TEACHING TELECOMMUNICATIONS POLICY, CRITICALLY

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This article offers both opportunity and challenge.   It offers me
the   opportunity   to reflect on what I have learned after teaching   for
ten   years,   including several years in courses on   telecommunications.
At the same time it is a challenge to describe a field of teaching   **and**
research that is a newborn child,   with uncertain parentage, more often
than not claimed by communication,   a discipline that itself has barely
learned   to crawl.   To make matters more complex,   I focus on teaching
critical telecommunications policy,   a still newer field of   communica-
tion inquiry.   For it is this critical dimension that enlivens both the
learning   process and the subject matter and makes teaching an exciting
experience.

Despite   the difficult challenge facing the teaching   of   telecom-
munications policy,   there is a material concreteness about the subject
that   eases the job.   Students spend more and more of their time   with
the   basic instruments of telecommunications -- the   telephone,   radio,
television,   and   computer.   Students do not need to be convinced that
telecommunications is of practical significance.   Moreover,   students,
like   teachers,   are awash in a sea of messages that identify   telecom-
munications as the spearhead of enormous social change,   the gateway to
the   Information Age.   IBM's commercials   featuring   Charlie   Chaplin
learning   about Modern Times are not lost on them.   Most students rea-
lize that telecommunication is vital to business and therefore to their
job   prospects.   They have a more or less vague sense that   they   will
need   to learn how telecommunications works.   They have an even vaguer
sense that people with power,   principally in government and   business,
are   making decisions that will affect the use and misuses of   telecom-
munications   technology.   So as teachers we start with a stronger than
average interest among students and many conceptions and misconceptions
calling   for considerable analysis and demystification.   In   sum,   the
challenge   to teachers of telecommunications policy is to define a   new
field that fits no well established discipline,   but about which   there
is strong student interest.

With these introductory remarks in mind,   let us dissect the field
of telecommunications policy by defining these two terms and   situating
them in a critical framework.   Following this, the article examines the
substance of a course in telecommunication,   including research that is
particularly useful.

TELECOMMUNICATIONS

Telecommunications can be defined in a number of ways. I find it useful to view telecommunication as electronic means of communication. This incorporates the generally accepted, though more vague, notion of communication at a distance. It is more useful than the alternative legalistic conception that identifies telecommunication with point-to-point communication and distinguishes it from mass communication. The ongoing integration of technologies makes this distinction obsolete. For instance, videotex systems integrate television, telephone, and computer technology into communication systems that provide specialized point-to-point and mass services. Telecommunication encompasses electronic media such as telegraph, telephone, radio, video, film, and communication satellites. In addition, telecommunication includes information technology to the extent that it is used in communication. Hence, the computer per se is not a telecommunications technology. But the computer does fall within the purview of telecommunications analysis when it is linked to electronic media, to process and transmit messages or data. This point is important because some of the more interesting policy questions arise from technological integration rather than from the development of individual technologies. For example, changes in telephony alone raise few interesting issues. But when Bell Canada links telephone to computer technology, it makes possible local measured service or pay per call, a significant issue for the many people who would have to give up their telephone if this went into effect (Peat Marwick, 1984). The focus on telecommunication is therefore on electronic media and information technology to the extent that this technology is linked to these media.

POLICY

The addition of policy takes telecommunications out of the realm of engineering. Policy concerns decisions about the production, distribution, and use of telecommunications. However, traditionally, policy has meant nudging the field into mainstream marginalist economics and law. Traditional economists have focused on the market conditions that would favour various industry structure conditions, and lawyers have addressed the degree to which state intervention was necessary or permissible to achieve agreed on ends. These ends have included national competition, international competitiveness, preservation of a major industry or of a national culture. Actual questions posed here have typically been limited to the narrow concerns of economists and lawyers working for industry and government. What are appropriate accounting procedures for a monopoly phone company? How many broadcast networks are needed for competition in program supply? What is the legal definition of a common carrier? What are the legal constraints on a regulatory body?

Yet, these questions separate policy from power, policy issues from the major social issues of our time. It is to overcome this separation that I introduce a critical focus to the study of telecommunications policy.

CRITICAL TELECOMMUNICATIONS POLICY

Critical communications research has a firm tradition in Europe and Latin America, and a growing following in Canada and the United States (Media, Culture and Society, 1984). Essentially, the term critical identifies research that:

1) Challenges established procedures on communication research;

2) Links the communication issue at hand to the wider social structure;

3) Identifies system contradictions and, through these, pathways to social transformation (Mosco, 1983a).

Critical telecommunications policy research starts from an assessment of basic concepts, questions, and perspectives that, whether explicitly or implicitly, guide research and teaching in this field. For example, what is the world view that underlies policies which promote the maximum dissemination of privately controlled telecommunications technology (Finlay-Pelinski, 1983)? In order to address this question we need to situate telecommunication in a wider social context. That context includes the needs of transnational businesses for advanced telecommunications systems to assist in the process of global expansion without the loss of centralized control over strategic decision-making (D. Schiller, 1982). But such policies are not without their contradictions. Promoting business needs for capital accumulation leads to efforts to privatise and deregulate telecommunication producers and distributors. Such efforts eliminate or cut back severely the role of public authorities such as state-owned telecommunications bodies in Europe (PTTs) and regulatory agencies in Canada (CRTC) and the United States (FCC). The decline of these bodies creates legitimacy problems for the government, as it turns over to private hands decision-making authority for what has been a public resource (Offe, 1984). Critical research identifies these contradictions. Additionally, it focuses on efforts to advance the fullest possible public participation in decisions about the production, distribution and use of telecommunications systems.

With a general sense of basic concepts, let us turn to the core content of teaching in this area. The article describes the chief themes that are covered by a course in telecommunications policy. In addition to thematic description, it suggests readings useful to both instructors and students. Of course, the depth of discussion and reading varies with the level and duration of the course.

THE SIGNIFICANCE OF TELECOMMUNICATIONS POLICY

Though most students have a sense that telecommunication is of **growing importance, few are aware of just how significant it is.** Consequently, the first section of the course describes the widening scope of telecommunication worldwide. The emphasis here is on the way **telecommunication has grown internally with the growth of business.** Here I draw on the historical work of Innis (1951), including a collection that advance his work (Melody, Salter and Heyer, 1981; Smythe, 1981; Bell, 1973; D. Schiller, 1982; H. Schiller, 1984). The telegraph, telephone, radio, communication satellite, and related devices, are more than businesses in themselves. They have made possible the organizational and geographic expansion of most all businesses. **The advantage** of size and scope that telecommunication has brought to business **has helped to transform Western economies.** The competitive, small firm gave way to large-scale oligopolies, epitomized in the transnational conglomerate. Moreover, telecommunication helped to transform the product of economic activity. Developed economies rely less on agriculture and manufactured commodities and more on the product of telecommunication: information commodities. Morevoer, information commodities have more than economic value. They shape the ideas, attitudes, levels of awareness and ignorance, in short, the general degree of consciousness in society. Consequently, we study telecommunication because it is vital to the economic, political, and cultural life of society.

Once we have explained the significance of telecommunication, it would appear easy to justify studying telecommunications **policy.** After all, if telecommunication is so important, ought we not be concerned about its production, distribution, and use? Not if you have internalized the technological determinist views so pervasive in our culture. If **students are to become genuinely interested in policy issues, they** must accept the possibility that people can, by their decisions, have **an impact on the technology.** Since students have absorbed many strong doses of popular culture, from advertisements to high tech movies, which present technology as an overwhelming force independent of human agency, this is far from an easy thing to accomplish.

One way to overcome technological determinism in the minds of our students is to draw on historical examples of how similar technologies **have been used in fundamentally different ways. Though the principles** of steam power were widely known two thousand years ago in Rome, the use **of steam was limited to opening temple doors. It took 1700 years** and an entirely different type of society to make decisions that would turn steam power into the literal instrument of massive economic expansion. Another technique is to identify different uses of similar **telecommunications systems in contemporary society.** For example, the course considers the difference that it makes to have telephone, radio, or television under private or various forms of public control. Finally, it is useful to discuss concrete cases in which specific policy deci-

sions had far-reaching consequences. Among the many examples are decisions to establish private regulated telephone services in much of Canada and all of the U.S. and the compromise between major U.S. companies and the U.S. military that established a private broadcasting service for the U. S. and subsequently influence private/public debates in Canada (Danilean, 1939; Barnouw, 1975; Smythe, 1981).

Yet, even if one is effective in conveying a sense of choice in the application of telecommunications technology, technological determinism is likely to remain a force to contend with throughout the course. For, as teachers, we are swimming against a continuous and powerful tide. That tide would limit our discussion of policy to mere fine tuning of what technology makes inevitable. Failure to resist this pressure invites trivializing the subject matter. There is more to telecommunications policy than deciding on which of two depreciation methods the CRTC should allow Bell Canada to employ.

One can overcome the pressures to retreat into technical fine tuning by describing at the outset the critical perspective that informs the course. Lazarsfeld's classic distinction between administrative and critical research is a good starting point (1941). For much of telecommunications policy research is administrative in nature, i.e., it is done in the service of a particular company or government bureau with a stake in the outcome. Unlike critical research, it rarely challenges accepted perspectives, rarely addresses the historical and social contexts of decisions, and is unconcerned with contradiction, systematic conflict, or transformation of established policy processes to incorporate a democratic structure. Murdock and Golding (1974), Mosco (1983) and Melody and Mansell (1983) offer additional material on the nature of critical research in telecommunication.

Following these discussions, the course takes up three broad themes that encompass the range of telecommunications policy issues: the political economy of telecommunications, telecommunications policy and the workplace, telecommunications and the home.

THE POLITICAL ECONOMY OF TELECOMMUNICATION

More time is taken up addressing this theme than any other in telecommunications policy. For this is the heart of policy: how and why are decisions made about a basic resource, here the production and distribution of telecommunications services. I stress political economy because in this policy area, as in so many others, the terms politics and economics are inseparable. One cannot simply speak of the politics of policy because both the how and why of policy are inextricably tied to economic questions. These include the links between wealth and power that influence the "how" question and the economic value of telecommunication that influence the "why" of policy making. Similarly, the economics of telecommunications policy suggests a process governed by the equivalent of an Invisible Hand in the market-

place. To the contrary, a political economic perspective recognizes that political decisions, made by public and private individuals and organizations propel the flow of policy.

It is useful to start a discussion of this theme by examining the traditional perspective, the established map or what I call the dominant fantasy for understanding the political economy of telecommunication (Mosco, 1982). In my experience, students remember perspectives long after they have forgotten the alphabet soup of government agencies involved in the process. Consequently, I begin by considering the mainstream pluralist perspective.

The pluralist view starts from the assertion that policy results from the give and take of organizations with an interest in the decision. As its name suggests, a plurality of participants, none with an overriding influence over the process, arrive at policy. The result of one decision feeds into the next so that one group's loss today is a chip to be cashed for victory tomorrow. Broadcasters may win the opportunity to sell more advertising time, but tomorrow a consumer or public interest group will win a crackdown on violence or a limit on U.S. programming. Moreover, pluralists see the government as the locus of decision-making. Policy, according to the pluralist, is decided at the CRTC or the Federal Communications Commission. In most cases the pluralist view is not made explicit, but is embedded in the assumptions underlying both research and policy recommendations (Buchan, et al., 1982; Serafina and Andrieu, 1980; Brock, 1981). Krasnow and Longley's (1982) popular review of communication regulation and policy in the U.S. does a very good job of making explicit the pluralist formulation. In doing so, it opens the possibility for thinking about alternatives.

The first alternative is an instrumentalist view that explains how powerful groups in business and government shape the policy process. This work reflects the contribution of Clement (1983) and Domhoff (1979) in elite analysis . The instrumentalist perspective does two things quite well. It points to the ways business and government mobilize funds, foundations, private planning bodies, royal commissions, and the media to build a consensus around a specific goal. The movement to dismantle regulation and generally privatise traditionally public telecommunications systems are major national examples (CWC, 1984). The drive to overcome cultural sovereignty with a corporate controlled free flow of information policy is a prominent example in the international arena (Schiller, 1976; Smith, 1980). Furthermore, the instrumentalist model shows how the formal governmental process is generally not the central locus of decisions. Rather, it is often a forum for simply finetuning and ratifying policies arrived at in substance much earlier and in settings more private than a regulatory hearing. Additionally, the formal policy process provides an opportunity for elites to build and disseminate a coherent ideology. Technology means growth. Telecommunication means progress. Private control means efficiency, productivity and jobs. Salter (1980), Finlay-Pelinski (1983), Wilson (1984), Murphy (1982), D. Schiller (1982), Mosco

(1982), McDonnell (1984), and Murdock (1982) provide examples from the Canadian, U. S., and British experience.

Just as the instrumentalist view provides a deeper sense of how policy is made, a structuralist perspective points to why (Panitch, 1979; Poulantzas, 1978). Specifically, such a view identifies the significance for capital accumulation and social control of widespread growth in telecommunication. Telecommunication is central to the successful operation of contemporary transnational business; telecommunication is a major business in its own right. Moreover, the opportunity offered by telecommunication-computer links for measuring and monitoring electronic transactions and communications is an invaluable source of social control. The structuralist view examines corporate-state structures responsible for carrying out specific functions. It also points to contradictions that result from the pursuit of accumulation and social control. For example, the pursuit of accumulation has led in Canada to a telecommunication system under substantial U. S. control. This challenges the legitimacy of Canadian sovereignty and leads to struggles over the creation and operation of public media and telecommunication. A structuralist view identifies these struggles, whether of the Canadian Radio League to build public broadcasting (Smythe) or the telephone workers to create publicly controlled networks, and suggests how these struggles are tied to the wider issues of democracy and popular control generally (Bernard, 1982; CWC, 1984).

TELECOMMUNICATIONS POLICY AND THE WORKPLACE

One of the difficulties of teaching a telecommunications policy course is that the issues typically presented are distant from the concerns of students. This need not be so. A critical approach directly links telecommunications policy to the wider social structure and several major social issues encompassing the workplace and home.

Telecommunications systems that link computers to communications technology are reshaping office and factory. We discuss what is happening, the likely consequences for business and workers, and the connection to policy-making. Trying to steer clear of overly technical points, we consider how computer communication systems make possible increased productivity and centralized control. Both office and factory can produce more with fewer workers and centralize information management and decision-making (Kaplinsky, 1984; Mosco, 1983). The likely consequences include greater profits and market control, particularly for those large companies that can afford the capital investment in telecommunications systems. These companies are in a position to take near instantaneous advantage of worldwide differentials in the costs of labour, raw materials, and capital. The result is a small number of transnational businesses that use telecommunication to operate facilities worldwide at a considerable advantage over small, including indigenous, firms (Schiller, 1984).

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For workers, the consequences may be as significant. We discuss the impact on the number of jobs in different occupational categories. We consider changes in the quality of work, particularly the increasing centralization of decision-making, the simplification of work tasks and the general deskilling of the work force (Braverman, 1974). Special attention is directed to the impact of telecommunications systems on working women. For these systems are automating and deskilling work most rapidly and pervasively in clerical and secretarial jobs, retail sales, and other occupations that are principally filled by women (Menzies, 1981). The global implications for women are particularly serious (Ehrenreich and Fuentes, 1983).

Given these significant impacts, policy decisions in telecommunications, whether or intended or not, are very much decisions about the shape of industry, occupations, and the quality of work life. A major goal is to make students aware of these ramifications in order to broaden their understanding of the meaning and significance of telecommunications policy. It is useful to analyze a policy document on this issue in order to make the discussion more concrete (Science Council of Canada, 1980).

TELECOMMUNICATIONS POLICY AND THE HOME

We conclude the course by turning from the workplace to the home, where telecommunications systems are having equally pervasive impacts. The changes that telecommunication is bringing about in the home are identified, e.g., access to more information, the opportunity to perform at home what have traditionally been "outside" activities, including learning, working, banking, shopping, and communicating in numerous electronic modes (mail, voice, bulletin board, etc.) with a wide range of people (Mosco, 1982). The ensuing changes in the social relations of space and time raise several policy issues, three of which are given particular attention.

Telecommunications systems can ease access to information, entertainment, etc. but there is no certainty that they will do so equitably. Indeed, the ability of these systems to measure every transaction in the system makes it possible for carriers to charge by the transaction, the minute of use, or the item of information consumed. Consequently, it is less likely than ever that we will be able to retain the notion of information as a free good. The book we borrow from the library or the program we receive on television is likely to contain a precise cost-based price. But what is gained in market rationality can be lost in equity. For such precision is likely to exacerbate the gap between information rich and poor in society (Cook and Stein, 1984; Myrick, 1984; Elton, 1984). What are the policy alternatives for addressing this issue? Subsidies? More controlled technological growth? Contemporary versions of luddism? (Noble, 1983).

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The converse of access is <u>privacy</u>, the ability to maintain know-
ledge and control over the information that circulates throughout the
telecommunications system. These systems have advanced markedly the
potential of monitoring transactions. Such monitoring can be of great
value to companies that need detailed profiles of actual and potential
customers (Wilson, 1984). Government agencies (particularly those
providing social welfare assistance), policy, intelligence, and mili-
tary bodies are eager to use this information (Burnham, 1980). To
date, there are few privacy protections for users of telecommunications
systems, particularly those linked to large computers. How can we
extend equitable access throughout society without endangering indivi-
dual and collective privacy (Flaherty, 1983)?

Finally, the concentration of activity in the home raises the
potential for social isolation. This is particularly a problem in
advanced capitalist societies where the growth of private activity has
encroached on the tradition of the public sphere, on public space
(Habermas, 1973). This is a difficult issue to address because its
manifestations have not received much research attention. If we know
very little about what it really means to watch five hours of televi-
sion a day, how can we understand what it means to conduct most of our
daily life in the living room? Nevertheless, speculating on ramifica-
tions and discussing policies to overcome social isolation and the
erosion of the public sphere are useful ways to stir a student's imagi-
nation about telecommunications policy.

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* indicates required reading.

** supplementary reading in short courses; required in long courses.