

Moving towards the millennium: Will information technology take democracy into the 21st century?

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Abstract

The impending new millennium offers a rare opportunity to assess the impact that the technological revolution in communication technologies might have on human systems. This essay focuses on their potential role for democratic processes, and the responsibilities for professionals in this field. The economic and political forces shaping the uses of these technologies are outlined.

INTRODUCTION

We are rapidly approaching the turn of the century, and a new millennium. This rare circumstance, which appeals to our particularly human preoccupation with numbers and abstract concepts, will increasingly take up conversational and media space. Like more mundane milestones, it offers an opportunity to look both back and towards the future.

There is no doubt that the world is changing much more rapidly than in the year 999. Most startling to a mediaeval time traveller might be the sheer numbers and extent of human settlement, and our ability to communicate across time and space. What has not changed, perhaps, is that our species is defined by its extremes - an amazing capacity for both creation and destruction.

Will someone looking back on this time, in another century or two, see us as limited by our achievements, too caught up in the dominant paradigms to see the contradictions which bind us? Or will this epochal breakthrough in communication ability, symbolized by our ability to know more and see more

than could ever have been imagined by our ancestors, lead to a new age of harmony and balance?

This essay explores some of the themes outlined in a position paper on culture and democracy prepared by the working group on social accountability in computing (Berleur, this volume), among them the problem of confusion in the midst of knowledge. Here I raise some aspects of responsibility for the path ahead and propose that, many of us here today, and our global community of colleagues in related fields, have the capacity and the duty to direct that path, by focusing on our role as professional communicators, in the fullest sense.

First, I will discuss our current communication tools and factors influencing their structure and control. From there, I argue the need for a normative, global approach. Finally, an outline will be given of how information and communication technology (ICT) professionals can contribute to developing a value-based framework for global ICTs.

KNOWING WHERE WE ARE

The current state of information and communication technologies offers some very good news, which is cause for justified pride. The world is wealthy; neither skill nor cost should prohibit access to the information necessary to achieve almost anything. We can explore the furthest reaches of the universe, and map the codes that create and differentiate life forms. Sending detailed pictures and sound and data around the world is no longer a challenge.

Not just high end scientific and commercial applications benefit from this cornucopia. In the developed countries, many individuals benefit from ready access to information, entertainment, and communication facilities. We keep in touch with friends, talk to distant relatives, see our children reaching out to explore vast oceans electronically. Community networks such as VICNET in Australia help keep citizens informed. Leading projects on electronic democracy in the United States and the United Kingdom encourage citizens to participate in government.

Howard Rheingold's virtual communities seem to fulfil McLuhan's promise of commitment through interactivity.

Clearly, if many cannot take advantage of these wonders, the fault is not with the technologies. As David Lyon has pointed out, it is misleading to talk of the social impact of technology when the technologies are an outcome of existing social and economic structures. There is no point at which society ends and technology begins. On a small scale, examples from studies of computer-mediated communication illustrate this continuum. When email was first introduced to companies, many claims were made for its democratizing effects on organizational structures. By reducing visual and status cues, it was thought to make internal communications less hierarchical and more open. However, it soon became apparent that patterns of email use followed, and were determined by, existing organizational structures.

One hypothesis of my research is that similar technologies combine with similar social structures to create self-organizing fractal patterns of technology use. Problems encountered on one scale will resemble those on other scales. The implication is that we can learn from case studies, and adjust either the technology

or the social context to produce the desired outcomes. This assumes, of course, that our concept of desired outcomes is also similar on different scales. This is where a normative framework is necessary, as discussed in the next section.

This audience especially understands the technical structure of ICTs, but we may need to clarify the social, economic and political context which shapes them. This is, partly, the bad news, as there are some dark truths that are seldom highlighted and brought to public attention in the same way as the technical achievements.

The processes of globalization and convergence are not unique to ICTs. Many industries, cultures, and demographics reflect these trends. The spur towards growth has long been a feature of capitalist development, with technological mastery of nature as handmaiden. As Lyon points out, the cultural, military and economic domination of a few highly industrialized nations in Europe and North America extended almost organically to telecommunications and ICTs. Governments geared towards central control and competitive advantage readily turn towards global markets in communications to continue their development.

However, the competitiveness that fostered growth and innovation also encouraged democracy and diversity. This has led to an embarrassment of riches in information, along with internal contradictions and ambiguities. We are now seeing a decline in power for the very nation states whose strength supported the expansion of global industries. We find ourselves not so much lacking in consensus as unable to achieve global public communication beyond the barriers that global control presents. The capitalist parent is eating its child, democracy.

Thus, the collapse of Communist regimes was frequently presented as the end of ideology in the globally structured western press. It could equally have been presented as the end of dialogue about capitalism and social responsibility. Distribution of the world's vast wealth is becoming more concentrated, in a pervasive, global process. It is a fractal outcome of the current self-organizing structures of capital that creates similar process and outcomes on many scales. From it arise many of the contradictions which characterize this period of transition to global control.

On the one hand, we are consistently told of the coming information age, with steady updates and previews of the latest breakthroughs and how they will enhance our lives. On the other, news about the steady advances in the privatization of information and commercialization of ICT pathways is soft-pedalled. This news circulates primarily in the back pages of computer sections in our newspapers or in the self-selected listservs which inform an elite few. The implications of this quiet convergence of control over our communicative futures are not household issues. On smaller scales, workplace implementations of interactive technologies do not generally empower even the professionals most closely associated with them.

The less developed nations may call for a New World Information Order, but only a few in the luckier nations see or speak about the processes that link the disenfranchised everywhere. As with employment, information creates new alliances and patterns of behaviour: some have too much, and are too busy to make sense of it all; others have too little, but lack voices to protest what they are missing.

This subtle transformation of society, not so much because of, but rather with the assistance of ICTs, has been going on longer than most of us realize. It began

when the telegraph became the first technology to separate travel from communication. Information flows, unsurprisingly, followed colonial patterns of travel. Today, the development and application of ICTs still reflect not just ownership, but the inherently diverse and turbulent features of the societies that conceived them. This ambiguity of purpose and control is a window of opportunity for those of us who are acutely aware that decisions are being made that will affect many who do not know what is at stake. We are at a crossroads, having realized that competition must give way to collaboration, and growth must acknowledge the need for sustainability.

But the voices calling for new approaches are not the driving forces. They lack power, and are often drowned by the compelling surge of demand which propels the juggernaut of technological advance. Consensus exists, but it is often shallow and ill-informed, oblivious of internal contradictions. Just as classic liberalism helped create representative government but it did not preclude ill treatment of the sick, old or women; likewise, our advances in communication do not of themselves urge on us a concern for those who cannot even eavesdrop on our global conversations. What is missing is a global framework to match the global reach of these developments.

WHAT ARE THE UNIFYING CONCEPTS?

We have demonstrated our ability to bring the world closer and generate wealth through ICTs. Our short-term thinking is very good. Using the same ICTs to reach for broader goals requires a different level of understanding. Again, using the fractal concept, consider Shoshana Zuboff's insightful analysis of the introduction of computerized production. Most managers felt threatened when junior staff gained access to new levels of information. Some took steps to limit understanding and integration of this information to managers. But some realized that their roles, too, had changed, and became more guiding than controlling, more coordinating than deciding. These workplaces tended to integrate the new technologies more effectively. However, these managers were in the minority. On larger scales, the challenge to both industry and government is to make information available, and to use it consciously to clarify and to move towards structures which promote a more balanced dynamic. ICTs are crucial to the creation of 'communicative action', to borrow a term from Habermas - without it there can be no sustainability, social or environmental.

Such action, in turn, requires a value set which transcends economics. Habermas has said that the status of citizenship relies on a kindred background of motives and beliefs that cannot be enforced legally. He recognizes that the legitimacy of the nation-state is not only less appropriate for a globally connected and interdependent world, but that citizens have been reduced to clients by pervasive privatization. Management theorist, Mintzberg, also calls for a return to more normative models of government, reminding us of the crucial differences between citizens, clients, and consumers. McChesney, writing about information policy in the United States, calls for communication scholars and journalists to renew their commitment first and foremost to democratic values, regardless of the

corporate consequences. These corporate views now influence university research, as well as media reporting.

A universal charter of democratic rights in cyberspace, such as that developed in the paper for this conference on behalf of the Australian Computer Society (Cameron and Geiselhart, this volume), would articulate these values for ICTs. These rights could eventually assume standing alongside other fundamental rights recognized by the United Nations. To have impact, they would not just be binding on governments, but also on corporations. It would offer a benchmark against which to assess technology proposals, and would act as a recognition of the implicit structures which govern today's world. The fundamental ethical question for ICT professionals is how they can support this process of defining, articulating, and implementing goals to overcome the contradictions of global forces and create meaningful local change.

PLANNING FOR EMPOWERMENT

The previous statement that ICTs cannot of themselves reshape society, but rather that they reflect existing structures, must now be qualified with the element of personal and professional freedom that many of us possess. Within our workplaces, we know what we want and need to function fully and to develop our skills. We seek openness, not just of technical systems, but of pathways to information. On a larger scale, we require our governments and corporations to tell us the truth, to help us make collective decisions free from pressure. For this, we need universal access to the machines, skills, and networks needed to use this information as well as to the content. Increasingly, this information is held by private companies, but it is crucial for public decisions. It must be available, freely, to those who want it. Treaties which seek to privatize information which was previously in the public domain must be challenged. Within the workplace, all decisions relating to the implementation of ICTs must be considered in their political context.

The erosion of social capital cannot be reversed through ICTs, but these technologies can give citizens essential tools for participation and cooperation. There are now many community networks, electronic civic centres and online organizations for electronic democracy: Computer Professionals for Social Responsibility, the Electronic Frontier Foundation, the Benton Foundation, the Electronic Privacy Information Centre, to name just a few. Last year's Internet Society meeting in Montreal, the first to focus on social issues of the Internet, attracted many papers on issues of control and access to the superhighway. Computer professionals are recognizing the importance of the decisions now being made, but are still reluctant to speak out. Government officials, constrained by their formal roles, hesitate to put forward views which may be politically unpopular. Canadian, Peter Heimler, has outlined in familiar detail how hierarchical power structures prevent the implementation of productive information technology systems in the public sector. Politicians, in turn, are notoriously shortsighted, and tend to vanish into obscurity when reckoning is due. Those with influence are often most cautious about pushing an equalizing agenda, and the courageous get no support. Without commitment to clarifying longer-term goals, data systems and information can only be shuffled; they rarely can be called

knowledge, and almost never wisdom. As David Lyon points out, wisdom is not a common word any more, and integrity, like other value-laden terms, is interpreted in many postmodern ways.

Models for a democratic global information infrastructure are available. One with that name has been proposed by Vigdor Schreiberman. It consists of three interconnected virtual networks funded respectively by public, nonprofit and for profit sources, supported by an authorized use policy which would ensure that use is limited to services which enhance the goals of sustaining democratic government, social equity, and ecological integrity. It would ensure that government information is freely available, and that resources are supplied for collaborative participation in decision-making.

These are the principles which we can apply in our workplaces, and in influencing, in whatever way we can, the development of ICTs. Information relevant to public decisions should be widely accessible, and the process of deciding relevance should itself be open to public debate, with ICT professionals as important contributors. There is a great need to reach beyond our individual specialities to become more broadly informed on issues of privacy, data ownership, universal access, and the implications of new technical proposals for these. We have an obligation to communicate to others who have less understanding about these matters, to build strength by linking together, rather than concentrating on differences.

In conclusion, I cite a quote from Russell Ackoff, Chairman of INTERACT, a firm that facilitates interactive management:

‘Creative leaps are “discontinuities,” qualitative changes. They involve three steps: identification of self-imposed constraints (assumptions); removal of them; and exploring the consequences of their removal. That is why there is always an element of surprise when we are exposed to creative work - it always embodies the denial of something we have taken for granted, usually unconsciously.’

The most significant self-imposed constraint, in relation to the creative and productive use of ICTs for the greatest social good, may well be our own lack of faith in the transformations which are possible. The members of this working group are in a unique position of power, at a unique point in time. Let us work together creatively.

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