merely act in advisory capacities, able to make recommendations but having no power of enforcement. If the new technology is considered to have certain negative implications on the social formation, the regulatory agency may well decide to modify how the technology is implemented. The objective is to mitigate undesirable effects. The intervention, in effect, frames what will become available for the mass public as policy.

Public policy can be described as government's broad framework of ideas and values within which decisions or no decisions are taken regarding some issue or problem. Policy, therefore, is the instrument to mitigate the consequences of a technological impact and to determine the way it should be introduced into a society. This thesis illustrates public policy practices of the Canadian federal state by means of a case study examining Bell Canada's submission to the Canadian Radio-television and Telecommunications Commission (CRTC) to introduce a public-based interactive videotex system called ALEX.

Bell presented its offering to the CRTC in a process that required scrutinizing by interested players at public hearings. The CRTC is charged by law with examining the technology and then disarming the impact that technology may have on the public. The

CRTC's decision becomes public policy and can be considered a frame or perspective. The technology will be offered to the public within the parameters designated by the regulatory agency. Other countries, or their regulatory agencies, may well devise a different frame or approach, resulting in different consequences for their societies.

Interactive videotex is a unique technology that falls outside the conventional paradigm of consumptive behaviour. Interactive videotex has the inherent potential to provide unlimited informational choices that can be constantly accessed and redesigned according to user needs. In Canada, the countless possibilities for shared knowledge have been minimized because the CRTC chose a frame which limits the accessibility of videotex to the broad public. The frame circumscribed by the CRTC is one which speaks to the needs of policymakers who, in turn, meet the needs of the corporate state. In Canada, the informational activities of videotex are predicated on the motive of profit... privileging the needs of the corporate state and disadvantaging the general public.

Instead of making interactive videotex technology available to all, with knowledge services available at little cost, the CRTC chose to limit its accessibility to affluent consumers by encouraging profit-driven services. As a consequence of the CRTC's intervening frame, information via interactive videotex remains mainly in the private realm. As a consequence of their frame, the CRTC has failed to release the full social and economic potential of this innovative information technology to enhance the human

condition. As well, the CRTC has failed to advocate a frame in which the evolution of a technological infrastructure with easy access to knowledge would remain paramount. Their continuing acceptance of its limiting frame and the continuing domination of corporate state interests have combined to prevent the full release of informational technology in this country.

If Bell Canada were operating as a public monopoly acting in the interest of the public, the CRTC would have compelled the monopoly to distribute the technology to all telephone subscribers (as is the case in France) without limiting its accessibility according to the ability to pay. The Commission would have compelled the public monopoly to employ its computer system and distribution network in the interests of all communities instead of restricting its technology for corporate gain.

Lorimer and Wilson posit:

> Ultimately the models should reflect the interests of the people to be served, so there is likely a need for many of them. Identifying models, proposing working systems, and positioning requirements in the long list of national policies and programs-- that should be the agenda for telematics development in Canada. (1988, p. 261).

RATIONALE

The motive to examine the subject of public policy and intervention is succinctly expressed by Jennifer Daryl Slack in Communications Technologies and Society. "We are living in a time," she asserts, "when scrutinizing our theoretical understanding of the role of communication technologies in society ought to be paramount, for the ways we think about technologies are intimately related to what we do about them." (1984, preface xv). Consequently, intervention that takes into account an understanding of the nature of technology and its impact on a society would establish public policy more attuned to the needs of all.

This paper asserts that a different interventionist strategy relating to the CRTC's ruling on Bell Canada's ALEX submission would have substantially altered its decision. The CRTC ruling illustrates how the complex structure in dominance operates in awarding technological ownership, a de facto monopoly control. The CRTC granted Bell an exclusive right to own interactive videotex in Canada based on free market notions. The consequences are that access to knowledge is limited to those who can afford the high cost of terminals and services and that interactive videotex becomes a domain of business.

State Intervention and the CRTC

In this study, the term "intervention" denotes the objective of mitigating or enhancing the impact of a communications technology

on the social fabric-- "intervention" being different phrase to distinguish public policy. The Canadian government exercises its vision of intervention through the Canadian Radio-Television and Telecommunications Commission (CRTC). The CRTC is considered the ultimate intervener in the realm of federal communications and enjoys a high profile presence in telecommunications (telephone) and broadcasting (radio, television). The agency exerts considerable power since it controls rates, return on capital, appropriateness of capital expenditure programs, market entry and mergers, and licence revocations. (Stanbury, 1986 p. 31).

CRTC researcher J. C. Clifford defined the nature of the CRTC, and those of corporate interests when he wrote:

> Private broadcasters' interests are mainly private and economic-- selling an audience to advertisers at the highest rates-- while the Commission's interests are mainly public and cultural, in terms expressed in the Broadcasting Act. (1983, p. 515).

CRTC practices, in theory, are governed by an arm's length domination of Parliament. However, any government of the day can set aside CRTC rulings by an order of Cabinet (composed of the prime minister and a number of high-ranking government leaders). In July 1982, for example, a Cabinet order to the CRTC prohibited firms with interests in newspapers from renewing broadcasting or cable licences in the same market. This ruling was reversed by the Conservative Cabinet in a 1985 directive to the CRTC. (Brooks,1989,

p. 302). This illustrates the roller-coaster impact the government of the day can impose on the "independent" decision making of the CRTC.

Fundamentally, the CRTC performs the vital function of communications assessment, reviewing the implementation of new technologies or any changes arising from the ownership of those technologies. Consequently, it plays a vigorous role in the development of new human practises, i.e., a public watching a new medium called television or accessing information through a new medium called interactive videotex that inexorably, though subtly, emerge as a result of its decisions.

The CRTC's Historical Imperatives

An investigation into the CRTC begins, logically, at its inception. As the progeny of decades of preceding policy statements, the contemporary CRTC is endowed with identifiable birthright characteristics; its historical antecedents provide a basis for understanding its current regulatory behaviour. As a creation of government, the CRTC speaks to the needs of policymakers. It is tied to the decision-making processes of government-- and, by extension, business-- which directly influences government policy. The Commission operates from a frame that is characterized by its relations to capital. The Commission's history reveals the ties that bind.

The CRTC has emerged from a long tradition of broadcasting rhetoric, beginning in 1928 when the Royal Commission on Radio

Broadcasting was appointed under the chairmanship of Sir John Aird. The Commission's mandate was to determine how the "public good" or "public will" would be best served. The Commission was to determine how broadcasting would be used most effectively in the interests of Canadians and in the national interest of Canada. But the CRTC's historic role to protect the interests of the corporate state was clear from the very beginning.

R. E. Babe, a communications authority, states:

> The first phase, lasting from 1920 to 1932, saw the full dominance of commercial forces. The function of broadcasting was clear: to make money for the industry through the importation of popular American programs. (1979 p. 11).

The Aird Commission's 1932 Canadian Radio Broadcasting Act entrenched this idea because the Act addressed two distinct discourses on Canadian communications. One argued for limited state involvement in the business concerns of broadcasting, and the other privileged cultural sovereignty. (Hargaddon,1990 p. 5). In view of the proximity of the United States, the tension to secure a distinct Canadian identity was keenly perceived in communications issues. The dissatisfaction culminated in the adoption of the Canadian Broadcasting Act of 1936, which created the Canadian Broadcasting Corporation, Canada's national radio and television service.

The enormous growth and profitability of television in the early 50s impelled private enterprise to assert its presence in the field. The 1957 Report of the Fowler Royal Commission acknowledged for the first time that private interests were essential to broadcasting, urging that they be "encouraged" and "accepted." (Babe,1979, p.17). Protection of private broadcasting interests by the BBG (the Board of Broadcast Governors-- the regulatory body conceived by the Royal Commission) was carried out chiefly through its regulatory (i.e., licensing) practices.

The next significant development occurred on September 1, 1965, when the second Fowler Committee (composed entirely of ruling liberal government officials) submitted a report which established the Canadian Radio-Television Commission. The Broadcasting Act of 1968 created the contemporary CRTC. It was designed to have broad regulatory supervision over the entire Canadian communications system, including cable television (previously governed by the Ministry of Transport). (CRTC Annual Report (1988-89), p.7). This new agency's most important power was that of licensing: "the right to utilize a scarce public resource in the pursuit of economic gain." (Babe, 1979, p. 33).

Section 3 of this new Broadcasting Act was particularly telling in the way social objectives were considered paramount. Section 3(b) stated 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."

Most importantly, however, Section 3(g) iii, iv specifically underscores the political objectives..."to contribute to the development of national unity and provide for a continuing expression of Canadian identity." Section 3 (h) alludes to the political posture between the rights of the public and private corporate concerns. "Where any conflict arises between the objectives of the national broadcasting service and the interests of the private element of the Canadian broadcasting system, it shall be resolved in the public interest but paramount consideration shall be given to the objectives of the national broadcasting review." These pronouncements entrenched Canadian communication ideals in the CRTC, but they would be abandoned in case after case when a more pragmatic approach was required.

The next development occurred when the CRTC was assigned responsibility for telecommunications regulation on April 1, 1976. (CRTC Annual Report (1976-77). p. 9). The Canadian Radio-television and Telecommunications Commission Act transferred authority over telecommunications from the Canadian Transport Commission to the CRTC. Aspects of the antiquated Railway Act, such as the the levy of "just and reasonable" tolls, unfair advantages, and anti-discrimination laws, were integrated into the new Act. This change gave the CRTC substantial authority in the communications carrier field, enabling the Commission to enhance its directive force into this emerging regulatory realm.

Telecommunications

The 1989 CRTC Annual Report affirmed its new power to frame the way the federal state views telecommunications technology. Under the rubric of "telecommunication goals," the CRTC explained the nature of its mandate to:

> 1. ensure the provision of efficient, justly and reasonably priced telecommunications services;
>
> 2. ensure universal accessibility to basic telephone services;
>
> 3. ensure that telecommunication carriers do not unfairly take advantage of their monopoly or dominant market position in dealings with subscribers, other carriers or competitors;
>
> 4. ensure that telecommunications companies are financially viable and able to provide basic services of adequate quality to meet subscriber needs; and
>
> 5. determine where regulation could be eliminated, reduced or made more flexible and, in particular, where regulation could be complemented by reliance on market forces. (CRTC Annual Report,1989, p. 9).

In its position as a regulatory body, the CRTC was mandated to interpret the broad public interest in the telecommunications sector. The federal state endowed the CRTC with a mandate to frame the way the federal state views communications technology.

These objectives included serving Canadians in the two official languages, overseeing the broad range of services that would enhance Canadian program content and, in the process, enhancing cultural sovereignty. It also established an inherent allegiance to market forces to circumscribe communications exigencies. This fact explains why the CRTC authorized Bell Canada to offer interactive technology to the Canadian public in the manner it did.

Consequently, when a control dilemma would arise from the interaction of market forces and the public interest, the prerogatives of capital would remain paramount. The CRTC lacks independence from political pressures because the requirements of the corporate state are inbred into its very nature, regardless of the government in power. And should a CRTC regulatory decision conflict with the interests of capital, the Federal state need only overturn its decision. Overriding a CRTC decision does not even require a public hearing or public assessment.

Description of Subject

As stated above, this thesis asserts that knowledge-providing services offered through interactive videotex have been reduced to the level of a commodity in Canada. This problematic arises from policy derived from forces operating in Canadian capitalism. Consequently, access to ALEX has been designed for citizens with above average income. Those with limited incomes are blocked from this important source of informational enrichment.

Having outlined the significance of this study and after having examined the relevant literature the remainder of this thesis will focus on interactive videotex by examining its historical origins, its current status as Bell Canada's ALEX, and why the CRTC permitted a public monopoly to capitalize on knowledge-providing technology.

Chapter Two

This chapter examines the historical imperatives of interactive videotex, culminating in Bell Canada's ALEX project. The origins of interactive videotex, by means of financial intervention from governments, is explored to show how vital principles regarding free access to information evolved differently in North America than in Europe. A particular emphasis will be placed on the development of France's Minitel project where the technology was distributed without charge to citizens. This approach contrasts with the rise of ALEX in Canada where government intervention through the CRTC permitted Bell Canada to operate ALEX as a profit generating utility. Submissions to the CRTC from a variety of respondents is reviewed, Bell Canada's response is outlined, and the CRTC's verdict is scrutinized.

Chapter Three

The CRTC's ruling to allow Bell Canada to capture a virtual monopoly on interactive videotex services in Canada is not isolated. This chapter asserts that the CRTC has historically acted in the

interests of the corporate state and business. The CRTC has failed to safeguard public property rights in the area of communications media, despite the fact that the notion of public ownership of the "air waves" is imbedded in the CRTC mandate. In addition, the CRTC has failed to support a Canadian cultural identity. The CRTC has abandoned its promises to support Canadian production and instead has enabled Canadian communications firms to import inexpensive US programming. As well, this chapter examines the CRTC's sanctioning of major companies sustaining or seeking monopoly situations. In particular, "myths" advanced by Bell Canada, and upheld by the CRTC, to substantiate its dominant monopoly position are audited.

Chapter 4

This final section provides a theoretical underpinning to the policy practises exhibited by the CRTC. This chapter describes how the CRTC demonstrates the characteristics defined by the notion of Technology Assessment (TA): a perspective from which to develop communications policy. It is shown that the TA approach is linked to the decision-making process of the corporate state. In contrast, Alternative Technology is a view espoused by "counterculture" groups who desire to control the negative impact of technology for communities inherently lacking political power. This section asserts that a more democratic approach to communications technology in Canada is possible if policymakers mitigate their perspective to include aspects of Alternative Technology.

CHAPTER TWO

A BRIEF HISTORY OF VIDEOTEX

Videotex is an interactive technology which enables both the sender (usually a computer delivering information that has transactional capacity) and the receiver to communicate in tandem. In other words, the receiver could choose the information he or she desired from a menu. By means of such an integrated system, an individual can have access to a wide variety of specialized information services. The information is rapid, comparatively inexpensive, and portable. In the late 1970s videotex was considered an innovative communications system blending a unique combination of hardware and software. Interactive videotex merged computers, databases communication networks, television sets, terminal devices, and software, including graphic design and text, gateway mechanisms, retrieval systems, and accounting procedures.

By contrast, the first generation of videotex, called teletext, used television monitors. Teletext was merely one way information, essentially acting like a video book. It was a unidirectional information exchange, since the receiver had no choice in the information conveyed to the screen. This explains why the early marketers of teletext (one-way information) were cable operations. Later, the telephone (using a modem) was integrated with the videoscreen and computer. As an extension of the telephone, this new medium acquired a singular character, securing it as an

innovative and practical medium for conveying two-way information. Bell Canada's ALEX and France's Minitel are two such devices.

Telematics is the contemporary designate to describe the convergence of computer and telecommunication technologies. This broad term is used to distinguish the relationship between computer and communications technology, and refers to the software and hardware which incorporate both technologies.

Since telematics is an international exchange medium of on-going information, theorists contend that it can have a profound social impact, shrinking the world in the process. Videotex, one author states, "has the potential to change how people use information and indirectly how they think." (Tydeman et al, 1982, p. 1). Other writers assert that videotex will lead to a different kind of collective consciousness. (Lorimer and Wilson, 1988, p. 251).

Montreal Gazette columnist Cairn MacGregor summed up the importance of interactive vidoetex to the general public when he wrote:

> One of the most important things that ALEX (interactive videotex device) will bring is the de-mystifying of computer technology. There are still many people, bless them, for whom "computer" is just a "C" word.
>
> I appreciate these people, and their brave, last-ditch effort against the invasion of technology. I fear for them

> though-- if they don't resign themselves to it and assimilate into our techno-world, they will be left in a stone-age void.
>
> Many of these people, never really considering that they were using the "C" device, will gaily use their Alex terminals to call up other "C" devices.
>
> Alex removes the computer from the realm of the techno-head and puts it under the fingers of Mr. Everyman. A nice friendly little box that you can rent from Bell, it's really just an extension of your telephone. (Montreal Gazette, 10 Dec. 1988, p. K-11)

A more concrete definition of videotex, however, is provided by Tyler, who defines videotex as "Systems for the widespread dissemination of textual and graphic information by wholly electronic means, for display on low-cost terminals (often suitably equipped television receivers), under the selective control of the recipient, and using control procedures easily understood by untrained users." (Tydeman et. al, 1982, p. 2).

One significant feature of the early system was its hardware configuration. The system joined a decoder (computer/modem) to the television set, engendering a hybrid medium of keyboard/video monitor/telephone. Originally, a discrete decoder translated the messages for television. Gradually the two separate devices were replaced by one apparatus. The constantly changing information flowed through the decoder and then relayed it to the screen.

Information was provided by either firms already in the information generating business or by government. The three classes of videotex services included general-interest, business, and government sponsored information. Specialized trials in Canadian the early 1980s focused on specific professional markets, providing a comprehensive catalogue of subjects. One Infomart (Southam Inc.) project called Grassroots, for example, was made available to the agriculture community in Western Canada. The system began its operation in 1981 and served some 2000 agribusiness subscribers in other provinces and Ontario by 1988.

Such important information as news, weather, stock prices, and supply and services was developed. Other programming ranged from simple print news reports on screen (teletext) to at-home banking, shopping, energy and security management. Different trials involving extensions of a corporation's business activities, such as business directories, reference libraries, stock market information and opinion polling took place as well.

Historical Background

Videotex in Canada, the ALEX system, and in France, the Minitel system, provide illuminating case studies regarding the approaches, or frames, adopted by each country. These nations chose different paths in the way they ultimately offered the technology to their publics. The intervention expressed by the governments of these countries-- as regulatory agencies-- arose from fundamental

political orientations. The subsequent policy adopted by each country on interactive videotex provided the goals for their respective intervention strategies.

Different countries had different approaches. In Europe, research was, during the initial videotex developmental stages, financed by the national telephone systems (Britain and France). In Canada ,the federal government, through the Department of Communication (DOC) and a number of provinces, initiated projects with private industry. An historical examination illuminates the approach and subsequent application of videotex technology in each country. France and Canada provide the best examples regarding the adoption of comparative frames for the dissemination of electronic information.

Canada

An examination of the genesis of videotex technology in Canada reveals those forces which ultimately gave birth to Bell Canada's ALEX project. The CRTC's support of Bell Canada has, as its roots, Federal government support of Telidon-- the early videotex experiment in Canada.

Videotex was initially researched at the Department of Communications Research Centre near Ottawa in the mid-1970s. From a strictly technological perspective, Telidon differed from the European system in its graphic capacity, which enabled it to make more distinctive and sharply resoluted images. The alpha-geometric Telidon system consists of a composite mosaic of small rectangles,

a picture which is made up of a number of linear shapes. (Godfrey and Chang, 1981, p.109). The European developments used an alpha-mosaic pattern where the images appeared step-like in construction. The systems were innovative ways of digitally encoding and decoding graphic information through electronic transmissions. (Babe, 1990, p. 229).

In 1978 the Department of Communications (DOC) officially heralded Telidon as a major Canadian breakthrough... the most sophisticated videotex system in the world. In part, the motive to develop the technology was inspired as a means to replicate a Canadian version of the American Silicon Valley (a manufacturing area in California of high-tech industries) to Silicon Valley North (an area north of Ottawa). Telidon was proclaimed the technology to catapult the Canadian manufacturing to the forefront of North American hardware production.

Government economic intervention in the form of grants, tax advantages, and loans was provided to initiate a demand push. The notion was that government economic policy would be pivotal in creating a demand for the new product. (By contrast, a "demand pull" scenario asserts that market forces act exclusively to create a demand.) It was the "chicken and the egg" syndrome. Potential providers of information were reluctant to dispense investment dollars when so few consumers (terminals) were available. Product manufacturers were reluctant to provide the huge investment required to mass produce videotex equipment. The government was compelled to dislodge the bottleneck or forfeit Canada's future in

videotex technology to the Europeans.

In 1979 a $9 million program was announced to set up field trials. By 1981 the government poured in an additional $27.5 million "to ensure the existence of a commercially viable videotex industry in Canada with a capability to compete in export markets." (Babe, 1990, p. 228). In 1982-3 an additional $23 million was invested in Telidon's future. Although 40,000 terminals were predicted to be installed in homes, fewer than 5000 were in operation at that time. (Babe, 1990, p. 230).

A number of young, innovative companies such as Norpak Ltd., Microtel Pacific Research, and Nabu Manufacturing Ltd. emerged to dominate hardware manufacturing. The motive to export such products on a mass basis to American consumers of Telidon information services appealed to these firms. Between 1979 and 1982, an estimated $130 million was spent by private sources, encouraged by the DOC. (Babe, 1990, p. 230.)

Government investments for the field trials were destined for large corporations where videotex was an extension of their operations. Despite $100 million in government investments by 1984-85, there were fewer than 1,000 machines in place.

> In the absence of a framework policy, nearly a quarter of this money ($40 million) was used to "stimulate" industrial investment in videotex/teletext projects; the money was provided to such companies as Infomart, The London Free Press's Infopress, and Faxctel's Marketfax in the form of

> grants-in-aid, subsidies for Telidon terminal acquisition. (Lorimer and Wilson, 1988, p. 258)

One example of an experimental information-providing service was Grassroots Information Services of Winnipeg, instituted in 1981. Grassroots provided a full colour and graphics NAPLPS information service and was one of the first commercially available videotex information services in the world. Designed mainly for agribusiness customers, the service provides stock market and futures quotes and options. Its financial news wires provide information required to understand the events affecting stock and futures markets.

By the mid 1980s, however, little was heard of Telidon. Nevertheless, Bell Canada Enterprises (BCE) was not unaware of the success enjoyed by Minitel, Telidon's counterpart in France. Bell also reviewed developments in the British hardware program. Other events were also unfolding. In 1987, at the Summit of Francophone Nations in Montreal, Centre d'Excellence en Télécommunications Intégrées (CETI), a Quebec-based company, pledged to import Minitel equipment and to develop the Canadian market. The firm, formed by venture capital, was privately held by CETI President Gerard Sabourin and majority partner Groupe Soficorp Inc. of Montreal. The fact that Bell was to have a direct competitor became one of the driving forces behind the company's urgent development of ALEX.

In fact, by the time Bell entered the market, Minitel had already established a toehold in the Quebec market. By February

1988, CETI had signed up a number of large information providers including the Royal Bank, the Mouvement Desjardins (Quebec's largest banking system), the Montreal Stock Exchange, Le Journal de Québec and Le Journal de Montréal, Disnat (real estate), Logidisque (software), Scénerio (education), and the Canada News Wire.

French-language Quebec publications heralded Minitel because it was designed to meet the needs of Quebecers (based on France's experience) and because CETI was prepared to invest in manufacturing plants. (Québec Science, February 1988, p. 28). According to the CETI rate schedule of May 1, 1988, the company was planning to provide interactive services to subscribers for $25 per month with no charge for the terminal and one hour of free access time. There was a $50 non-refundable connection fee and, after the initial hour, a $15 per hour service fee. Another option was an outright $600 hardware purchase fee. If an individual or firm wished to lease the equipment, there was a $30 a month charge over 36 months.

On April 21,1988, a press release issued by CETI announced the operation of the first Canadian telematics communication service. A newspaper article dated April 22 optimistically reported that CETI would expand its subscriber base in Canada at a rate of 5,000 terminals per month and head into the Ontario market by late 1988. (Montreal Gazette, April 22, 1988, p. C1)

So fierce was the impending business war that Maclean's Magazine reported:

> Next month CETI of Montreal, founded by a group of aggressive Quebec executives in 1986, plans to turn that city's telephone system into a gigantic computer grid, which will allow its clients to communicate directly with one another and with hundreds of computer systems. Just before CETI's system is scheduled to go into operation, Bell Canada officials say that it will unveil the technology that it hopes will stop CETI's advance. (March 14, 1988, p. 44).

Bell Canada committed itself on April 13, 1988, when the CRTC received an application for a marketing trial of "a new enhanced videotex service" called ALEX. At a press conference on May 26, 1988, Bell Canada announced that its home-grown product ALEX-- based on Telidon technology-- would enter the market by December, 1988. On the same day, numerous information providers-- from Consumers Distributing to the Canadian Guidance and Counselling Foundation-- announced their participation in the ALEX system.

Bell's product was different in two important ways. The company adopted the alpha geometric graphic principles for superior imaging, as well as a uniquely North American protocol (standards) system. Bell's endorsement of the NAPLPS standard adroitly positioned itself to capture the North American potential

in selling interactive videotex equipment.

By gaining a North American stronghold and by eliminating CETI, Bell could use Quebec and Ontario as the exemplar for a wired North America. Its monopoly on telephone telecommunications equipment and services in Quebec and Ontario would serve to fortify its domination of the marketplace. Bell chose Montreal to inaugurate the system... competing head-on with CETI. For CETI, it was a more contemporary version of David and Goliath, but where Goliath emerges the victor and CETI perishes. The advantages afforded Bell by its monopoly position and the CRTC's virtually total support effectively crippled the competition-- and its foreign-developed technology.

By the fall of 1988, Bell Canada began publishing print and busboard ads in Montreal heralding the arrival of ALEX, the firm's new interactive videotex service. A newspaper feature on November 25, 1988, in the Montreal Gazette revealed that Bell earmarked some $45 million toward the ALEX project after already having spent more than $30 million in developmental costs. (Montreal Gazette, Nov. 25,1988, p. F-3) Consumers were "teased" for months before actually receiving any machines. Bell launched a three-pronged program which was designed to make the public knowledgeable about ALEX. The first, an "awareness" campaign, introduced consumers to the basics of the service through press communications and bus, metro, and outdoor billboards.

This was followed by print ads in Montreal dailies, detailing the ALEX service. By June 1989, Bell undertook a direct mail "recruitment" campaign, using coupons enclosed with telephone invoices. The final fall and winter "stimulation" stage invited customers to sign on the dotted line. According to information provided by Bell Canada Advertising Director Marcel Saint-Germain in an interview in 1988, Bell's campaign in Montreal was made possible by an advertising program budgeted at between $600,000 - $700,000. In April 1990, ALEX was launched in Toronto. By the end of May 1990, Bell signed up 20,500 subscribers, with the numbers rising to 31,000 seven months later. By May 1991, the numbers began to slip and ALEX actually lost subscribers. (Montreal Gazette, 4 July 1991, p. E3).

ALEX started in January, 1989 with 66 services, gained momentum by May, 1989 with 104 information providers, and stabilized at approximately 650 services in 1990. By 1990 the depth and variety of providers increased enormously, although the basic themes remained constant. Services included such interests as travel clubs, professional associations, games, banks, stock and financial information, chat lines and astrology, software companies, home shopping, news, interest groups (music, consumer, loto), and government and public relations information from large corporations (Provigo).

By 1990 the lack of a critical mass became so critical and the costs of providing services so expensive that large information

providers began dropping out. An important case in point regarding the failure of Canadian videotex due to such a limited mass of subscribers was Southam Inc.'s Gazetel, Southam's moniker in the ALEX directory. Gazetel's information consisted of up-to-date stock market information and continuously updated personalized financial information. The service also provided up-to-the-minute newspaper information, movie reviews, entertainment calenders, etc. The service was also planning home polling and an innovative classified advertising project before it was brought to a halt on December 19, 1990.

The European Experience

Videotex technology was first researched in Europe-- mainly in England (PRESTEL) and in France (ANTIOPE). Other European countries such as West Germany, Austria, Belgium, and Finland, as well as Japan and Australia, were experimenting with interactive videotex. France's experiment, however, provides the most telling contrast to the Canadian experience. The French adopted a frame that made it the only country in the world to successfully integrate interactive videotex into the social realm.

By 1972 competing British firms had christened their teletext services Ceefax and Oracle, and by 1984 their videotex service was called Prestel. By 1978 these two countries confronted a third competitor, Canada with Telidon. In 1981, the United States joined the fray with AT&T's own NAPLPS format.

France

The French monopoly telephone company, France Telecom, was regulated directly by the government and performed according to the direction-- or frame-- of the government in power. An important distinction was that the French monopoly was regulated directly by government, operated as an arm or extension of the French federal state. This allowed for greater control over videotex development since the government could invest public money in the state monopoly without having to answer to shareholders. The government had greater freedom to introduce changes to the telephone system. In other words, the government established the frame as the regulatory body.

Consequently, during the 1970s, the French government directed energy and investment-- some $17 billion--to modernize its antiquated telephone system and videotex was considered a natural frontier to explore. (Marchand, 1988, p. 17). In 1972 and 1973, in an attempt to develop a videophone, the French initiated a "telephone consultation service", a first stage teletext (one-way information) service that plugged into existing stock market and news service data banks.

The French-- with about double the Canadian population-- were particularly singleminded in developing interactive videotex for their national market. The Mitterand government of the early 1980s lavished substantial financial and moral support on the Antiope system. The country's determination was underscored by

the idea of an electronic infrastructure for the total society. Futuristic services (for the time) were being planned such as home banking, ticket reservation, computerized directory services and, especially, the telephone directory.

The French government felt they could save billions of dollars by replacing the paper-based information directory, one that inevitably became outdated the moment it was printed. The French realized early on that the means to propel this technology lay in intensive government intervention at the marketing level, where massive amounts of investment would be prerequisite.

The success the French had achieved with the technology was predicated on the critical belief that videotex must become an every-day feature in the lives of ordinary people. A policy report in 1978 by Nora and Minc called The Computerization of Society advanced the notion of Télématique, a wired infrastructure integrating information processing and data communications throughout the country. (Marchand, 1988, p. 29).

The road for videotex in France, nevertheless, was fraught with competing corporate interests. Prior to 1980, Minitel (the ultimate moniker of the hardware) was besieged by paper-based industries that felt threatened by its potential. Consequently, little hope was raised for the technology's future. The factor which changed the status quo dramatically, however, was the election of France's Socialist Party, which put videotex back on track. (Minitel acquired the critical epithet "rose" to denote the left's constant

promotion of videotex. Later the term "rose" denoted the sensual quality Minitel took on as a result of its chat lines.) There was a desperate need, stated the government, to catch up to other countries which were technologically rooted into the Information Age.

Spurred by a need to develop interactive information services by eliminating all paper-based product for the 1982 economic summit in Paris, the French moved feverishly to perfect an electronic directory system. A stand-alone unit integrating a keyboard, modem, and monitor was designed, eliminating the outmoded decoder hooked to a large television screen.

The initial commercial potential for interactive videotex hastened the process. The government felt that this innovative videotex technology could access disparate data bases and immediate electronic mail services, reach company catalogues and directories, provide comprehensive and updated inventory information, recall company guidelines and act as a gateway to other data bases at the touch of a key without major hardware and software investments. With satellite connections, the information could be accessed any time and almost anywhere in the world. Weighing a little more than ten pounds, the hardware could be carried by businesspeople from client to client like a portable computer, taking orders, maintaining inventory control, and providing basic product information.

Minitel's foremost application, as a directory, suggested business possibilities such as home banking and mail order retailing. As a directory, product descriptions and technical data, prices, shipping and availability could be easily accessed. In 1988, Cetelem, Europe's largest consumer loan company, directly attributed 10 percent of its growth to Minitel. This increase resulted from a pilot test whereby consumers were able to make loans through terminals located at retail stores. Until 1983, consumers had applied for a loan at a branch office. (Network World, 18 April 1988 p. 21).

Minitel was being used by manufacturers and distributors to connect with distant outlets. Cycle Peugot, for example, offered such services as stock ordering, display, general information, as well as staff training and briefing programs. In addition, services for business consumers-- ranging from reservation taking through complete banking information and personal and business fund management to machine repair instruction-- were being offered.

In addition, France's 'Télématique' orientation supported the idea that telephone directories could be replaced by electronic modules. This remarkably innovative idea of developing a small, integrated terminal was based on rational assumptions. First, the print based directories were constantly outdated and consumed inordinate amounts of costly paper. In 1975, a directory cost the French public $15 per unit (in a society of 20 million individuals) and it was estimated that five times the amount of paper would be

required to print directories by 1985. (Marchand, 1988, p. 31). **Policy recommendations suggested that Minitel be distributed free of charge to every telephone subscriber.** At the same time, of course, the hardcopy version of the directory would be relegated to the pages of history. Consumers would be impelled to consult the electronic surrogate. The consequences of these key decisions were pivotal to the success of Minitel.

One French writer reported:

> ... no one would need to buy a terminal, which explains in large measure why videotex got off the ground in France despite skepticism in Europe and the United States. (Marchand, 1988, p. 100).

Maclean's Magazine also spelled out the Minitel success when it stated:

> The French state-owned telephone company not only financed development of the system in the late 1970s, but gave away three million terminals to get the system into operation. As well, the company forced its clients to adapt to Minitel by refusing to issue standard telephone books. That compelled customers to use, instead, the electronic directory in their MInitel computers. And as they did so, they quickly learned to use many of the 5,500 services offered on their system as well. (14 March 1988, p. 44).

Consumers Enjoy Minitel

The French legal system was also credited for encouraging a wide variety of information providers to apply Minitel. A 1982 broadcasting law placed videotex-publishing entrepreneurs on the same legal ground as those in print. Dismissing corporate interests for coveting the power status quo, the law had a significant impact on the growth of Minitel. Anyone could provide information if they registered the source of the information at a local administrative building for liability exigencies (libel, copyright.). Videotex in France, therefore, was governed by a legal framework which allowed change and flexibility "a rare occurance indeed in French law, and so attracted "adventurers" bent on doing something new." (Marchand, 1988, p.98).

While the commercial implications were attractive, these "adventurers" offered the general public innovative applications of interactive videotex. French consumers found that the mail box service was to their liking, and this foreshadowed the appeal of the "messageries roses"-- romantic rendez-vous connections. Since Minitel's charisma is predicated on anonymity, subscribers consider no subject taboo. Subscribers adopt pseudonyms--frequently more than one identity-- and have complete freedom as to who to respond to and at what time of the day or night.

One French information provider bluntly, though accurately, calls its chat line service "Sextel."

> What prompted people from all over France to try for hours on end to access the service? Nothing more than the opportunity to communicate. But communication of a third kind: anonymous, instantaneous, fleeting. It was communication in a vacuum, for the pleasure of simply having someone on-line at all times to say something to.
>
> In 1982, for the first time, a communications device (Minitel) enabled 36 people from all over the country to converse at the same time. The chat service expanded rapidly after a French television channel broadcast a one-hour program documenting a videotex romance. By 1984 electronic mail and chat lines accounted for over 40 percent of the use of Minitel. (Marchand,1988, p.91).

Other consumer services, of a less sensuous nature, proved equally attractive. Of particular importance was a service provided in 1986 called S.O.S.-Devoirs (homework), where children could access a teacher between 5 and 7 p.m. to problem-solve school work. Secondary students who keyed in the simple code numbers could reach a teacher who helped them on or off line.

One author explains the service:

> If the question is easy or of interest to all those on-line, Philippe transmits the answer immediately, thereby enabling the students to help each other and to give thought to the same subject, like in class. If the problem

> is knotty and not particularly pressing, Philippe deposits his response the next day in an electronic mailbox. He is of the opinion that the future of teaching depends on the new forms of guidance offered by videotex. (Marchand, 1988, p. 171).

Other information offered on-line for the general public dealt with knowledge issues of law, travel, insurance, books, and data processing. There was also a no-fee service for a medical information service and even a specialized service designed for women, which provided pertinent and intimate information on everything from hygiene to baby sitting and shopping.

Videotex's unique knowledge-supplying capability has a profound educational implication for a society, since it heralds on-line libraries and specialized data banks. The process of spreading knowledge data banks is only possible when the frame adopted by a government enables everyone in a society to access the information. The distribution of free terminals on a mass basis is essential. By 1983, with 120,000 terminals in operation, several trials provided vital marketing and utilization statistics. By the beginning of 1985, there were 800,000 Minitels in operation ringing up 11 million calls. (Marchand, 1988, p. 129).

According to statistics supplied by Prima Telematic Inc. of Montreal, a videotex consulting and services firm, French citizens made 52 million hours of paid connection calls. Rates of $15 Cdn per hour connect time were charged to customers. As a result, some

$281 million Cdn was made by information providers, and another $250 million Cdn by the telephone monopoly as its cut. The French government made an estimated $250 million Cdn from information providers -mainly businesses- that paid for certain "free" consumer services. The videotex industry also received an estimated $250 million Cdn for computer and processing services arising out of Minitel (Personal Interview, Prima Vice-President Claude Legrand, March 1988).

Minitel's growth rate was electric. By 1988 there were 3.7 million Minitel units in use in France-- up by 50% from the previous year. The income garnered by information providers tripled from 1985 to 1987 to reach $281 million. One statistic is particularly telling. In 1987 alone there were 52 million hours of chargeable calls made. In February 1988 Minitel set a record 5.7 million hours of connect time in one month. About 25% of the calls cost customers nothing, 25% cost $4.50 per hour Cdn., and the rest were charged out at $15 per hour Cdn. The potential profits arising from introducing interactive videotex technology to Canada were not lost to Bell Telephone. (Personal Interview Prima Vice-President Claude Legrand, March 1988).

Other Countries

England, Japan, and West Germany, as well as Finland, Holland, and Sweden, Australia, Austria, and Belgium were also showing impressive developments with their own technology or were working in relationship with the technology provided by a partner

country. The Americans were attempting a number of unsuccessful field trials using basic teletext services, many in association with Canadian firms. The British were developing a number of competing products called PRESTEL, CEEFAX, and ORACLE, mainly one-way communication. In Britain the number of entries in the field was a feature which hindered the development of a singular national vision.

The Japanese were developing CAPTAIN, an index type system which made consumer access easy. (Conference Transcript, 1981, p. 108). By 1980 a range of top Japanese firms were poised to provide information services. They were also developing and experimenting with fully interactive fiber optic material. Germany was evolving the user-friendly BILDSCHIRMTEXT, described by a writer of the time as "the most versatile, comprehensive and automated videotex transaction system in the world." (Godfrey and Chang et al, 1981, p. 35).

BY 1985 it was clear that for videotex to prosper, a critical mass market had to be established in each country. In countries where fees for product and services were levied, success was minimal.

One magazine report provided a clear assessment of this need.

> The terminal cost DGT (France's Direction Générale des Télécommunications) some $130 each, but by installing them free, a large subscriber base has been created that has been establishing an increasingly large market for

> videotex services. Telecommunications agencies in the UK, Germany, and Japan are not providing free terminals, so videotex has not taken off as a consumer medium. (Telephone Engineer and Management, (Vol: v89n5, 1 March 1985, p. 90).

The CRTC HEARINGS-- DETERMINING ACCESS TO ALEX

Did the CRTC acknowledge the notion of free access to videotex? Did it recommend that the Federal state compel the public monopoly to provide a terminal to all telephone subscribers as a means to obviate the need for a paper-based telephone directory? Did the CRTC recognize the inherent benefits to all Canadians to have access to such knowledge-generating machinery? Were there interveners who pressed these issues before the CRTC when Bell submitted its proposal for the ALEX system? And if there were, how did the CRTC respond? An examination of Bell's submission, the intervener's reaction, Bell's response, and the CRTC's decision illuminate how Canadians missed out on one the most innovative mass technologies of the 20th century.

Bell Canada is obliged to first appeal to the CRTC before implementing any technological changes that impact on rates to telephone subscribers. Since Bell is a public monopoly, any changes or modifications must be scrutinized at open hearings. Interested parties have the right to file letters of intervention stating their

views. Bell is required to respond to the arguments. All interventions form part of the public record of the proceedings. (Canada Gazette, Part 11, Vol 113, No./ 15, p. 2780).

Bell Canada initiated the process on April 13, 1988, when the CRTC received an application for approval of tariff revisions for a marketing trial of "a new enhanced videotex service " called ALEX. The trial was to last two years and support 20,000 subscribers in the Montreal area. The exhaustive document defines the nature and costs of the product and the differing charges and special promotions to the consumer.

Different rate categories were established: ALEX 1 (no charge) to ALEX 5 (variable). ALEX 2 charges $0.12 to the consumer, ALEX 3 $0.30 per minute and ALEX 4 $0.45 per minute. These prices varied according to how much profit the information provider wants to draw from the marketplace. Charges to information providers are $0.15 to Bell and $0.03 to Accounts Receivable Management (ARM), an accounting firm. ALEX 1 is sales or government oriented; ALEX 2 supports, for example, newspaper information services; and ALEX 3, chatlines. (Videotex democratizes sources of information since the costs associated with the publishing field are relatively minor. For the entrepreneur publisher as little as $5,0000 was required to set up a chat line service.)

No firms currently use ALEX 4 rates, and the vast majority stabilize at ALEX 3 rates. At $0.30 a minute, however, it could cost $3 to access a few movie reviews; the costs mount up deceptively

quickly.In the submission, Bell Canada provided a configuration map outlining the organization of videotex services from consumer to information supplier. The submission defines, in a legal manner, the role and obligations of consumers and information providers based on this organization chart.

The submission stated that the $7.95 basic monthly rental charge for the terminal is non-compensatory (does not pay for itself). According to Bell, this loss is required as part of its marketing strategy to attract subscribers. Bell estimated the terminal loss charge at $400. The submission stated that Yellow Pages listings and Yellow Pages advertising are applications of ALEX and form part of the overall mix of services that Bell intends to provide the marketplace. (Bell Canada ALEX submission (SI)-3, CRTC submission 1988). This meant that in addition to its capacity as a telecommunications carrier, Bell also desired to enter the electronic publishing field.

On May 30, 1988, an official notice inviting interested parties to submit comments was issued by the CRTC. (CRTC Telecom Public Notice 1988-22, 1988). The CRTC asked interveners to circumscribe the way ALEX should be received by the public... what Bell should or should not be permitted to do. The CRTC's decision, rendered three months later, on September 30, sketched out the proceedings and the comments advanced by interveners, as well as Bell's response. (CRTC Telecom decision 88-16,1988, p. 1).

A summary of the original interrogatory submissions regarding ALEX consisted of the following:

Kevin Wilson

One of the most compelling contributions consisted of a submission by Kevin Wilson, an author and teacher, who touched on two significant issues: mass use and privacy. In his nine-page treatise, Wilson urged that a "critical mass," or sufficient volume, is required for the success of interactive videotex. Citing the successful Minitel experience, Wilson said that ALEX terminals should be distributed free of charge or considerably below cost. He estimated that France invested more than $1 billion in Minitel, a 1988 figure. Wilson did not provide any financial projections regarding the cost of introducing ALEX to all Canadian homes vs the expenditures for the print directory.

Wilson did assert that the key to marketing videotex "lies in its promotion as an extension of the telephone. Developing videotex as a transformation of the television (an entertainment media) has, to date, not been successful. In part this was the problem with Telidon." (Wilson, CRTC ALEX submission, 1988, p. 4)

Wilson also expressed concern that adequate safeguards for privacy should be integrated into the system, since every page of information which is delivered generates its own electronic (machine-readable) record. (Wilson, CRTC ALEX submission, 1988, p. 5). Canada, he wrote, has fewer privacy protection safeguards than

France, which imposes restrictions on the use and disclosure of information.

> Nothing in law will prevent Bell or service providers from keeping more detailed records than are required for billing. Nothing will prevent them from using this information for other purposes, for example, marketing. They may exchange it, transfer it internally, or sell it to third parties without the consent or knowledge of the consumer. (Wilson, 1988, CRTC ALEX submission, p. 6).

Wilson urged the CRTC to undertake public discussion to demand legislation insuring information privacy in order to protect communications networks of the future. In the CRTC's decision, no mention was made of the content of the Wilson report.

Jean-Claude Quédon

This professor of comparative literature at the University of Montreal provided a forceful argument in favour of integrating ALEX into a total communications infrastructure, following the successful French experience. As an interdisciplinary member of a university committee studying interactive videotex, Prof. Quédon stated that the consumer price of $7.95 for ALEX was too high. He stated that both the cost of the terminal and the total revenue of a mass offering must be initially established in order to have the highest penetration of ALEX in the marketplace.

In other words, the process must start at a high level of market penetration with vast numbers of terminals operating at once. In France, he wrote, Minitel didn't "spark" until the numbers of subscribers reached 500,000. He also dealt with the ethical and legal issues of interactive videotex and urged that privacy guarantees be an essential ingredient of ALEX usage. (Jean-Claude Guédon, Institut d'histoire et de sociopolitique de science, Université de Montréal, CRTC ALEX submission, 1988).

Consumer Association of Canada (CAC)

The CAC urged the CRTC to deny Bell's videotex trial based on the belief that the service would be non-compensatory. The CAC stated that monopoly subscribers should not be required to subsidize the market trial of ALEX. The CAC based its claim on the fact that Bell stated in its submission that only 9.3 percent of the trial's costs would be recovered by revenues. The CAC's submission did not refer to any sociological implications of videotex and privacy issues nor did it refer to the need for any critical mass requirements of a successful launch. The CAC, basically, was concerned that Canadian telephone subscribers should not be responsible for any costs associated with ALEX.

Centre d'Excellance en Télécommunications (CETI)

The most exhaustive legal approach to Bell's submission emanated from Centre d'Excellance en Télécommunications Intégrées (CETI). This firm was Bell's singular rival for the

interactive videotex market in Canada. Of central concern to CETI was the scope of the Bell trial. The firm railed against Bell's unfair use of its monopoly position and its advantages in retail marketing, billing, computer services etc. CETI asserted that Bell would subsidize its market entry from general revenues and by charging non-compensatory fees. CETI was critical of Bell's market advantage and declared that the market trial would recover only a small percentage of the total expenses. They argued that the market trial would be anti-competitive. (CETI, CRTC ALEX submission, 1988).

Association of Competitive Telecommunications Suppliers (ACTS)

This organization expressed a concern about the magnitude and scope of the trials, arguing that ALEX should not be permitted to advance to the trial stage until rates are fully compensatory and that a second, more advanced report be submitted by Bell. ACTS also recommended that the business of Yellow Pages directory advertising be available to any service providers.

CNCP Telecommunications.

CNCP also asserted that the rates of return on capital of the ALEX program were understated, calling into question the fact that the total amount of charges would not be assumed by ALEX. (CNCP, in fact, was embroiled in other disputes with Bell through the CRTC. CNCP was attempting to erode Bell's domination as telecommunications carrier in Canada.)

CNCP's submission contained the following summation:

> Inconsistencies are also apparent in the areas of the size of the market trial, the target market and the interworking capabilities. Obviously, the capabilities exist for this service to reach far beyond the boundaries implied by Bell. Approval of this service could only enhance Bell's monopoly position, at the expense of competition and Bell's monopoly subscribers. CNCP therefore respectfully requests that the proposed trial for ALEX service be denied. (CNCP, CRTC ALEX submission, 1988).

Canadian Business Telecommunications Alliance (CBTA)

This group also argued on economic grounds. The CBTA urged the CRTC to compel Bell to set up a separate corporate subsidiary so that any losses would be borne by shareholders of Bell Canada Enterprises (BCE), the parent company, and not by telephone subscribers. Bell Canada, the submission stated, should not be subsidized at the expense of its competitors or its telephone subscribers. (CBTA, CRTC ALEX Submission, 1988).

Canadian Daily Newspaper Publishers. (CDNPA)

The CDNPA also invoked comments relating to unfair competition and Bell Canada's monopoly status advantages. (This non-profit organization represented 82 French and English daily newspapers, accounting for 89 percent of the daily newspaper

circulation in Canada.) The organization argued that the development of the electronic publishing industry would be unfairly impeded if telecommunications carriers were allowed to become information publishers. The CDNPA asserted the benefits of a division of labour where an information superstructure resembled a highway system. Only information providers would be permitted to feed into the main trunk of the hardware supplier's expressway.

The Association expressed its "grave" concern that Bell was planning to initiate an electronic directory service incorporating Yellow Pages information. Allowing Bell to enter into such a venture would go far beyond the company's mandate. The CDNPA maintained that the presence of a firm the size of Bell would likely deter potential competitors from investing in electronic publishing ventures. The CDNPA provided the CRTC with supporting jurisprudence on the subject from United States courts denying telecommunications carrier companies the right to become publishers.

The organization's submission stated:

> The potential for discrimination by a telephone company in favour of its own information services is so strong and has such a high potential for abuse that it is crucial that the Commission indicate clearly to Bell Canada in this proceeding that this aspect of the ALEX market trial is contrary to public policy and should not be permitted. (CDNPA, CRTC ALEX Submission, 1988).

Southam Inc.

Southam Inc. was one of the first Canadian players involved with Telidon and is the largest newspaper chain in Canada. Through Infomart, the organization supplies data bases from member newspapers. Southam urged the CRTC not to permit Bell to provide any electronic directory services. Southam argued that the Bell Canada Act and the CRTC expressly prevent ALEX from becoming a Bell information provider. Southam quoted from a CRTC decision (CRTC 84-18) which stated: "Bell should not be permitted to engage in electronic publishing involving editorial control or content or in the creation or distribution of its own data bases."

The theory underlying such a safeguard is that the carrier could not exert influence on the provider, thus challenging fundamental freedoms of the press. Southam argued for a strict separation of telecommunications carrier and publisher. Southam urged the CRTC to deny Bell's entry into the electronic advertising directory marketplace.

What is noteworthy, however, is that BCE's Tele-Direct (Canada) Inc. was not a minor subsidiary. It was a dominant and potent competitor of Southam, as well as other publishing conglomerates. In 1984 BCE announced that Tele-Direct had become one of North America's largest printers. Directly involved in Yellow Pages advertising in the US, Australia and Canada, the organization controlled a number of publishing and printing subsidiaries, including Canada's largest publisher of controlled circulation

publications. BCE also owned Ronalds-Federated, which employed 4600 people in 25 plants in Canada and the United States, as well as the British North American Bank Note Company Inc. In 1984, Tele-Direct rang up $417 million in sales and by 1985, revenues advanced to $602.3 million. In 1988, BCE purchased 21 percent of Québecor Inc., publisher of daily and weekly Quebec newspapers and owner of numerous printing plants. (Babe, 1990, p. 232).

BELL'S REBUTTAL

On July 15, 1988 Bell replied to the various interveners in a 16-page detailed rebuttal. (Bell Canada, ALEX submission 2727, 1988). The telephone monopoly broke down its rebuttal into five broad categories: appropriateness of a market trial, customer rates, separate subsidiary or separate accounts for ALEX, electronic directory service, and phase 111 assignments.

A number of interveners asserted that Bell would be excluding significant costs, making it easier for Bell to justify ALEX as a successful commercial service because it was undercharging its customers. Bell responded by stating that the proposed rates had been set at levels which the firm considered "realistic" for the introduction of such a new mass market videotex service. Other interveners were also critical of Bell's non-compensatory pricing and of the fact that cross-subsidization (subsiding one unprofitable service with another profitable one) would be occurring from Bell's monopoly revenues.

Bell replied that it would adequately bill all the tariff costs

(costs as a telecommunications carrier to suppliers) but would require low monthly rates on the consumer side if the videotex marketplace was to grow. Bell stated that the test to determine whether the rates are compensatory is not normally performed for marketing trials. "The Company submits that the knowledge gained from the market trial will be used to determine the appropriate rate levels for commercial service." (Bell Canada ALEX submission TN 2727, Aug. 18, 1988, p.4). Bell asserted that it would be an unwarranted constraint, requiring unwarranted delays and operational difficulties for it to establish a separate accounting structure for ALEX costs.

CETI believed that the market trial should adequately reflect the costs involved in the trial-- since it, as a private company, must face such costs. Bell dismissed its competitor outright by stating that it could have provided CETI with the same telecommunications carrier services that CETI undertook to offer its customers directly. With this response, Bell dismissed CETI's argument that it was abusing its monopoly position. In addition, Bell dismissed CETI's argument that it was taking advantage of its monopoly position by using its vast distribution network of teleboutiques stores and billing envelopes for ALEX. The company stated that this was appropriate and that CETI's comments "should be disregarded in their entirety."

Regarding the consumer issues on privacy raised by Kevin Wilson, Bell asserted that it would not be permitted to release any information other than name, address, and listed telephone number.

Bell's promise was based on its consumer contract with each subscriber. Bell stated that its billing details would include only the category of the ALEX service (1 through 5) enlisted by the consumer. Bell disregarded suggestions that ALEX should be distributed free of charge to homes (Wilson) or at an extraordinarily low price (Quédon).

The second issue responded to by Bell related to its aspirations to become an information provider. Essentially, Bell Canada approached the controversy by disassociating itself from its Yellow Pages subsidiary. The company stated that Tele-Direct would be treated like any customer that provided the same service and would be subject to the same rates and obligations. Bell argued that a distance would be created between its subsidiary and itself so that no conflict of interest could arise-- a noble, though somewhat suspect, aspiration.

In forceful legal language written by Bell's counsel, the firm countered arguments critical of its role in electronic publishing by presenting its own set of legal counter arguments. Bell tried to impress the CRTC with the logic that since it has been long involved with Yellow Pages directories, there is no difference-- in terms of that mandate-- in another type of publishing.

Bell responded :

> Bell Canada does not believe that the participation of Tele-Direct in the ALEX market trial would impede the ability of others to enter the arena of electronic

> publishing via ALEX or other media. In fact, Bell Canada is actively seeking the full participation of such parties so as to ensure a well-rounded range of information and advertising services. (Bell Canada submission TN 2727, Aug. 18, 1988, p. 70).

CRTC TELECOM DECISION 88-16

The CRTC response to both Bell and the interveners described the Commission's prioritization of issues and the agenda it established for the introduction of interactive videotex in Canada. The items the Commission excluded from its written deliberations illuminate how the CRTC merely avoids responding to substantive issues.

The decision document outlined the background and positions of the interveners as well as Bell's rebuttal. The CRTC concluded by rendering its decision. Primarily, the CRTC underscored its decision on the basis that "vidoetex is useful and has the potential to benefit many segments of society." Its comprehension of the subject was limited to the notion of "useful" and failed to perceive the long-term contributions the technology could provide Canadian society.

The CRTC stated that to be successful, videotex services must attract a very large customer base and that "low entry and transaction rates are required in order to attract such a base." Since ALEX may well suffer a long period of unprofitability, it is in the **"public interest"** for Bell to offer the service. The CRTC failed to comprehend, despite submissions to that effect, that for

videotex to be successful it must reach a high level of market penetration-- amounting, according to one intervener, to at least 500,000 subscribers. The CRTC did not allude to those interventions calling for the need of a critical mass.

> However, the commission finds that the size and nature of that trial necessitates special precautions in order to ensure that rates for Bell's other services are not affected and that the company does not accord itself an undue advantage over competitors through the use of cross-subsidies from other services. (Telecom ALEX Decision CRTC 88-16, Sept. 30, 1988 p. 7).

The CRTC agreed with Bell that ALEX should not be made into a separate subsidiary, stating that proper cost tracking would ensure the same result. The CRTC decreed that Bell would have to provide an annual revenue forecast for the forthcoming year and quarterly reports on tracking information related to ALEX and revenue forecasts for the remainder of the calendar year. The CRTC built in a rate of return structure so that profits and losses (resulting in dividends) would be equalized to safeguard telephone subscribers.

Much of the CRTC documentation was directed towards financial matters, defining how rate increases and rate of returns would be approved or disapproved should revenues fall below expectations. The commission required Bell to place mechanisms into the system, which would ensure that rates for other services would not be affected by the ALEX trial. The CRTC demanded that

Bell provide tracking of all costs, including development costs, and the identification and forecasting of costs.

The CRTC upheld the prescription that prevented Bell from becoming an information provider, stating that although providing a white pages directory is consistent with its mandate, the Yellow Pages directory is not. Bell feared that engaging in Yellow Pages advertising would contravene section 8 of the Bell Canada Act which states:

> By virtue of section 8 of the Bell Canada Act, Bell is required, in the provisions of services or facilities, to act solely as a telecommunications common carrier and shall not control the contents or influence the meaning or purpose of the transmitted information (Telecom ALEX Decision CRTC 88-16, Sept. 30, 1988 p. 10)

But the CRTC left the door open for Bell in the future by suggesting the possibility of a General Tariff offering which would permit any player to participate in Yellow Pages publishing. "Accordingly, should the market trial proceed, the Commission will establish a public process to deal with these issues". (CRTC ALEX Decision Telecom 88-16 p.12). The CRTC also stated that the use of its teleboutiques to market the machines and its envelopes for billing is appropriate for the trials.

The Canadian system, observers state, is closely patterned after the United States version. Changes taking place in the US often drift northward and permeate the Canadian experience. A July

26, 1991 front page article in the New York Times reported that a Federal judge lifted a legal bar that prevented seven regional Bell companies from offering publishing services. One newspaper publisher commented in the article: "If we are going to enter a world in which a great deal of information passes through telephone lines, then those providing the phone lines should be neutral; they shouldn't be one of the information providers." (New York Times, July 26, 1989, p. A1).

The CRTC granted all of Bell's requests save two: the right to provide Yellow Pages advertising and one of the conditions in its service contract with information providers. Article 3 paragraph 6 of Bell's contract states: "The service provider shall not advertise or market alternative access vehicles on the ALEX network." The CRTC considered that article a violation of the prohibition on control of content as specified in the Bell Canada Act.

No mention was made in the CRTC's decision of the content of the Wilson report which urged privacy protections for ALEX subscribers nor did the decision respond to the need for a critical mass to ensure a successful videotex offering in Canada. The CRTC felt that free market forces were sufficient to sustain interactive videotex in the Canadian marketplace.

One magazine noted.

> A March 7 ruling allows regional Bell operating companies (RBOC) to offer more information services than some had expected. These include electronic white

pages listings, voice and data services gateways, protocol conversion, and per-use billing on monthly telephone bills. The RBOCs also may compete with providers of electronic mail and provide storage and forwarding of voice and data messages. (Information Today, Vol: v5n5, May 1988, p.25).

CHAPTER THREE

CRTC'S HISTORICAL RELATION TO CAPITAL

The Commission's allegiance to free market forces as a guiding principle of its intervening strategy characterizes its relations to capital. The assignment of monopoly jurisdictions to corporations is a CRTC power of inestimable importance. The authority to award an economic fiefdom in Canadian communications by giving companies a monopoly licence is tantamount to providing an open credit card. As an intermediary between government and capital, the CRTC is conveniently placed in the scheme of power relations to legitimate the decisions of government and to respond to the needs of capital.

This chapter examines the conduct of the CRTC to ascertain the nature of the relationship between the Commission and capital over time. Conclusive evidence is introduced to illuminate the Commission's historical pro-business bias at the expense of the public good. This chapter contends that the CRTC has a history of favouring corporate interests, of allowing these forces, in some instances, to dominate their respective communications field by monopoly control.

The spirit of corporate capitalism-- imbued in the CRTC-- conflicts with its laudable public interest goals. This chapter will

reveal the claims formulated by the CRTC, which are designed to reduce those contradictions and to legitimate its behaviour. Consequently, this chapter will illuminate the Commission's logic underlying its decision to award Bell a virtual monopoly in interactive videotex in Canada.

Bell Canada is the largest telecommunications carrier in Canada, with a telephone and telecommunications carrier monopoly in Quebec, Ontario and the Northwest Territories. Its monopoly over Canada's largest marketplaces (Ontario and Quebec) was a result of government privileging and its aggressive "and frequently predatory" business practices. (Babe, 1990, p. 89). Consequently, the fact that the CRTC awarded Bell Canada a virtual "monopoly" in interactive videotex is not a precedent.

The CRTC's ALEX decision cannot be viewed, therefore, as an isolated phenomenon but merely as one chapter in its ongoing biography. This will provide a clearer understanding as to why the CRTC empowered Bell to offer the Canadian public limited access to interactive technology. Ultimately, the CRTC's allegiance to capital ushers in a frame which ultimately determines how a communications technology will be offered to the mass, a frame defined as Technology Assessment.

CRTC PRACTISES

The CRTC acquiesces to corporate pressures on a number of issues, including: sovereignty controversies, information disclosures, licensing policies, cable policies, and private property ownership. The following information provides evidence of the CRTC's responsiveness to the needs of capital.

Private Property Rights

In theory, Canadian values and beliefs are legally invested in the CRTC, which applies sanctions to enforce public service objectives. However, the CRTC, also an agent of the corporate establishment, fails to safeguard those prescriptions. Studies illuminating the relationship between the CRTC and corporate interests provide a telling glimpse into the realities of private enterprise and Canadian communications.

The notion of private property rights is intrinsic to capitalist theory and defines the frame of Technology Assessment; the subject resonates throughout the research in Canadian broadcasting. (Babe 1979, Hardin 1985, Szigetvari 1989). The CRTC's sanction of private companies to own public broadcasting resources is an integral aspect that defines the Technology Assessment frame. (This concept will be more fully defined in the following chapter.)

The mechanism by which free market economies operate is exchanging or trading property. However, private property rights in the communications spectrum have been prohibited by law, public property rights over the "airwaves" having been encoded (Babe, 1979, p. 31). The CRTC awards a "monopoly" to an airwave for the exclusive use of a particular corporation because it has pledged to operate in a certain manner.

Public policy considers that communications resources, like the position on the FM band, is owned by the public and is lent in trust to the "guardian" of that FM position. In ascribing the term "public service" to broadcasting companies, the CRTC, in fact, obfuscates an understanding of property rights and the ownership of a public commodity Public policy objectives, of course, require that the communications technology-- the position on the FM band-- serve the public good. Intervening practices between the CRTC and the "guardian" enforces compliance. What occurs, however, is that public policy objectives serve to ease constraints under which the "guardians" must operate.

Babe states:

> To policy makers, who are removed from the process of capital accumulation and by definition are interested primarily in public policy objectives, financial considerations appear to be viewed as a constraint under which the system must function in pursuit of these public policy objectives; public policy, therefore, is

> directed to easing the financial constraints-- that is, increasing revenues in order to enable the system to pursue public policy goals. .... In this view, broadcasting must be protected, enriched, nursed, scolded, and encouraged to grow; however its basic "goodness" is never doubted. (1979, p. 227).

Therefore, companies selling their shares to another company also pass on the right to enjoy monopoly benefits assigned by the CRTC. The "monopoly" now becomes an object to be bought and sold. These benefits, ostensibly the property of the public, should not be part of the exchange process. Yet the CRTC has allowed private enterprise to appropriate public property and to use it for corporate gain.

Hardin writes:

> You could not buy the right to be the sole applicant for the licence when it was first issued, but by being a collaborator in the private trafficking of the licence, you could buy the right from the party that had originally got the licence. (1985, p. 229).

The CRTC dismissed the 'privatization of monopoly interests' issue by constructing a new reality: all the conditions of the licence would remain the same, except one variable, its owner. Since this variable did not affect the way services were being delivered, it did not require a public hearing to discuss the exchange of the communications commodity.

Babe reports that for capital, the "trading" in licences emerges as a common feature in its broadcasting conduct. This feature has a significant negative downside for the entire system, since funds arising from profits that would otherwise ameliorate broadcasting are usually diverted into other unrelated enterprise. "Corporate acquisitions and diversification into unrelated fields," writes Babe, "cause funds to leave the broadcasting system that could otherwise be devoted to improving Canadian programming. (1979, p. 92).

Adds Hardin:

> As things were, licensees in Canada maximized short-term and long-term profits where it suited them, and maximized the speculative gain in the private trading of public licences, all to the cost of the quality of service and to subscribers. They did so with relative impunity exactly because no competitive licensing procedure was allowed. (1985, p. 241).

Cultural Sovereignty

The CRTC, as its charter states, was conceived to protect Canada from American cultural intrusions and to safeguard a Canadian cultural identity. Babe notes that it was principally the availability and demand of US programming that first caused Canadian policy-makers to notice the special role that broadcasting could play in Canada. (1979, p. 7). However, from the perspective of capital, public policy goals are viewed as a restraint under which

they must operate in order to do business.

By promoting the notion of the threat from the south, the CRTC performs classical legitimation practices. The CRTC grants capital the right to show US programming at the expense of Canadian production while, at the same time, legitimating its role as regulator by saving Canadian broadcasting from American corporate domination. Babe suggests that in directing attention only to this public service aspect of Canadian broadcasting primarily as "David against the Goliath to the South, as an impoverished system with expensive, multifaceted and often contradictory objectives", the CRTC sacrifices the very goals it pursues (cultural sovereignty and production). (1979, p. 227). This serves the interests of cable operators because US programming is far less expensive to buy than Canadian content is to produce.

Canadian Content: Abandoned Promises

The CRTC's performance of awarding licenses to television stations that abandoned their promises of Canadian content resonates throughout the literature. The high rate of automatic licence renewals and relative lack of short-term renewals indicates the "lax" nature which the CRTC attaches to "promises of performance." (Babe, 1979, p. 185). Authors Hardin, Babe, and Clifford cite a number of cases to support this assertion: CITV Edmonton Video, Global, CTV, City-TV, CKND Winnipeg, Capital cable Cooperative, CKGM-TV Toronto, and Pay-TV.

Clifford's research of unpublished CRTC documentation illuminates CRTC policy towards communication companies on Canadian content issues. One document concerned the case of Toronto Television station CKGN-TV where some commission staff expressed the view that this licensee should never have been awarded a licence because of its failure to meet Canadian content rules. (Clifford 1983, p. 459). He adds that some media critics felt the station should not be faulted because the performance of other Toronto stations was not any better.

Hardin provides a 1973 example of CITV Edmonton. This station provided a submission for a new television station based on its fiscal responsibility, having local investors and upholding Canadian cultural content promises of performance.

Hardin comments:

> With the licence in hand, CITV, as the new station was called, had to decide what to do with it. 'It's dead already,' said one local TV executive, several months before CITV went on the air.
>
> This terribly cynical comment was based on the terribly cynical assumption that CITV would attempt to fulfill all its programming promises for a few months or a year, and then, running into financial difficulty, would abandon its programming promises, just as Global and City-TV were about to do, and as all the CTV stations had done

> before them. CITV, however, had a better idea that out Globalled Global. It began to sidetrack a few of its more troublesome programming promises before going on the air. It made eminent sense to go directly from promise of performance to abandonment of promise of performance without the complications of passing through an opening schedule kept to the mark for the sole purpose of establishing brownie points with the CRTC. The commission could be looked after later. (1985 p. 157).

In another example, Hardin asserts that awarding Toronto's Global Television a broadcast licence in 1972 was one of the most destructive acts in Canadian broadcasting history. (1985, p 47). He contends that it merely strengthened the ties and similarities of Canadian to American television, segregated the lone CBC station to compete in an American-dominated environment, and diverted Canadian dollars into American cultural manufacturing.

Babe provided additional insight into this example when he described how the CRTC allows firms to restrict information on matters of public policy. He cites Global-- the "guardian" of the publicly owned "airwave" -- as an illustration of how the CRTC fails to demand financial disclosures from firms during licence renewals or transfers. This reduces any form of public accountability. It has the effect "of virtually excluding any groups wishing to contest an application from knowledgeable participation in the public hearings for these applications because they lack a considerable amount of pertinent information." (1979, p. 179).

In researching the CRTC, Clifford found that the CRTC had not demonstrated a willingness to employ the harsh sanctions against licensees for even the most flagrant violations. (1983, p. 495). The harshest penalty the CRTC applies is a short-term licence renewal. In fact, in both television and FM radio the main mechanism to discipline broadcasters has been the application of short-term licence renewal. This unwillingness to apply substantive sanctions undermines the impact of the CRTC's compliance strategy. (Clifford, 1983, p. 496).

In his exhaustive research to observe the strategic and operational activities which the CRTC undertakes to gain compliance from private licensees in the television and FM sectors, Clifford proffers an insight. "In the end, however, it appears that the commission will tolerate licensee regulatory programming and content failures, provided that a full schedule of programming is being broadcast." (1983, p. 493). Obviously, these competing goals conflict when attempting to enrich and enhance Canadian broadcasting.

In addition, Clifford attributes the failure of the CRTC to adequately police business broadcasting interests to the way the CRTC prosecutes violators: the employment of judicial enforcement action. (1983, p. 496). This type of action has become the Commission's customary practice but actually elicits no substantive changes from violators. It is the principle enforcement procedure around which the CRTC focuses its powers. According to

Clifford, the whole of the monitoring system is designed to develop statistics to support the persecutory approach, although the numbers of prosecutions are few. (1983, p. 315). The results from prosecutions have been overall unsuccessful. "...it is arguable," states Clifford, "that the Commission's principal compliance strategy vis a vis Canadian content in the television sector has been ineffective. The threat or likelihood of prosecution may, however, serve some minor deterrent function." (1983, p. 497).

Deploying judicial enforcement exacerbates compliance attempts even more. The Commission "deliberately" separates the company's problems with Canadian content compliance from the licensing process. (Hardin, 1983, p. 498). This means that a firm which is deficient in its Canadian content program will not be questioned about that deficiency at a licensing hearing. This approach is taken because the CRTC does not "want to put the licensee into the position of having to make incriminating admissions in public licensing hearings about matters which may come before the courts by way of prosecution for regulatory offense." (1983, p. 498) Hardin writes that decisions issued by the CRTC during licensing renewal hearings make little mention of the broadcasting firm's Canadian content deficiency issue. (1983, p. 498)

This reluctance to enforce conduct adversely affects the notion of a singular Canadian cultural identity. This CRTC shortcoming runs counter to the expressed purpose of the Commission, as stipulated in Section 3 of the Broadcasting Act-- to

uphold the public will in safeguarding and enhancing Canadian communications sovereignty. Hardin contends that the CRTC facilitated the Americanization of the Canadian Broadcasting System even though it was "never intended and never envisaged in the legislation that the agencies were created to implement." (Hardin, p.167).

Advocacy Advertising

Corporate propaganda (the marketing of ideas) is an area where the CRTC has fallen short of its public servant role in the Canadian social realm, once again illustrating the commission's relationship with capital. By way of example, Hardin points out an incident in the 1970s when Imperial Oil launched a series of paid ads on Hockey Night In Canada that portrayed a patently misleading image of the company. Although the advertising violated CRTC guidelines regarding fair access to the airways without undue influence through wealth or position, the CRTC stonewalled its response until the issue simply disappeared from public attention.

Hardin contrasts this rather unhurried reaction to a 1975 controversy regarding CFCF-AM radio's treatment of Bill 22-- the then provincial language law. The protest centred around the unmistakable impression that the station-- through its open-line show-- was advancing only one side of the issue. It took the CRTC a mere four months to call the station to task at a public hearing on the subject. (Hardin, p. 95). This case exemplifies one of several examples where the CRTC protected the interests of the corporation

by being slow to resolve the controversy. Yet in the case of radio station CFCF-AM, which championed the one-sided political angst of Quebec's English minority, it became politically expedient for the CRTC to respond decisively and publicly.

Public Disclosures

Hardin describes the CRTC's support of corporate interests in a case calling for the disclosure of financial information by consumer groups. The event arose in 1972, he wrote, when interveners requested financial information about a Vancouver cable company which was seeking a rate increase. Three years after the request was made, the CRTC, at a hearing to discuss the matter, opposed disclosure. The commission argued that the revealed financial information may likely be abused, that rate hearings were not meant to be adversarial in nature, and that it would direct public attention to purely financial matters. (Hardin, p. 136).

The Consumer Association of Canada (CAC) took the issue to the Federal Court of Canada in 1975, condemning such secrecy. Only after a positive decision was rendered for the CAC did the CRTC force the company to reveal its secrets.

The CRTC also withdraws from key intervening practices "through its reluctance to delve into the financial affairs of its licensees in areas termed 'managerial prerogatives'." (Babe 1990, p. 174). The CRTC can state that probing into the affairs of a communications company is unwarranted because it is interfering with normal business practice-- areas that concern management.

The CRTC, therefore, has tended to personalize the broadcasting industry, to act as if business persons appearing before it speak more as individuals than as representatives of large corporations. This personalization of the licensing process is reflected in the general informality of the Commission's proceedings and, in particular, the lack of financial disclosure (Babe, 1990, p. 227).

Justifying Monopoly

The term "natural monopoly" arises through attempts by capital to legitimate the need for monopoly business practices. Capital establishes "claims" to legitimate a monopoly condition, asserting that a competitive environment is undesirable or unstable. In the early part of the 20th century, telephone companies employed this idea by advancing a positive public relations profile "....attaining thereby an aura of necessity, respectability and even benevolence for an industrial structure that otherwise could have generated even more controversy." (Babe, 1990, p. 137).

Another definition of a "natural monopoly" is lucidly described by Manley R. Irwin as a static model of stable technology-- single industry-- clear-cut boundary lines where market forces are deemed unworkable in protecting the interests of consumers. Therefore, an institution (like Bell Canada) is necessary to replace the market. (1981, p. 70). A natural monopoly establishes an inherent dependency on one firm to supply consumer needs Consequently, a monopoly assumes a rather static approach to technological dynamism. The concept of a natural monopoly asserts

a "god-given" right to establish monopolistic boundaries in hardware manufacturing, services, and tariffs necessary for the public good. Irwin summed up the predicament of the "natural monopoly" notion when he wrote that the legacy of the public utility principle inhibits carrier transition and adjustment. "Indeed regulatory authorities conjure up the image of natural monopoly where no monopoly exists." (Irwin, 1981, p. 89).

Another example of the CRTC's allegiance to capital to appropriate monopoly power for Bell occured in 1985 when CNCP desired access to the lucrative long-distance telephone market. The fact that US border states were supplying this service to companies at lower rates-- including to Canadian firms searching for less expensive routes-- made this business a golden plum. Stanbury points out that the CRTC ruled in favour of Bell Canada to prevent CNCP telecommunications' competitive entry to supply long-distance service, despite consumer polls supporting competition. (1986, p.116). The growth of the market, coupled with the vast Canadian distance, made this enterprise lucrative.

Although the general public spends substantially more dollars on long-distance calls than on regular monthly rates, the CRTC's decision protected Bell Canada's monopoly status. Bell contended that it was using profits made through long distance to shore up its costs in providing low-cost monthly telephone services. Special interest groups protested, stating that the hardship imposed on the poor as a result of more expensive monthly telephone rates contravened Canadian telecommunication goals. (Stanbury, 1986 p.

400). These goals stated that the CRTC would ensure universal accessibility to basic telephone services. In this case, the CRTC used its own ideals to legitimate monopoly services, despite the fact that the mass public would have been better served by lowering long-distance charges.

A more recent 1991 telecommunications controversy relates to the application by two companies to gain access to the lucrative long-distance telecommunications market in competition with the federally regulated telephone companies. Once again, Bell Canada asserted that subscribers would have less expensive long-distance rates if it was allowed to sustain its monopoly. Once again, Bell contended that it could maintain lower costs and greater productivity savings without competition.

But Unitel and B.C. Rail-Lightel claimed the opposite, stating that competition would, in fact, lower costs. Politicians entered the politically expedient controversy and claimed that competition would threaten low-cost basic telephone rates and favour urban centres at the expense of rural areas. Once again the specter of losing a monopoly advantage haunted Bell, and it warned the CRTC against making such a politically unpopular decision.

"Myths" of Monopoly

Babe reveals three "myths" employed by capital to advance the acceptance of a natural monopoly: economies of scale, service universality through cross subsidization, and systemic integrity. For decades, telecommunication companies such as Bell Canada

insisted that their grasp of a monopoly was justified in order to restrict consumer expenditures for telephone services. The telephone companies explained that one monopolistic company could avoid the costly duplication of capital expenditures by taking advantage of the capacity to exercise an economy of scale. The bigger you are, the theory holds, the less expensive it is to innovate; and when one company does the innovating, it is not necessary for other companies to spend the same amounts to purchase the same innovations. The capital investments, therefore, need not be charged back to the consumer because of the savings brought about by the economy of scale.

By the 1920s, companies launching a telecommunications endeavour were regarded as wasteful and counterproductive in both Canada and the U.S. (Irwin, 1981, p. 12). Telephone companies instituted policies to maintain the high cost of market entry in order to restrict competition. Consumers were, for decades, unable to purchase or lease their own hardware so companies were unable to manufacture the equipment. Telephone companies prevented subscribers from using their own equipment because it would "pollute the system with substandard, malfunctioning equipment."

The economies of scale rationale held the public hostage to the needs of capital. The more the utility spent on capital cost allocations, the more the company could expect to earn. This also prevented competing firms from gaining access to the market. Telephone carriers "refused customer ownership of terminals, refused to permit competitive toll facilities access to local

telephone facilities, refused to permit independent telephone companies access to long-distance toll facilities, refused to permit users to share or resell communication lines, refused to purchase equipment on a competitive basis." (Irwin, 1981 p. 16). Until recently, regulatory agencies dared not challenge that assertion lest capital's dire prediction of catastrophe come to pass.

Service Universality and Systemic Integrity

Service universality through cross subsidization is also a notion used by telecommunication firms to justify their monopoly position in order to equalize the cost of services throughout a system. Consequently, urban telephone areas were shown to support losses in rural areas and heavily used long-distance routes were shown to support lightly used routes. Layers of subsidies (or tariffs) grew, cementing private companies under the control of Bell. This also served to obfuscate cost breakdowns for analytical purposes.

The notion of systemic integrity asserts that "network performance can be maintained at high levels only through centralized administration of 'end-to-end' operations." (Babe, 1990, p. 143). In other words, the corporation requires complete control of the public network and all its hardware to prevent the contamination of the system from foreign appliances. Babe illustrate the idea with the 1975 case of Dr. Morton Shulman-- then an Ontario MPP-- who complained to the CRTC that Bell blocked his telephone service because he had attached an automatic dialer. Bell

argued that its client could only lease such equipment because Bell had not published a "requirement" (permission) allowing the device to be attached. The CRTC agreed with corporate interests by contending that it had no jurisdiction in the matter.

Concentration of Ownership

As well as tolerating patterns of monopoly ownership, the CRTC closed its eyes to the on-going process of ownership concentration and the loss of local ownership. Numerous instances of cable companies swallowing smaller, local organizations into their fold have been documented. By 1973, a significant concentration of capital was observed. "In 1973, it has been estimated that ten of the largest public companies accounted for 71 percent of industry profits through control of 33 AM, 15 FM, and 19 primarily television stations." (Babe, 1979, p. 51).

The situation continued into the 1970s. Hardin cites several examples of concentration. Premier Cablevision, already holding multiple licences, was given additional cable geographies. Agra Industries picked up six different cable licences in smaller areas, and CHUM Limited, owner of six radio stations, picked up two television stations. (Hardin, 1985, p. 259). Through a series of takeovers, corporations in large urban centers gobbled up outlets in outlying communities. Despite an original policy of local control, the CRTC, under a succession of government-appointed leaders, turned a blind eye to such changes.

Such concentration is not limited to broadcasting but has

become evident in the telematics realm. One writer asserted that the market orientation on the part of government and planners, working in tandem with corporate forces, has led to the concentration of telematic capabilities among a few companies.

The writer states that "reliance by regions on information and processing at the center could accelerate the marginalization of people and communities outside of the metropolises, just as it marginalizes Canadian institutions in relation to American head offices." (Lorimer et al., 1988, p. 259). Such technological concentration could result in the hegemony of powerful forces in the technological realm and pose a competitive threat to regional development.

Another example of pro-business attitudes on the part of the CRTC that describes its penchant to concentrate corporate ownership was demonstrated when the commission awarded an FM radio frequency in Toronto to a country music station instead of a black/dance music station. Studies of Toronto radio showed that the under-35 age group (including a high percentage of blacks) was the least well served segment of the marketplace and that overwhelmingly high numbers from that market wanted dance music, not country. Despite a 2-1 response of the CRTC's investigative committee, the Commission as a whole voted 6 to 3 in favour of a country music station from Calgary. (Globe and Mail, 10 Oct. 1990 p. A6).

The dance music-music controversy shows how

> successful the Tory strategy has been regarding the CRTC. By molding a supposedly independent commission in its own image (pro-business, anti-regulatory and with scant concern for the public interest), the federal cabinet doesn't have to go through the embarrassment of overriding its decisions. The CRTC will make rulings the Tories like all on its own. (Drainie, Globe and Mail, p. E-1).

CRTC's Internal and External Relationships

The CRTC is also fraught with internal disquiet, a state which disrupts consistent and evenly applied supervision. Internal disunity neutralizes the efforts of the CRTC. Clifford indicated that this condition impacts on the licensing mechanism: "It is therefore concluded that the licensing mechanism may have been more effective, efficient and meaningful if the significant gaps and internal conflicts had been eliminated." (1983, p. 492). Generally, the researcher states that licensing may not be desirable in circumstances where "internal conflict" prevents objective regulatory decisions (1983, p. 491).

Lack of organization and identifiable compliance regulations in the CRTC also work in favour of corporate interests. During examination of the CRTC's regulatory activity, "the researcher has not discovered clearly articulated, coherent compliance programs." (1983, p. 494). Although elements of a "program" can be observed, there is no all-encompassing, coherent program that the CRTC could

use to chart whether licensees were, in fact, living up to their promised performances in order to achieve better licensee compliance. He adds: "At present the principal concern of Commission staff in broadcasting matters is in connection with preparation for hearings on licensing applications: it is suggested that if the orientation and efforts were instead directed in terms of a Commission compliance strategy, better compliance might be achieved in matters of programming content." (Clifford, 1981, p. 495).

CHAPTER FOUR

THEORETICAL UNDERPINNING

Three Frameworks for Intervention

Slack's probing into the "the ways we think about technologies" provides researchers with innovative frameworks in which to analyze relations between public policy and intervention. These frameworks are vantage points from which to view the introduction of any innovative technology. By changing the frame, i.e., the way the technology will be introduced into the society, the technology will impact with different consequences. These frameworks provide a less ambiguous understanding of the operation of the CRTC and why the commission responded to the introduction of interactive vidoetex in the manner it did.

Slack reviews three constructs: Technology Assessment, Alternative Technology and Luddism. Technology Assessment describes a pattern which analyzes the positive and negative impact of any particular technology with a view to controlling those effects. This model resonates throughout the literature on technological assessment in North America. The ideology of Technology Assessment (TA) seeks to inquire into the short- and long-term effects arising from the interaction of technologies and societal systems. Slack (1984) and O'Brien et al. (1982), concur that the Technology Assessment approach is tied to the decision-making processes of government-- and, by extension, business, which

influences government policy. Technology Assessment, therefore, is characterized by its relations to capital.

Alternative Technology is a view embraced by "counterculture" groups who desire to control the negative impact of communications technology and to make technology responsive to communities who inherently lack power. Slack argues that it "does not serve the business and government as conspicuously or consciously as Technology Assessment, but it does serve to the extent that Luddism does not." (Slack, 1984, p. 3)

Luddism

Luddism is a belief that technology is objectionable because it is inherently harmful. The notion has been elaborated upon by Ellul (1964) and Marcuse (1964). In the Luddite frame, the inner essence of technology reflects alienation, fragmentation, and regimentation It engenders the affliction of mass consumption, the breakdown of family and capitalist domination. This perspective is the substance of revolutionary theorists who call for a radical transformation by means of revolution to unshackle the fetters of technology.

For example, in the videotex technology context, chat lines--interactively conveyed messages through computers-- provide an illuminating example. This service is the most popular delivered through ALEX. Chat lines express a social realm where the pervasive effects of alienation compel people to initiate their amorous escapades through this anonymous network. These alienated expressions consist of fragmented interludes of anonymous

intimacy-- often for the purpose of contracting sexual engagements

With ALEX, the critique consists of the alienating nature of the technology. To purge ALEX from the public marketplace would be justifiable in intellectual terms because it is a service that promotes alienation. From a Luddist perspective, the essence of Canadian society must be modified to eradicate alienation; ALEX merely serves as a typical representation. Purposeful intervention can only take place by a revolutionary approach, hardly an option for North American society.

Marcuse best sums up the direction of such thought:

> The technological transformation is at the same time political transformation, but the political change would turn into qualitative social change only to the degree to which it would alter the direction of technical progress-- that is, develop a new technology. For the established technology has become an instrument of destructive politics. (Marcuse, 1964, p. 227).

Although the notion of Luddism has specific applications to this case study on ALEX, it does not provide a realistic approach to intervention. Consequently, this study will not dwell on Luddism as an intervening strategy for videotex technology in Canada.

Technology Assessment

The impetus to examine technological impact emerged during the 1960s and achieved a prominent status in the United States with the formation of the Office of Technology Assessment (OTA) in 1968. (Baroush et al., 1980, p. 7.; O'Brien et al., 1982, p 22, Dickson,1974, p. 3).

The OTA was initiated by Emilio Q. Daddario, the "founder" of Technology Assessment and former U.S. Representative who introduced the 1966 Bill to establish the OTA In so doing, he set the standards for the ensuing debate on technological assessments. (O'Brien et al 1982 Index p. 301.) TA allows technological innovation as inexorable, and can only venture to minimize threats In Canada, the CRTC serves a similar function as the OTA in the communications realm, since it holds public hearings to examine the pros and cons of any new technological development. The CRTC was established in 1966 to regulate the entire Canadian Broadcasting System, including cable television, satellite communications and, later, telecommunications.

The following is one definition of TA:

> Technological assessment is a form of policy research which provides a balanced appraisal to the policy maker. Ideally, it is a system to ask the right questions and

> obtain correct and timely answers. It identifies policy issues, assesses the impact of alternative courses of action and presents findings. It is a method of analysis that systematically appraises the nature, significance, status, and merit of a technological progress (Baroush et al.,1980, p. 7).

A Frame Characterized by Capital

Technology Assessment is the most powerful and pervasive frame operating in the capitalist state. By definition, it is the vision of industry and government; a frame to generate policy on the relative merits of any new technology based on the perceived impact of that technology on society. (Dickson,1974, p. 2; O'Brien et al.,1982, p. 21). Underlying the notion of TA is the belief in the inherent benefits arising from technological progress. As a result, state interventions are predicated on the doctrine that policy must not inhibit social or economic advancement.

Robert Babe shows how the Technology Assessment model can approach the status of myth when he describes the doctrine of "technological imperative." This concept contends that technological developments are inevitable and beyond human control and holds that "human choices are severely limited, if not altogether illusory." (Lorimer et al., 1988, p. 59). Since technological evolution is inevitable, it affords no entry point for intervention. Babe contends that this notion is advanced by public servants who are positioned to influence public policy. The model of

technological imperative points out the futility of intervention, asserting that a nation has no option but to embrace development or suffer the alternative of falling behind "in the international race to improve productivity of all sectors of the economy."

One perspective that contributes to the understanding of the underlying values of Technology Assessment is provided by Manley R. Irwin in a published monograph for the Economic Council of Canada. He believes that any paradigm which relies on government intervention through regulatory commissions becomes a static model. "The static model places undue reliance-- not to say faith-- on the wisdom of the regulatory commission. (Irwin, 1981, p. 78) This notion presupposes that the regulatory agency is imbued with all the necessary knowledge, judgement, and skills to act on behalf of all the people. "The static model, in short, presumes a regulatory agency is endowed with a rare degree of managerial perspicacity." (p. 78).

Harman argues that technological assessment is just a "euphemism for anticipatory control." Since control is synonymous with interference, and interference is an anathema to a "free enterprise" system, intervention must be avoided "because it jeopardizes certain basic freedoms that were difficult to achieve." (Thompson, 1979, p.15). The Technological Assessment interventionist strategy asserts that the deleterious effects of any technology can be controlled when public policy safeguards are deployed "for the public good."

This view contends that the negative effects of a communications technology can be contained by applying specific interventionist tactics. Such directives settle at the superficial level of, for instance, the imposition of price restraints or rules for marketing. The CRTC, for example, restricted Bell Canada from entering the electronic publishing field with its Yellow Pages directory. This intervention maintained strict separation of powers for Bell as a telecommunications carrier and not as a publisher in order to avoid a possible challenge to free speech. The CRTC also required Bell to institute tracking measures so that losses attributable to ALEX would be clearly delineated and not carried by telephone subscribers.

When examining the American experience, Coates reports that assessments "were concentrated on areas of intense political concern and conflict rather than directed to the broader range of advancing technologies." (O'Brien et al., 1982, p. 43). Being framed by and for the interests of government and capital, the Technology Assessment perspective is oriented for the short term, the politically expedient. A long-term vision that predicts short-term hardship is more than likely circumvented.

This was the case with the CRTC, which ignored the long-term benefits of interactive videotex by not compelling Bell Canada to provide ALEX terminals to all telephone subscribers. By taking this bold step, an electronic infrastructure would have been established in Canada, the paper-based directories would have become

redundant, and a knowledge-providing instrument would have been given, available to ordinary Canadians everywhere. It was expedient for the CRTC to adopt the free enterprise model for ALEX, limiting accessibility to business and more affluent consumers.

Lobbying Efforts

Efforts exerted by forces representing the vested interests of the corporate federal state influence the process of intervention. Stanbury points out that "...the existing stock of government intervention reflects, in part, the previous lobbying efforts of firms in the industry." W. T. Stanbury, in his book Business-Government Relations in Canada, describes how organizations as powerful as Bell Canada, for example, convey "messages" to the CRTC These messages reflect the prevailing interests and values of the business organization by means of sophisticated systems. In Bell's case, a regulatory affairs unit directs information through formal and informal channels to the CRTC. The unit's purpose is to maintain relations with the federal and provincial communications departments with a view to keeping informed about policy developments and to exchange information. The unit operates as a lobbying instrument.

The author also provides an example of informal relations between the CRTC and the professional staff. He describes an inner group, an old-boys network, which exemplifies the close relationship between capital and the CRTC and which weakens the will of the Broadcasting Act. A sense of duty can be tempered when

personal associations or interlocking business relationships mediate the decision-making process. He writes: "Some Ottawa insiders were slightly shocked when, during the course of hearings on pay-television licences, one of the applicants hosted a cocktail party for CRTC commissioners, CRTC staff, and various representatives of other applicants. Almost all the commissioners attended and during the course of the event were seen in conversation with employees of their host." (Stanbury, 1986, p. 31, p. 373).

Limited Public Input

Criticism leveled at the Technology Assessment paradigm by such authors as Thompson (1979) and Brooks (1989) pertain to the limited public input into the decision making process relating to technological change. They assert that forces with vested interests overwhelm the process because there is no mechanism in place for public participation. Essentially, it becomes a potent vehicle to justify-- to legitimate-- the decision-making process. This was clearly the case during the ALEX hearings.

In the CRTC's ALEX decision, the report minimally alluded to the submission of alternative writer Professor Kevin Wilson of the Université de Québec and did not mention Université de Montréal Professor Jean-Claude Quédon at all. Both academics advanced the need for privacy and the free or low-cost distribution of ALEX terminals. The CRTC's Decision report made no mention of either the privacy or free access concerns raised by these members of the

public. This provides evidence to the argument that the CRTC, as a regulator in the Technology Assessment frame, does not speak to the needs of the public nor does it provide a means for substantive public participation.

In addition, Bell's rebuttal to the interveners contained no reference to the free access issue and only a cursory remark about the need for privacy in the system. Bell stated that privacy would be well guarded by virtue of a contractual agreement between itself and the shareholders. This agreement prohibits Bell from releasing only basic subscriber information like name, address, etc. Bell also stated that data accessed would be limited only to the broad categories, such as ALEX 2 or ALEX 3. The public would have to take Bell's corporate promise at face value. In its ALEX decision, the CRTC is shown to speak to the needs of the business community, relying on the monopoly's "word" to protect the public.

A researcher of the CRTC, J.C. Clifford, affirmed the lack of public involvement in substantive issues on complaint procedures and policing corporate adherence to Canadian programming. He found that the CRTC does not make its policies about content of broadcasting readily accessible to the listening audience. This reduces the effectiveness of the CRTC in monitoring content. Further, when there were complaints, the broadcaster was required to respond directly to the complaining party so the CRTC took no direct role in seeing that complaints were redressed. (1983, p. 500). Clifford writes: "Complaints and responses were not made part of the public record, nor were complaints always referenced in

subsequent licensing decisions." (1983, p. 501).

THE CRITIQUE OF TECHNOLOGICAL ASSESSMENT

Technology Assessment obviates the need to examine the technology at its formative level-- the historical context which includes the regulatory agency and the technology. This thesis has shown that the CRTC evolved from government representatives who endowed the commission with the federal state's set of values and prescriptions. As well, this thesis has shown that the CRTC serves the interests of capital by acquiescing to corporate pressures. By excluding the historical circumstances of a technology, contemporary debates become manageable and limited in scope.

In 1988, the CRTC established policy on interactive videotex arising out of historic imperatives. The Department of Communications invested some $100 million to develop Telidon. The opportunity to use developed, sophisticated technology which was literally free did not escape Bell. The fact that Telidon was a Canadian product designed for the North American marketplace did not escape Bell Canada. The importance of Telidon's history in Canadian broadcasting was never addressed during the monopoly 's submission, yet it was an underlying factor in choosing ALEX technology. It would be too embarrassing to use a foreign-made product when a better one is available at home. Nevertheless, the CRTC's decision effectively blocked the introduction of the European Minitel product and ensured that the home-grown device would achieve maximum priority.

Fundamentally, the intellectual inadequacy of technology assessment resides in the assumption that the government has the capacity to arbitrate competing interests to elicit balance and harmony in the society. The perspective reduces the significance of capital in influencing the outcome of the government intervention.

The Ideology of Industrialization

In what he calls the "ideology of industrialization," Dickson critiques Technology Assessment for legitimating social ills on the basis that technology operates to maximize efficient industrial production. The notion that technology functions to augment efficiency appears frequently in the literature devoted to technology and public policy issues. Dickson asserts, however, that within the rubric of "ideology," the social consequences, such as authoritarian forms of behaviour, loss of privacy, hierarchical regimentation, and fragmentation of the labour force are easily ignored. (Dickson,1974, p. 42, p. 64). He asserts that the degree of political exploitation and manipulation of humanity and environment associated with the industrial process has not been adequately revealed and stressed.

Dickson critiques the Technology Assessment view for elevating a "use-abuse" model-- how the technology will be employed -- as the pre-eminent factor in determining the viability of any new communications technology. The premise is that the technology remains "blameless," since the problems arise from the manifestation of the technology and not the technology itself.

(Dickson, 1974, p.16).

An extenuating dilemma arises because focusing on the effects of a technology precludes the possibility that those effects in themselves give rise to causes. Slack maintains that cause and effect are solidly interlinked and impact on each other in a continuous bombardment of causes and effects. Critics of the Technology Assessment discourse assert that it is impossible to predict the consequences of a new technology by applying the Technology Assessment paradigm. They argue that Technology Assessment is so ubiquitous that it becomes impossible to determine the locus for appropriate intervention. In effect, they state, Technology Assessment is not "doable." (Baroush et al., 1980, p. 8).

Technology Assessment and the Canadian Context

An important criticism of Technology Assessment is that it arises from market-based models of development. Technological developments depend, ultimately, on the initiatives of companies which already dominate, by virtue of their size and economic power, the field. Canada, in the communications sector, is modeled on the United States paradigm where development is mainly concentrated on those advancements which provide immediate revenue by business or private business consumers. The market-based developmental model is not concerned with a national-social transformation. It is based on mainly American assumptions on how broadcasting technologies should be paid for.

This model inherently preserves the existing power relationships in Canadian society. Rather than support the long-range goals of videotex, with its immediate requirements for large investments, the CRTC chose the US model which limits access to knowledge-producing technology to those who can afford it. "This model assumes indirect, reputedly significant economic benefits accruing to enhanced business activity, and it ensures that telematics applications are developed by reference to return on investment criteria." (Lorimer and Wilson, 1988, p. 258).

By mandating Bell Canada to provide ALEX services on a pay-per-play basis, the CRTC illustrated the Technology Assessment model-- a market driven paradigm-- for Canada. Instead of examining the French pattern of technological dissemination where all members benefit, the CRTC excluded this possibility from the public agenda. The elements of social justice heralded by the Alternative Technology model are not evident in the Canadian context.

In examining documentation recording the CRTC's assessment of Bell Canada's submission, it can be readily surmised that the agency confirms Slack's hypothesis. The CRTC extended its tacit approval of Bell's request on the basis that, at the very least, it could do no harm to social or economic advancement. The CRTC underscores the belief that technology is fundamentally beneficial for the consumer. In its 1989 Annual Report, the CRTC clearly indicated that interactive videotex is "useful."

It stated:

> The Commission considers that videotex services such as ALEX are useful and have the potential of benefitting a wide spectrum of users. While it is possible that the ALEX service might experience a period of unprofitability before a sufficient customer base is established, the Commission considered that it was in the public interest for Bell to have the opportunity of conducting this trial under certain conditions. (CRTC Annual Report, 1988-89, p. 43).

Slack asserts that the interests of capital are expressed through Technology Assessment-- that it speaks for the needs of the corporate state. There would likely be no immediate economic benefits-- just investment-- by the distribution of ALEX terminals to all telephone subscribers. The CRTC's approval of Bell Canada's application enabled the monopoly utility to achieve a hegemony over its interactive videotex rival, CETI, and to secure the hegemony of Canadian technology. Bell Canada argued that it was strategically positioned to rationalize its telephone operation for the deployment of interactive videotex. The CRTC's annual report alludes to "certain conditions" favouring Bell Canada's project but fails to reveal the nature of these factors.

Since Bell is a public monopoly, tensions arise regarding its motive to service the "public good" or to provide profit for its

shareholders. ALEX's limited availability to the mass public served to profit its shareholders. The enormous long-term investment to mass distribute ALEX was obviated, yet customers with higher incomes could avail themselves of ALEX-based information.

In its ALEX Decision, the CRTC never referred to the need for mass distribution by drawing on the Minitel experience. The CRTC examined ALEX within the limited frame of Technology Assessment where costs, obligations, and services remain paramount factors. Essentially, these conditions enabled Bell's project to become financially viable. The higher discourse based on the general social benefits ALEX could provide is not an element of the Technology Assessment frame-- the frame to which the CRTC is a de facto subscriber.

As a result, the federal state is said to fulfill its mandate to protect the "public interest." Intervention legitimates decisions taken in the interest of capital and is proclaimed in the guise of public policy.

When the federal state supports the interests of capital, in this case the monopoly demands of Bell Canada, it does so under the rubric of technological advancement. Capitalist institutions--in this case study the public monopoly-- prevail in the formation of public policy in the Technology Assessment paradigm. In approving Bell Canada's submission, the CRTC legitimated contemporary and historical state intervention in interactive videotex technology development and legitimated de facto monopoly interests. The role

of the state as the arbitrator of the public will via the CRTC was reaffirmed.

Lorimer and Wilson provide the following insight when they wrote:

> .. telematics is like any other area of technological or industrial advance. It will serve the interests of those who own or control the applications and their delivery to citizens and institutions. If those interests are for profit or improved corporate efficiency, then other interests, however much lipservice is paid to them, are likely to be ignored. In Canada, this means that telematics will widen rather than narrow discrepancies between the "haves" and the "have nots". (1988, p. 260).

(Bell's appetite to achieve market domination is predictable given the corporate culture from which Bell ascended. The firm was initially owned by the American giant AT & T until the US Congress forced it to divest Bell in 1956. Nevertheless, interlinking patents and management contracts sustained the pursuit for market domination.)

In the case study of ALEX, the CRTC did not address the fundamental issue of free distribution of terminals to supplant the white pages directory and actuate a comprehensive télématique infrastructure in Canadian society. Instead of compelling Bell Canada (and the other telephone monopolies elsewhere in Canada) to provide ALEX to all telephone subscribers in order to establish a

critical mass, the CRTC confirmed the failure of interactive videotex in Canada.

And it was a well-known fact that the requirement for a critical mass was absolutely essential for a successful public offering of ALEX. Numerous articles surfaced outlining the "secret" of Minitel's marketing success and mentioned other European countries incorporating such tactics. In one Telephony Magazine article, the journalist reported that Germany's Deutsche Bundespost attributes its low subscription rates to the expense of its service and that further steps were being taken to lower the subscription rates. "Further, Spain's Telefonica is linking its Ibertex service with France's Teletel. The UK's British Telecom also is reportedly considering a Teletel-like marketing approach." (Telephony, 27 June 1988, p. 44, 46).

As the CRTC's decision proves, the telephone monopoly assumed virtual control over videotex in Canada and was granted all but one of its submission (Yellow Pages directory). The company reaffirmed its monopoly position by overwhelming and eliminating any competition (CETI) through its superior marketing and hardware reach. The millions of dollars invested by the Canadian government to develop Telidon hardware was adopted by Bell engineers for ALEX. No mention in the literature or news reports is made of how taxpayer dollars found their way to ALEX through Telidon research.

Technology Assessment assumes that a body such as the CRTC speaks to the needs of policy makers when it asserts a capitalist model for ALEX. Rather than boldly selling the French concept of widespread accessibility to Canadians, policymakers chose to dismiss this possibility. The way Canadians were permitted to access ALEX was consistent with the government's economic policy. In 1988, the Conservative government of Brian Mulroney was more involved in a pro-business program to divest government of Crown corporations, to reduce social programming, and to reduce public debt than to encourage new capital ventures to benefit Canadians in the long term. The CRTC, as an extension of state policy, followed the implicit direction taken by the Conservative government of the 1980s. In Selling Out: Four Years of the Mulroney Government, Chodos et al. assert that the basic ideology underlying the Mulroney government was its entrenched capitalist approach to governing, a perspective that could be asserted for any leadership of a capitalist state.

The authors wrote:

> But underlying the government's approach to all the issues that have faced it in the last four years, from the sublime to the ridiculous, has been its basic ideology. This ideology is not conservatism, nor classical liberalism, but is based on the idea, more solidly entrenched under Mulroney than in any previous government, that government is a business and business

> is government. It is the ideology of the bottom line. (Chodos, R. et al., 1988, p. xii).

Consequently, this Technology Assessment model prefers high fees for information from relatively affluent customers. The alternative, the French Socialist version exemplified by Minitel, was never a subject for debate in Canada. The idea never attained a position on the public agenda.

Alternative Technology

The second frame ascribing a different vision of intervention is termed Alternative Technology. This perspective distinguishes itself for its focused commitment to enhancing the human condition. Alternative Technology reflects a population willing to abandon the excesses of consumption for a new vision: quality of life.... "that technology should be designed to meet human needs and resources-- and not the other way around." (Dickson, 1974, p. 39).

The Alternative Technology model subsumes a different construct. "Its general approach starts from the premise that the roots of the problem created by modern technology are to be found as much in the design of the technology itself as in the uses to which it is put. This view asserts that solutions can only be launched through radical changes of society's technological and industriai base." (Dickson, 1974, p. 38).

Alternative Technology emanates from a public's social beliefs which define a technology based on "convivial" considerations. The Alternative Technology frame stresses the aspect of conviviality as an essential criterion in the critical examination of the new machines.

This view of technology is perceptively defined by Slack:

> Technologies serve a society based on the goals of personal growth and fulfillment to the extent that they contribute to this kind of person-to-person, "natural" communication. Communication technologies are measured, therefore, by their ability to contribute to personal growth and fulfillment as well as to interpersonal communication. (Slack, 1984, p. 32).

Ivan Illich introduces this notion in Tools For Conviviality. He states: "Such a society, in which modern technologies serve politically interrelated individuals rather than managers, I will call convivial. I have chosen 'convivial' as a technical term to designate a modern society of responsibly limited tools." (Illich, 1973, p. xiii). Illich bases his utopia on the notion that convivial tools must function to promote interpersonal communications, foregoing the excesses of material consumption.

He writes:

> What is fundamental to a convivial society is not the total absence of manipulative institutions and addictive goods and services, but the balance between those tools which create the specific demands they are specialized to satisfy and those complementary, enabling tools which foster self-realization. (1973, p. 25).

Both the Technology Assessment and Alternative Technology frames arose out of a fear of unfettered technological growth. One of the differences between the two, however, is that Alternative Technology exudes a highly charged discourse. Dickson, who gave voice to the Alternative Technology movement in England during the 1970s, provides the following rationale:

> Contemporary society is characterized by a growing mistrust of technology. The many social benefits which technology has helped to bring about are being increasingly counterbalanced by the social problems associated with its use. These range from the oppression and manipulation of the individual to the widespread destruction of the natural environment and the depletion of the world's finite supply of natural resources. (Dickson, 1974, p. 9).

To appraise the " values" of a technology, this movement examines its historical roots -- a specific set of conditions-- to

explain why the effects have emerged. In other words, the ethical and moral properties of a technology can be defined by judging the motives for its inception. Therefore, by exploring the initiatives that instigated such technological innovation, the social and political "values" implicit in the technology will become apparent. (Dickson 1974, p. 41). For example, early textile workers in the 18th Century were compelled to group together into rural factory organizations not only because it led to more efficient production but because it imposed discipline and regime on cheap-labour farmers and freed capitalists from existing craft traditions which controlled technological innovation. (Dickson, 1974, p. 72).

In the case of ALEX, the historical aspect assumes its own perspective. The values implicit in ALEX emanated from the birth of Telidon, which in itself was geared almost exclusively for business-- from farmers to bankers to newspaper publishers to stock marketers. Telidon was an attempt to actuate Canadian technological production... just as Bell hopes it will achieve with the ALEX product in the rest of Canada and the United States. Little of the social potential as a knowledge-providing technology for a mass audience was a motive fo the evolution of interactive videotex. The fact that interactive videotex would have a positive environmental impact by reducing the need for paper-based directories was also never a historic concern.

The Counterculture Movement

For Slack, contemporary Alternative Technology models express the counterculture movement. Slack states that this movement embraces a "fascination" for new age machinery and sustains a deep mistrust of the corporate state. While these publics are willing to embody the convivial aspects of new age technology-- from decentralized office work to interactive computer chat lines-- they also forebode the sinister machinations of the corporate state.

One strategy utilized by adherents of Alternative Technology to impact on decision making bodies is to present documentation condemning the possible abuses of new technology. This was the case regarding the hearings examining Bell Canada's ALEX proposal. Submissions reflecting the Alternative Technology movement were presented to the CRTC during these meetings.

Kevin Wilson argued a clearly Alternative Technology posture. His submission elevated privacy concerns as an issue to be addressed. His comparison of Canadian and European privacy safeguards showed that Canada needs much improvement in that domain. In addition, Wilson urged that Minitel be distributed free of charge so that Canadians could acquire a telecommunications infrastructure of enormous potential. Only one other group addressed the mass acceptance of ALEX and privacy safeguards.

University of Montreal Professor Jean-Claude Quédon, representing an inter-disciplinary group which studies videotex also urged the CRTC to reduce the monthly fee of ALEX to a negligible amount. In addition, he urged that specific laws be invoked to protect privacy aspects.

(The only other non-business group to submit a brief to the CRTC was the Canadian Consumers Association (CAC). This organization argued on purely financial grounds, contending that the CRTC should not permit Bell to charge non-compensatory rates during the ALEX trial. This organization made no mention of a critical mass requirement for ALEX nor did it raise privacy concerns.)

One alternative author, Ian Reinecke, urged vigilance of the ownership of videotex publishing services, endorsing a separation of the telecommunications carrier and the supplier of videotex information. "The danger with a technology is that opinion that differs from the system's proprietors may not be transmitted." (Reinecke, 1982, p. 70). Although the CRTC disallowed Bell from providing Yellow Pages advertising, it left the door open for Bell to gain entry into the field when it recommended that a public forum be convened to debate the matter.

Aternative writers Lorimer and Wilson contend that videotex preserves the existing power relationships and maintains an economic status quo as an implicit objective of its development. (1988, p. 257). The CRTC positioning of ALEX for economic

advantaged provides evidence for their assertion. Most of ALEX's non-chat line products and services provide additional approaches to enjoy increased informational enrichment. The cost of ALEX at $7.95 per month plus taxes, plus the high cost of per minute on-line charges make the service accessible mainly to those with surplus, discretionary income.

> Individuals and groups who are most needy in terms of the potential information and communications capabilities of telematics receive the least. This is because such individuals and groups rarely qualify as prime consumer targets in that they are poor, live in areas like the North, that lack conventional communications infrastructure; and are perceived as lacking computer and/or communications literacy. (Lorimer and Wilson, 1988, p. 257).

Moreover, as this information is accessed more and more by business and professionals, the authors suggest, the cost for the service tends to rise, further exacerbating the situation, since the gap between those who can afford it and those who cannot grows wider. The need to manipulate the information requires higher and higher degrees of computer sophistication, which makes videotex less accessible to the ordinary individual.

Lorimer and Wilson succinctly conclude this chapter when they write:

> Because telematics is based on advanced technology, the potential of which is realized through very sophisticated computer and communications systems applications, most people approach the subject with cap in hand. This helps to explain our apparent reluctance to make telematics an important item on the political agenda or, indeed, to articulate criteria for the technology's introduction here that are based on principles of social justice rather than the inherent complexities of telematics technology. (1988, p. 260).

This aspect of social justice, a basic attribute of the Alternative Technology frame, is lacking in the Technology Assessment paradigm. The Canadian communications regulatory body, the CRTC, is strategically positioned to adapt the notion of Alternative Technology into its deliberations. Alternative Technology is a viable perspective in judging the merits of any new technology. In terms of this case study, the French experience proves that interactive vidoetex can be made available to all. The dilemma arising from the need to guide and to plan the collective would be more effectively resolved by integrating the convivial Alternative Technology frame.

CONCLUSION

Telematic services have added new informational dimensions to advanced capitalist systems. These services provide immediate, up-to-date, manipulatable information that is readily portable anywhere in the world. For business, videotex provides data that increases productivity and rationalizes human and commodity resources. For consumers-- of all ages-- videotex provides information on any subject that can sustain a market; the technology can render a library of knowledge. The technology enables interest groups to establish far-flung networks of immediately interactive communications. The potential of videotex to enhance the human condition is enormous.

In Canada, however, the mass diffusion of interactive videotex is unlikely. The cost of enjoying these services is prohibitive to most people. The dissemination of such technological advantage is limited to business and to groups with an above-average disposable income. Canadians whose financial growth is related to knowledge access-- such as stock market information-- can allocate their incomes to such expenditures. But others, where knowledge in itself is the reward, are locked out by the high costs imposed by the telephone monopoly. Consequently, the educational potential of ALEX is minimized because government policy, as articulated by the regulatory agency the CRTC, adopts the Technology Assessment frame.

This model preserves the existing power relationship in Canadian society. Technology Assessment defines the way the Federal state intervenes-- through the CRTC-- when a new technology is being proposed for general availability. Technology Assessment is a frame committed to the belief in a free market system where the regulatory agency acquiesces to the needs of capital. Consequently, the knowledge-providing service inherent in interactive vidoetex is reduced to the level of a commodity, devoid of any inherent value, a product to be bought and sold by businesses or individuals with capital. The Technology Assessment frame serves the interests of the corporate state. The Technology Assessment frame views ALEX as a privilege only to be accessed by ordinary people with sufficient income, not as a conventional right of citizenship, the property of all Canadians.

As a result, the information-weak elements benefit the least from Bell Canada's ALEX, widening the gap between the information haves and have nots in Canadian society. "In the quality of personal and work experience," states Edwards in Communication Canada," and in the ability to define and participate in valid communities, telematics applications have the potential to liberate people. Failure to realize this potential would amount to betrayal of the public interest." (p. 255) The CRTC, which articulates the Technology Assessment frame, has betrayed the Canadian public by not insisting that ALEX be accessible to all Canadians. By preventing the notion from reaching the public agenda for debate, the CRTC committed a significant breach of trust.

Yet Technology Assessment views the short term, responding to the forces of the market-driven economy which demands that short term profits supersede long term benefits. Only those products and services that provide immediate financial gain are exploited. The long-term social benefits and goals are neglected.

Other countries have opted for a different frame in regulating interactive videotex. France constructed a completely different model for telematics. The state chose a frame that is more aptly defined as Alternative Technology, wherein technology emphasizes the convivial needs of society. The state made the technology available to all. This eliminated the need for paper-based, environmentally unsound directories. The French experience shows the potential for all citizens to employ interactive videotex to enhance their lives-- from establishing communication networks to designing how-to data banks. The evidence shows that Canadians are forfeiting the potential to enjoy a communications technology that can link the nation from coast to coast.

Bibliography

Babe, R. E. Canadian Television Broadcasting: Structure, Performance and Regulation. Economic Council of Canada: Supply and Services Canada Ottawa, 1979.

Babe, R. E. Telecommunications in Canada: Technology, Industry, and Government. University of Toronto Press: Toronto, 1990.

Baker et al. Public Policy Development: Linking the Tecnical and Political Process. New York: John Wiley & Sons, 1975.

Baroush et al. Technology Assessment: Creative Futures . North Holland, New York: Thomond Books, 1980.

"Bell plans to spend $45 million on ALEX system," Montreal Gazette, 25 Nov. 1988.

"Bell's ALEX Service losing Subscribers," Montreal Gazette, 4 July 1991.

Brooks, S. Public Policy In Canada: An Introduction. Toronto: McClelland & Stewart Inc., 1989.

Canada Gazette. Procedings of the House of Commons. Ottawa: Department of Supply and Services. Part 11, Vol 113, No.15.

Chodos R. et al. (1988). Selling Out: Four Years of the Mulroney Government Toronto: James Lorimer and Company.

Clifford, J. C. Content Regulation in private FM Radio and Television Broadcasting: A Background Study about CRTC Sanctions and Compliance Strategy. Unpublished study for the CRTC. Ottawa, Ontario, 1983.

Conference Transcript. Viewdata and Videotext, 1980-81, A Worldwide Report Knowledge Industry Publications Inc., White Plains: New York, 1980.

CRTC. Annual Report. Ottawa: Supply and Services Canada, 1980.

CRTC. Telecom decision CRTC 88-16. Ottawa: Supply and Services Canada, 1988.

CRTC. Telecom Public Notice 1988-22. Ottawa: Supply and Services Canada, 1988.

Dickson, D. Alternative Technology: The Politics of Technical Change. Great Britain: Fontana/William Collins Sons & Co. Ltd., 1974.

Dranie, B. "Spectator," Globe and Mail. 20 Oct. 1990, Section p. E-1.

Fabiani, Christine. "Minitel au Quebec," Québec Science. February 1988.

Fennell, Tom and Marc Clark, "Showdown in Montreal," Maclean's March 14, 1988.

"Firm profits from French Videotex," Network World. Vol: v5n16: 18 April 1988.

Godfrey, David and Ernest Chang et al., The Telidon Book. Vancouver: Press Porcépic, 1981.

Hardin, H. Closed Circuit: The Sellout of Canadian Television. Vancouver: Douglas and McIntyre, 1985.

Hargaddon, R. "Uncommon Carriers: Canadian Cable Policy 1968-1990." Unpublished Master's Thesis., Concordia University, 1990.

Illich, I. Tools For Conviviality. New York: Harper & Row, Perennial Books,1973.

Irwin, M. R., "Technology and Telecommunication: A Policy Perspective For The 80's" Manuscript for the Economic Council of Canada Ottawa: Ontario, 1981.

"Judge Allows Phone Companies to Provide Information Services," New York Times. 26 July 1991.

Lorimer, R. et al. Communication Canada: Issues in Broadcasting and New Technologies. Toronto: Kagan and Woo Limited, 1981.

Marchand, Marie. The Minitel Saga. Paris: Larousse, 1988.

Marcuse, H. One-Dimensional Man. Boston: Beacon Press, 1964.

McLuhan M. and Quintin Fiore. The Medium is the Massage: An Inventory of Effects. Harmondsworth, Middlesex England, Penguin Books, 1967.

MacGregor, Cairn. "Alex appeals to all who dread "C" word," Montreal Gazette 10 Dec. 1988.

"Montreal firm wins rights to Minitel." Montreal Gazette. 22 April 1988.

Mumford, L. Technics and Civilization. San Diego: Harcourt Brace Javonovich Publishers, 1963.

Murphy, M.M. The World Wired Up: Unscrambling the New Communications Puzzle. London: Comedia Publishing Group, 1983.

O'Brien D. M. et al. The Politics of Technology Assessment: Institutions, Process, and Policy Disputes. Lexington: D.C. Heath and Company, 1982.

"Overseas, Vidoetex is Government Business," Telephone Engineer and Management. Vol: v89n5: 1 March 1985.

Reinecke, I. Electronic Illusions: A Skeptic's View of Our High-Tech Future. Middlesex, England: Penguin Books, 1982.

Salter, L. and D. Slaco. Public Inquiries in Canada: Their Scientific Assessment. Ottawa: Science Council of Canada, 1981.

Slack, J. D. Communications Technologies and Society: Conceptions of Casuality and the Politics of Technological Intervention. New Jersey: Ablex Publishing Corporation, 1984.

Stanbury, W.T. Business-Government Relations In Canada. Toronto: Methuen Publications, 1986.

Tydeman, John et al. Teletext and Videotex in the United States. McGraw-Hill Publications Company: New York, New York, 1982.

Thompson, G.B. (1979). Memo From Mercury: Information Technology is Different. Montreal: Institute for Research on Public Policy, 1979.

"Videotex struggles to leave its stamp on Europe," Telephony Magazine Vol: v214n26: 27 June1988.

"1988: A year of growth for videotex," Information Today. Vol: v5n5 p.25: May, 1988.