Forum / Tribune

The Digital New Economy and the Virtual Educator*

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ABSTRACT

As we take up and are taken up by the new multimedia technologies, we cannot overlook the effects of larger economic trends associated with digitization, downsizing, globalization, privatization and free trade. As educators, we are faced with the challenge of trying to develop virtual education as an extension of a culture of education grounded in human-to-human communication as opposed to the business of education in which information is viewed as a commodity.

RÉSUMÉ

Comme on s'accapare et on s'intéresse aux nouvelles technologies multimédia, nous ne pouvons négliger les effets des tendances économiques importantes associées à la numérisation, réduction des effectifs, mondialisation , privatisation et libre-échange. En tant que pédagogues, notre défi est de développer une éducation virtuelle étant le renforcement d'une culture d'éducation fondée dans la communication de personne à personne au lieu d'un commerce

The author encourages educators to keep the objective of education in mind when entering the virtual arena and suggests some principles we can apply to ensure virtual education fulfills its purpose.

d'éducation dans lequel l'information est vue comme une marchandise.

L'auteure encourage les pédagogues à garder en vue le but de l'éducation quand ils entrent dans l'arène virtuelle et elle suggère quelques principes pouvant être appliqués pour assurer la réalisation des intentions de l'éducation virtuelle.

Nine o'clock Monday morning, June 2nd, 1997, was a historical moment, the first Monday morning in Canada in many years without *Morningside*, a program that epitomized the best of what public radio was meant to be. It wasn't culture as business—the business of entertainment—but culture as shared social bonds and community. For me, the silencing of *Morningside* highlights the crisis facing public culture in this country, and why it is important for CAUCE to hold conferences to discuss this crisis. Because we, as adult educators, are inextricably caught up not only in the issue of the culture of education versus the business of education, but also in ensuring that virtual education is an extension of that culture—not an eclipsing or silencing of it.

The stakes are high. On the one hand, a great many desperate people, anxious to acquire skills for the new economy, are looking to acquire credentials that will get them to the front of the line-up of equally desperate people vying for the handfuls of decent full-time jobs these days. On the other, we have a plethora of multimedia learning products and a host of service providers ready to deliver some or all of it anywhere at anytime, creating a virtual classroom in people's bedrooms, basements, and cars. There's a great deal of money to be made, and many careers to be built, in selling these packaged learning solutions to a desperate learner public.

The place to start, however, is with the context of this crisis.

The Technological Context

I want to sketch in the technical side of this context before going deeper in the social and cultural implications of it. The context is variously called globalization, restructuring, digitization and the new economy. In a nutshell, national machine-based economies are being restructured into a global systems economy.

There are two key elements in this restructuring: digitization and networking. Much of the information underpinning work and the management of work in the industrial economy is being digitized, that is, it is being transformed into the dynamic state of electronic bits. The second crucial point is that this digitization/computerization is now in its third phase: the networking phase, where all kinds of automated production modules and information sub-systems, plus related electronic files, can be linked together both within and between institutions to create the network of interconnecting networks called the information highway.

Networks and digitization are key to the transformation going on with restructuring: they make it possible first to deinstitutionalize all kinds of work, and then to contract it out through a new global and local division of labour constituted through at-home teleworkers and call centres, through remote agile factories and workshops, and through the networked organizational structures of virtual corporations and virtual colleges and universities and other institutions of training and learning. Consequently the machine is no longer just on the desk in front of us; it's as much in the lines and connecting switches running behind walls, under floors, and between satellites high in space.

The machine is now all around us. We live in the machine: a very smart, programmable machine, chillingly capable of pulling the plug on our ability to run our lives, our schools, and our other social institutions in ways that lie outside these systems of management and social organization, outside their logic and systemic priorities.

The New Medium

Given this technological context, Marshall McLuhan's phrase "the medium is the message" is vitally relevant today. It means that the structures of communication strongly determine what can and cannot be said and done inside them. It also means, he said, that new media create new

environments. In today's world, the global networks are becoming the new environment for work and for getting work, for getting an education, for shopping, for banking, and even for going to the movies. They represent a new meta-institution in which deinstitutionalized, contracted-out work is reconstituted, and re-institutionalized through shared electronic files and access protocols.

Another message of this new medium—this meta-institution of global digital networks—then, is that if you're not plugged into this new environment, you're irrelevant. A third message is that you're also irrelevant if you can't keep up with its performance standards, meaning: a global scale of operation and a multi-product, multimedia scope of operations, as well as rapid-fire turnaround and turnover through instant global connectivity. These are the new standards of competition. Speed is a big part of it—and key to the demise of some of the national retail chains, like Woolco and Eaton's, that we've seen recently. In part, they were bulldozed under by Walmart, the fourth biggest user of computer technology in the U.S., its systems capable of instant connectivity for just-in-time inventories and quick-response retailing, augmented by tele-shopping and 24-hour delivery by UPS (Mosco, 1996).

I predict that these new standards are soon going to start affecting the economy of education, especially in this era of deregulation, privatization, and free trade—including the Multilateral Agreement on Investment. Package-deal learning materials and service-delivery offerings from transnational information providers could be offered at irresistible economies of scale and speed, and they could price locally made products out of the new learning environment. It will be hard to resist simply competing on the terms provided, let alone on our own terms.

This brings me to a fourth message of this new medium: it is a corporate business environment, being built, run, and managed by corporate information systems and service providers. These globe-spanning corporations, such as Time-Warner-Turner Broadcasting, General Electric, and Microsoft, are accountable not to citizens and democratic principles but to shareholders and to corporate or corporatist principles. If this becomes the context in which learning is defined and managed, it becomes quite secondary whether it's brought to us by Disney or MacDonald's, Microsoft or Stentor, Thompson or a subsidiary. The terms provided and built into the infrastructures of the new communications environment threaten to turn more and more of education into a business, which is almost the antithesis of what extension departments are all about.

THE SOCIAL AND CULTURAL IMPLICATIONS

This then is the technological context we're dealing with: a new digital operating environment extending into all areas of our lives as people in communities, and into the work we do in the distinctive institutions within these communities. This new environment is not only transforming these institutions from within, it is also driving more and more people to the point of burnout, and leaving more and more people behind.

The contradictions are beginning to surface. In Germany, street demonstrations have illustrated the public's anger at Chancellor Helmut Kohl, despite his having engineered the miracle of economic growth in a united Germany. But, like here, it's a jobless economic growth with an unemployment rate of over 12 percent, and the citizens of Germany are angry. They are angry at finding themselves outcasts in their own economy, displaced from their own society. Historically, displaced persons have been an unintentional consequence of war; in Germany, the unintentionality is not nearly as clear.

It's not a question of being for or against technology, however, but of being for a particular use of technology—one that embodies certain values such as social justice, for example. Technology is a social construct and, as such, can be designed, managed, and used to extend the scope of what people do. Unfortunately, this is only happening for a minority of people— the new elite of professionals and executive decision-makers called "knowledge workers." Instead, in far too many institutions, both private and public, technology is being used either to replace people or to diminish and control what they do.

This is the reason there is so much unemployment and under-employment in Canada today, and why 40 percent of Canadians describe themselves as economically distressed. This is also why a good education and hard work will *no longer* guarantee people meaningful, stable work. There are three major trends here affecting today's workplace (Menzies, 1996, pp. 10-14).

1. More and more goods and services are being produced with a minimum of human involvement, which translates into jobless economic growth.

2. Computers are simplifying work and turning good jobs into bad jobs. Full-time jobs are being replaced by part-time "McJobs" or short-term contracts because the system does most of the thinking, organizing, and

supervising. Women in senior clerical, administration, and middle-management positions have been hit particularly hard by this trend as these are the jobs that are being decimated. Not surprisingly, the wage gap is beginning to widen again. (It would be wider still but for the fact that young men's earnings have dropped so precipitously.)

3. The computer's simplification of work is also permitting the increasing digital delivery of services and service support to material goods. Computer-simplified work is being shifted from the hands of paid workers to those of unpaid consumers who then push button their way through a computerized voice-clip maze to serve themselves in a torrent of new areas of so-called customer service (Menzies, 1997). The effect of this trend is more jobless economic growth *plus* more McJobs in a two-tiered labour force made up of a core of over-extended full-time professionals and executive decision-makers and a growing periphery of part-time, temporary, and short-term contract workers—or what I refer to as the new reserve army of the self-employed.

There's more to this than numbers, though. We're moving away from an inclusive society of universal standards and entitlements towards a society of deepening polarizations: between the overworked rich and the barely working or out-of-work poor; between the privileged and the deprived. Unless we actively work to reverse these trends, they could deepen into a political polarization of the righteous rich versus the resentful poor, and that could bring social breakdown and/or a police state.

Equally, there also exists a technology gap: between those with home computers and modems and those without, that is, the technologically enfranchised versus the technologically disenfranchised. There is a strong gender element in these polarizations, too, with women disproportionately concentrated at the losing end, on any measure from income to technology have or have-not status. Undoubtedly, the story of women is echoed among any or all of the other so-called minority groups in Canada. In Regina, for instance, a community-outreach worker estimated that of the 10,000 families dealing with Social Services in that city, 2000 had no phone (personal communication). Surely, in terms of the outreach mandate of education, these are the constituents. Yet in the fastforward thrust to the new digital society, these people are being left behind, and even disabled, as citizens in the new society.

The Faces of the New Technology

Women are not only losing a great many middle-ranked jobs, they're also concentrated in the occupations most likely to be strongly affected by the move to telework. Call centres are growing by leaps and bounds (over 5000 in Ontario alone), and work is being transferred into the home, where workers shoulder overhead costs, maintenance, insurance, etc.

The 1991 Canada census documented a 40 percent increase in the number of people reporting the home as their primary place of work. Among these, the three biggest occupational groups were clerical, sales, and service, all three female job ghettos. The majority of these respondents reported incomes of less than $20,000; a sizable minority within that reported less than $10,000, not enough to support a life let alone a family.

Carol Van Helvoort, who processes orders for Pizza Pizza pizzas from a computer and modem she rigged up in the bedroom of her one-bedroom apartment on the fringes of Metro Toronto, puts a face on the reality of this new economic order (Menzies, 1996, p. 127). It doesn't really bother her that the computer monitors everything she does. It bothers her more that what she does is so little worth monitoring. She described the inconvenience of having the family phone line taken over for two four-hour chunks of the day, as Pizza Pizza turns her home into a virtual workplace; about how young mothers have had to get their kids to keep quiet (But why should they? What does it do to family life?); and about the increased vulnerability of women in abusive relationships, when they're being trapped inside the home all the time.

And that, the loneliness and isolation inside her silicon work cell, bothered her the most. "You don't even bother getting dressed half the time," she said. In effect, she's disappearing as a social being. And although she'd quit tomorrow if she could, she can't, the economy being the way it is. "If I want to work, I have to pay the price."

Her story captures much of what globalization means locally and personally as human experience and cultural transformation. It means fragmented work tasks managed and monitored by computers, with pay-per-unit earnings; isolated phone-booth-like work environments; loss of community and continuity with others; broken people and families; social isolation, the dumbing down of work, and silicon ceilings on involvement; and the insidious, coercive force driving everyone to work harder, to keep up with the technology, to adjust to globalization on the terms provided,

and be grateful for McJobs in the new economy. And these trends will likely intensify over the next 10 years, as the networking phase of restructuring proceeds, especially through the public sector.

EDUCATIONAL SECTOR TRENDS

From the general trends of digitization, globalization, and restructuring, I would like to move on to the particular trends in the educational sector. All along I've agreed with people such as Linda McQuaig who have challenged the assumptions associated with the deficit-lowering cutbacks (McQuaig, 1995). We know that social spending is not responsible for the deficit, that if corporations paid their fair share of taxes (and didn't get so many government hand-outs themselves), there wouldn't be a deficit, and so on. Given what we know, why does this attack on the public sector continue? Because, I argue, it's been a convenient smokescreen, behind which the public sector can be softened up, restructured, and "reformed," in other words, readied for take-over by the private sector. Again, digitization and networks are the key elements in the restructuring picture. Once files are digitized, once software takes over the administration and management of work functions, once work is fragmented into McJobs, once everything is linked and wired together, then more and more can be shifted inside the networks of the new economy. In education, this means that everything from the administration of student registration and records to the management of teaching-learning centres and even the delivery of teaching itself can be contracted out. What had been automatically embedded in face-to-face social relationships and bricks-and-mortar institutions can now be fragmented into service packages, or modules, to be deinstitutionalized, privatized, and opened up to competitive bidding by international information systems and service providers who, thanks to NAFTA, have the same standing as local and national suppliers. Then it can be parcelled out to subcontractors. Imagine teleworkers in call centres putting together "customized" packages of computer-based, multimedia learning materials and sending these to distance learners at universities and colleges served by such education/information-management companies.

Actually, I foresee the same kinds of polarization and fragmentation that are now emerging in the general economy emerging here in education and learning. Specifically, I see a move farther and farther away from universal standards and universal access toward a two-tiered education system, particularly at the post-secondary level. At the elite end, in the cultural

formation of "knowledge workers," learners will get many hours of individualized tutoring attention to augment their cruising through Internet salons of privileged discussion and their use of high-end, data-based search and analysis tools. At the other end, if we're not careful to resist it, we'll get dumbed-down digitally delivered learning: Disney-style learning packages marketed, distributed, and combined into "customized learning experiences" through the kind of computerized voice-clip mazes we currently navigate to do a lot of personal business. Absorption into this digital orbit could be the norm of virtual learning associated with adult education and the future of university extension departments.

In fact, this consonance of the polarizations in the economy and the polarizations in preparatory education has already been noted in some recent research, including a 1992 report on computer use in U.S. schools. This report found that the rich schools in the study had students doing multimedia work with teacher-facilitators, whereas the poor schools had computers replacing teachers, and were confining students to computerized drill work. "Instead of becoming instruments of reform, computers are reinforcing a two-tiered system of education for the rich and poor," the researchers concluded (McQuaig, 1995; Piller, & Weiman, 1992).

In *Whose Brave New World*, I predicted that the global networks of the new digital economy would prompt a new wave of colonization, and that the territory targeted for colonization would be the public-sector institutions of health and education. I call it colonization because this captures the polarizing dynamic that eco-feminist Maria Mies highlights in the development process associated with colonization (Mies, 1993). In other words, it is both development and underdevelopment. On one hand, the new digital media for education and learning are being developed as the latest—the with-it—media, and systems people are being promoted through the ranks of university administration. On the other, the traditional media and the people associated with-face-to-face learning are being underdeveloped, through underfunding.

The result of this dichotomy could be that those who can't afford to keep up with the new technologies will be left further and further behind, becoming more and more marginalized, despite the hype of universal access and instant connectivity. We need to be aware of this in our daily work as educators and, on an individual level, ask ourselves whether offering new learning tools to some people contributes to cutting off others who are beyond the reach of these technologies—either financially, technically, or psychologically. Much of this digital media is geared to the

isolated learner and, as such, assumes enormous motivation and self-confidence on the part of the learner. But what of the people already isolated by the new economy, having lost a great deal of self-confidence in the process?

From the impact of the digital media at an individual level, we must move on to the aggregate level at which these technologies are transforming education and learning, and consider the attendant polarizing dynamic here. With the cutbacks in public education funding, plus the centralization and other educational reforms introduced in the name of cutbacks, we are now seeing the underdevelopment of education as a public service and as a living culture embedded in local communities. In contrast to this, with the special-project and corporate-sector funding of new tele-learning initiatives, we could simultaneously be seeing a new development of education as a business. And that, I would suggest, is the larger context in which this conference's discussion of virtual learning is taking place.

The question is, how do we respond as critical insiders? What do we want to guard against? And what do we, in an effort to support those who have already been marginalized and don't want to be further displaced from their own society, want to push for?

It's not a case of the systems people saying to traditional educators: you don't know what you're talking about; nor of the traditional educators saying to the systems people: you don't know what you're talking about. Each group is talking from a different perspective, informed by a different approach to communication. It is the ecological or social-bonding model of communication versus the commodity-transmission model of communication. The first is solidly linked to what we have traditionally understood as "the culture of education." The other is linked to the business of education.

COMMUNICATION THEORY

At this point, it would be worthwhile looking at some communication theory (notably the ideas of Harold Innis and Robert Babe and, to a certain extent, my own), to help us define and defend what we want in terms of virtual extensions of learning. Equally, it could help us define what we are against, and why.

The ecological model is an organic, living model of communication,

grounded in nature and nature's ways of communicating. It is a web work of interdependent relationships and is suggested in the dancing spirals of the double helix, which Rosalind Franklin discerned through her crystallography work with Watson and Crick (Watson, 1968). It is also evident in the two-way communication between organism and environment that Barbara McClintock identified in her revolutionary theory of jumping genes (Fox Keller, 1983), and that Richard Lewontin has elaborated as a general theory of species-environment reciprocal communication (Lewontin, 1991).

When extrapolated into a more social model of communication, the ecological model focuses on relationships, too. In fact, it views individuals not in the dominant economics terms as social isolates but rather in terms of their physical and social bonds with others—from the original parental bonds in gestation through birth and childhood onward. In other words, as Herman Daly and John Cobb wrote, in *For the Common Good*, "people are constituted by their relationships" (Daly & Cobb, 1989). Their relationships are not external to their identity, but central to it.

Put into policy and practical terms, such a model would have the following features:

- communication as an extension of the living body, the grounded social relationship, and community;

- communication as conversation and culture;

- communication sustaining life and living institutions, over time;

- a growth model (Franklin, 1989);

- the social/natural process of communication has precedence (over any mechanical means that might augment and enhance it);

- communication governed by holistic practice, user control and related reciprocity, and autonomy.

Whereas the ecological model is an organic model of communication grounded in face-to-face social relationships, the transmission model is mechanical, grounded in the anonymity of the marketplace. It is also an economic model, which is driven by the logic of the pricing system, not by the logic of community and social bonding. If this model is put into policy and practical terms, it has the following features:

- It disembodies communication from face-to-face contact and from the rhythms associated with the time it takes to tell a story or to

make your particular point, for example. In other words, it is
anonymous and so makes the social bonds some of us think are
essential to effective learning irrelevant, as it does all the work of
cultivating the desire to learn and the confidence to acquire and
apply skills, the caring about those being left out of digital self-
serve registration, and so on.

- The mechanical means of communication takes precedence over the
  social process; as such, this model treats content as a commodity,
  subject to the laws of commodity exchange—economies of scale,
  scope, and speed.

- It transcends the natural limits of time and space (i.e., it lends itself
  to "scale up" plus "speed up," simply because it treats content as
  separate from the social context).

- It is a prescriptive production model of communication (Franklin,
  1989).

- It is also a commercial model of communication; its content is
  "information" viewed as a commodity.

Understandably, this economic model of communication has
predominated in our commercial, industrial society. However, in the past,
democratic values have prompted governments to actively promote the
more cultural and community-building model by subsidizing it, and so in
Canada, we have had a mixed-model approach to communication. In fact, it
has been a defining feature of Canadian society, giving us universality in
telephone service and institutions like the National Film Board, the CBC,
and community-access cable, as well as university extension departments
and public education generally. In recent years, however, the government
has actively withdrawn from that mixed-model tradition, as can be seen in
a 1994 amendment to the *Telecommunications Act* that shifted the initiative in
communication from public service to market forces and opened the doors
to deregulation and privatization. It can also be seen in the Information
Highway Advisory Council's 1995 report, *Connection, Community, Content:
The Challenge of The Information Highway*, which recommends that the
private sector create and manage the infrastructure and operating systems
of the information society free from public-interest interference and also
refers to education and learning, asserting that "Canada lacks a critical
mass of users to sustain a viable domestic learning and training industry"
(Information Highway Advisory Council, p. 63). This retreat can also be

seen in the cutbacks to public-sector education generally.

Therefore, it is useful to view developments today in terms of this polarizing dynamic: the active underdevelopment of the ecological, community-building, social-bonding model of communication, associated with the public culture of education, versus the active development of the transmission model of culture and education, as a business.

The Challenge for Educators

The challenge for educators is to refuse to see this as an either/or dichotomy—as a choice between one or the other. Instead, as educators, we must see the differences between the business of education and the culture of education, among the particular people within our particular institutions, as something to be negotiated. We can do that best, I think, by jointly focusing on the generally marginalized people who have been traditionally served by our institutions.

The two models, and the two sets of values, will influence every aspect of how you design and carry out virtual learning in the future. Negotiation, therefore, will be ongoing, even at the level of words. Let's use the words "access" and "quality" as examples.

Access: In the transmission model, access is defined as access to the technology, that is timely, affordable access to the Internet, to phone service etc. In the ecological, social-bonding model, access is defined with engaged social relationships as the focus; therefore, it is access to meaningful participation. Putting an equity focus on difference, it is then further defined as access to meaningful participation in terms of the participants, which, in this discussion, would mean not only women learners, but also women with all our differences in ethnicity, language, and ability. I am here drawing on an excellent analysis of the New Learning Technologies (NLTs) prepared by Jennifer O'Rourke and Linda Schachter. (O'Rourke & Schachter, 1997)

Quality: In the transmission model, quality is defined in technical terms. That is, from getting a dial tone within x seconds to bandwidth and multimedia capacity. In the ecological model, however, quality means social accountability in the relationship between learners' needs and learning outcomes. The questions here would include: Is the learning process relevant to the learner? Is it making a difference to the lives these people are living now? Or, is it just another dead-end computer literacy, "skills for the new economy" exercise?

I would like to conclude with a story of my own cautious move into virtual teaching and learning at Carleton University. First, I should say that the continuing education extension types at Carleton seem to occupy a decidedly lower rung on the university ladder than the Ph.D's on faculty. I should also add that my willingness to experiment with the new video and electronic communication media seems to have moved me a little lower on the ladder with some of my colleagues, and that's hard. Yet I don't quite belong with some of the systems types—who think it's great that every school in Canada will be hooked into Schoolnet by the year 2000—just for the sake of it—while I'm muttering: For the sake of what? And what about the cutbacks in basic education that are pushing student-teacher ratios through the roof in some provinces?

But equally, I'm regarded with some suspicion among my teaching colleagues, as though I'm selling out on classroom traditions and text-centred learning.

What I'm trying is in fact, very modest. The project is a video-based version of the Canadian Studies course I teach, "Canada in the Global Village," which I've developed as a "flexible format" offering, consisting of 12 one-hour documentary-style lectures. I wrote the accompanying text following the wonderful advice I gleaned from a slim volume by Myra Zubot called *Writing Your Course* (Zubot, 1993). But the part that has me really excited is the electronic discussion-group component, what I've dubbed the "virtual seminar room."

Ideally, all students will have the option of attending face-to-face seminars, because to my mind the community-building, ecological model of communication requires grounded face-to-face communication, even if it is only for one evening. I tried this with another course and was amazed at how well this set us all up for remote communication, simply because we'd had a chance to look each other in the eye, to take the measure of each other's body language, etc. I will also be providing some compressed seminars in person. But for those who can't attend, I'm trying to make the electronic discussion groups work as a viable substitute.

After collecting advice from others, I developed a short list of priorities, such as accepting my responsibility as the discussion animator (which means being on-line when I say I will be) and providing timely responses to my students, as well as providing supportive feedback to their contributions to the discussions. I plan to use the ecological model of communication as the theoretical backdrop for measuring the success of the

course. And I encourage other adult educators considering a modest move into virtual learning and teaching, to consider using it too, both individually and as units within their university / college institutional environment, and as CAUCE members.

And, finally, I have a dream. Or rather, I want to share a dream I sketched out to a conference of women adult educators in Montreal some months ago, organized by The Canadian Congress for Learning Opportunities for Women (CCLOW). Like many nongovernmental organizations, CCLOW is going through a major renewal and reorientation process, as it moves away from its government lobbyist role to a more active agent defining policy to make things happen itself. As I told that conference, I see organizations such as CCLOW taking the lead in some of the networking we need to do among educational / learning institutions to develop technological-assessment tools for women and other users of the NLTs. I also see them serving as brokers in creating cooperative joint ventures of praxis around this model of education, putting it to use to elicit commitments from various colleges and universities to make it their policy too.

These types of activities will contribute to the kind of national dialogue we need in order to articulate and press for public policies that will preserve a democratic, participative culture in this country and resist current moves to destroy it. To this end, I invite all adult educators to join in this dream, in this larger piece of educational policy-making work.

We are living in a time of crisis, brought on by globalization and the rise of global corporate governance. An inclusive public culture and, within this, the culture of education are under attack—along with a world view that values people on their own terms, and not just as they fit into the digital Disney / Microsoft world as producers or consumers.

Given the absence of leadership from our governments, and of critical analysis by our mainstream press, it is up to us, as adult educators, to articulate democratic cultural and educational policies for the new digital age. It won't be easy, but it's a job we must undertake—for the sake of the generations who haven't grown up taking *Morningside, Farm Radio Forum,* and the CBC for granted.

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Biography

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