

Information and Communication Technology

A Conversation Among Equals?

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Abstract

This paper outlines some of the key opportunities and challenges that societies and international development practitioners face in harnessing today's new information and communication technology (ICT). Has the Internet created an information revolution or a knowledge revolution, and who has been affected? Does ICT really change our sense of community and connection to others? Or is it a blind alley that blocks the task of building more just societies in the era of globalization – a new “sleep of Reason” that is producing new monsters? What political and cultural questions ought to frame debate about its uses? In response, the author examines the organizational learning that took place around the NetCorps Canada International initiative, a nine-member coalition led by Canada World Youth and designed to strengthen the ICT capacity of developing country partners, while creating a global youth engagement network among young people with information technology skills. Given a number of contentious issues within the coalition, minimum specifications were created which ensured safety, security and results, without micromanaging the means of resolving differences on a broader scale.

Preface

The research for this paper was undertaken in 1999 and 2000. Five years later, the underlying global profile of ICT use and provision of services has changed fundamentally. Although specific data for teledensity rates, investments in ICT infrastructure and the global portals would of course be different today, the “digital divide” is still a reality, and the concentration of ownership in companies controlling the portals and the content of ICT is as significant as ever.

At Industry Canada, the reality has shifted for the NetCorps Canada International Coalition, which is no longer defined as a partner but rather as an “executing agent” of a narrowly defined government program related to youth employment. With the departure of the visionaries from the Information Highway Applications Branch, a focus on administrative efficiency – person/months in the field for a specific investment – has replaced the mutual exploration of innovative approaches to ensure that the application of ICT benefits broader community development objectives. For its part, the coalition has not been proactive in seeking financial support for a broader vision of NetCorps and its potential.

There has been an interesting spin-off from the original NetCorps concept. The Digital Opportunities Trust (DOT), a Canadian NGO, has spearheaded the Global NetCorps initiative, which, instead of sending young Canadian ICT adepts around the world, has trained hundreds of local NetCorps youth, who have supported the growth of ICT for development in their own countries. DOT has two other interesting features. It is a virtual organization (see <http://www.dotrust.org>); and it has successfully engaged the private sector, international development organizations and local governments in the Global NetCorps initiative.



"The sleep of reason produces monsters" – Francisco de Goya (1746–1828)

Introduction

The Internet revolution, whatever skeptics may say, is as important today as the invention of printing was in the Renaissance. . . . The new communications technologies now tending toward digital multimedia convergence are restoring an interactive multi-sensoriality, which the invention of printing had for five centuries subjected to the simplistic parameters of linear thinking. We're rediscovering the aesthetic virtues of primitivism, and in many respects this new civilization's beginnings are reminiscent of an electronic primitivism. . . . Magical thinking, the irrational and the power of technology and science, which dominate our era, if left to themselves, make an explosive mixture and thus call for new cultural and political answers, which hopefully will allow us once more to overcome the dangers inherent in humanity's adventure, and continue our journey into the unknown.

Writing in *Le Devoir* in June 1998,¹ the philosopher and artist Hervé Fischer raised, directly or indirectly, several of the themes that I will be exploring in this paper:

- **The Internet revolution.** What is the difference between an information revolution and a knowledge revolution? Who has really been affected?
- **Globalization.** Is the spread of the digital revolution really a global phenomenon, or merely a tool of global capital? To what uses are the new information and communication technologies put, and toward what ends could they be used?
- **Electronic primitivism.** Does the Internet revolution actually change our perception of space and time? Does it change our image of ourselves, our connectivity to others and our sense of community?

¹“La révolution Internet est aussi importante aujourd’hui, quoiqu’en disent les sceptiques, que l’invention de l’imprimerie à la Renaissance. . . . Les nouvelles technologies de communication sous le signe de la convergence numérique multimédia, rétablissent une multisensorialité interactive, que depuis cinq siècles l’invention de l’imprimerie avait soumise aux paramètres réducteurs de la linéarité. Nous redécouvrons les vertus esthétiques du primitivisme, et à bien des égards les débuts de cette nouvelle civilisation nous font penser à un primitivisme électronique. . . . La pensée magique, l’irrationnel et la puissance technologique et scientifique laissées à eux-mêmes, qui dominent notre époque, constituent un mélange explosif, et appellent donc de nouvelles réponses culturelles et politiques qui permettront sans doute une fois de plus de maîtriser ces dangers inhérents à l’aventure de l’humanité, et de poursuivre notre chemin vers l’inconnu.”

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- **The Shadow Side.** Is this obsession with the Internet a blind alley that distracts us from the task of building more just societies? Is the Internet revolution a new “sleep of Reason” that is producing new monsters?²
 - **Cultural and political questions.** What are the political and cultural questions that need to frame any debate about the use of information and communication technologies?

I will explore these questions from different angles. In section 1, I will outline some of the key opportunities and challenges facing societies and development practitioners in harnessing the power of information and communication technologies in the service of development. In sections 2 and 3, I will look at one of the specific interventions of the Canadian voluntary sector: the NetCorps Canada International initiative, a program designed to strengthen the ICT capacity of developing country partners while creating a network of active global citizens among young people with information technology skills. In section 4, I analyze the lessons that the NetCorps initiative holds for Canada World Youth at a program and a structural level. Canada World Youth, as the lead agency of a nine-member coalition, manages the program and the relationship with Industry Canada, the key funder, as well as external relations with the private sector, national and multilateral institutions. Section 5 closes with some final reflections on the role of information technology in shaping our consciousness and our society.

²The message of Goya’s etching “The Sleep of Reason Produces Monsters” (No. 43 of the *Caprichos*, 1797–98), which depicts the artist asleep amid a crowd of emerging nightmare visions, has been interpreted in two contrasting ways:

- When reason is ignored, the irrational side of human nature will lead us into a hell of our own creation.
- The hubris and dreams engendered by human reason, if unchecked by other human qualities, will lead us to our destruction.

1

ICTs and Development

In the first part of this paper I will explore the impact that the introduction and expansion of information and communication technologies (ICTs) have already had, and potentially will have, on the process of development.

It is important to frame the discussion by clarifying what I mean by ICTs and development. Human societies have always had methods of communicating and retaining information – from oral traditions, drumming and rock paintings to the electronic methods of today. For the purposes of this paper I will be looking exclusively at the impact of what are sometimes called “new information and communication technologies” (NICTs) referring to the range of electronic innovations of the last fifty years, in particular, the last decade: computers, the Internet, the World Wide Web, and the whole array of complimentary changes in microchip and compression technology as well as fibre optics, wireless and broadband technology.³ I do not propose to analyze the history of these technological changes. What is clear is that we now have the capacity to transmit voice, data, images and anything else that can be digitized almost anywhere in the globe at a cost that is commercially viable for significant portions of the world’s population.⁴ The growth in connectivity and the application of computer technology and the Internet to almost all parts of North American life is staggering. Is it possible, desirable or even necessary for developing countries to follow the same path?

The word development conjures up different images to different people. I have found the following framework useful in my work with Canada World Youth. We create unique learning opportunities for young people in which they acquire the skills and knowledge,

³ See Friedman, *The Lexus and the Olive Tree* (1999), 47–63. Computing power has doubled every 18 months over the last 30 years. The amount of data that can be compressed onto one square inch has increased by 60 percent every year for the last decade. In the same period, the cost of storing 1 megabyte of information has decreased from 5 dollars to 5 cents.

⁴ International Bank for Reconstruction and Development/The World Bank, *World Development Report* (1999) [hereafter “WDR”], 9.

through a combination of community service and non-formal education, to build “just, harmonious and sustainable societies.” In this framework, development is a collective process of determining our future that would include the following factors:

- *Quantitative measures of well-being:* the capacity of a society to create the conditions necessary for people to meet their physical needs (levels of nutrition, housing, job creation, economic growth, access to clean water)
- *Qualitative well-being:* spiritual fulfillment, cultural integrity, respect for the environment, community bonds, national pride

There is overlap between these two categories in that employment, health, education and the environment – when seen as services, commodities or resources produced for, or made available to, consumers – can be reduced to statistical measures: numbers of jobs, absence of disease, years of schooling, extent of pollution. Good health, responding to a calling, and feeling a profound reverence for nature (or a spiritual commitment) represent a more holistic vision of what it means to be human. Groups within Canada World Youth typically identify this second category as a crucial part of what it means to be a human being living in society.

- *Distribution.* All members of the society should have access to these quantitative and qualitative goods
- *Process.* A transparent and participatory process is more likely to sustain the first three than other approaches. (I hesitate to use the word democratic because it carries a great deal of baggage in many cross-cultural contexts.)

This framework can be applied at the level of analyzing specific community development projects, the development strategies of particular countries, or even on a global scale. Since ICTs have created a global web of connectivity (electronic and cultural), this framework needs to be applied to the global impact in addition to any localized impact.

Knowledge for Development

“In the mental geography created by the railroad, humanity mastered distance. In the mental geography of e-commerce, distance has been eliminated. There is only one economy and one market.”⁵ Thomas L. Friedman’s book on globalization, *The Lexus and the Olive Tree*,⁶ outlines in great detail the way in which global corporations have been able to use ICTs as tools to gather information on markets and products, outsource knowledge-based production around the globe, market products on line, respond immediately and efficiently to on-line consumer demand (the computer giant Dell Inc. is a good example), and to monitor the economic performance and policies of countries in order to make strategic investment decisions. Not all companies do it well; but it is difficult to imagine companies functioning on a global scale without extensive use of ICTs.

What about small entrepreneurs? A neighbour of mine took early retirement to try and turn his hobby of building wooden kayaks into a small business. At first he made his traditional kayak design, which he then pitched to prospects at boat shows. Results were unpredictable: sometimes his basement was piled high with kayaks; at other times he was months behind on orders. He then went on line and communicated with some kayak clubs, and through some primitive market research found that people who use wooden kayaks (as opposed to plastic ones) also like to build their own, but often do not have the skills. Now he builds kayak kits, which people with basic skills can assemble and customize. The kayak design has been done with inexpensive software, which also automates the cutting of the wood to minimize waste. The kits are marketed and sold on line to people across North America and Europe. An on-line training manual, backed up by e-mail support, is also available. What is more, he can do all the back office work at home, using over-the-counter software and a basic computer system. With the help of ICTs, my neighbour has transformed a hobby into a small business that transcends the confines of our small town, or the limitations of doing business face-to-face.⁷

⁵ Peter F. Drucker, “Beyond the Information Revolution,” (*Atlantic Monthly*, October 1999), 57.

⁶ See Friedman (1999).

⁷ My wife has similarly benefited from ICTs to develop a home business. With a group of other people around the world she designs, writes, edits, produces, markets and sells training manuals on line.

Have ICTs had a similar impact in developing countries? It is really too early to say. There is anecdotal evidence that farmers and merchants in developing countries who have access to information about markets, prices and other economic indicators can make better decisions that generate income and help their business generally.⁸ The problem is that there are so many obstacles to gaining access in the first place and then to getting useful information. Accessibility issues include:

- *Limited or non-existent connectivity.* In many developing countries, where the communications infrastructure may have had low priority due to more pressing problems, there is a major shortage of phone lines. There is some hope that these countries might leapfrog to wireless communication – still expensive by local standards, but less so than wired options; the cost is decreasing all the time.
- *State monopolies.* Many developing countries have had inefficient state monopolies that controlled the telecommunications infrastructure. Since the 1997 WTO agreement on the liberalization of telecommunications and the subsequent introduction of regulated competition, several countries have seen a dramatic increase in the number of people with phones and Internet connectivity in step with price decreases.
- *The private sector.* It has often been assumed that rural people with limited means will not be interested in making personal investments in telecommunications. For that reason many private sector companies have avoided poorer countries. There is evidence to the contrary, however. In Bangladesh the Grameen Bank's Village Phone Program, a micro-credit venture in which rural poor women can generate income through a mobile phone subscription and a rented handset, with which they act as independent telephone operators charging local users, has spread to 68,000 villages. The Adesemi telecommunications company has successfully sold tens of thousands of wireless pay phones and pagers in Tanzania, Ghana and Sri Lanka. One of the keys to their success is that they envisage *communities* as

⁸ See WDR; also UNDP, "Making New Technologies Work for Human Development" in *Human Development Report 2001* [hereafter "HDR"].

customers – unlike service providers in North America, where the unit customer is an individual user.⁹

- *Intellectual property rights.* Eighty percent of the software that you find in developing countries is pirated. Software manufacturers will increasingly decline to invest in countries or share software with countries that do not respect copyright protection. This is a contentious issue, since it goes to the heart of the ongoing debate about the status of knowledge as an individually owned commodity to be patented and exploited for private profit. The private sector argues that since it has created much of the intellectual property related to the information revolution it is entitled to commercial compensation; otherwise it will have no further incentives to generate new knowledge. On the other hand, if access to the Internet is an indispensable condition of membership in the global community, at what point can ICT be considered a public good? Much of the current intellectual property law is designed to grease the wheels of international economic flows by reducing public goods to privately owned commodities. There is a growing perception that the intellectual property rights juggernaut, which would apply market principles to ecological biodiversity, human life forms, indigenous cultural practices and other forms of knowledge needs to be slowed down by ethical and legal frameworks governing their use.¹⁰ Thanks to the Internet, there are alternatives to the world of patents and profits in generating new software. Cooperative, decentralized approaches to software creation are flourishing, even if they now constitute a tiny percentage of the market.¹¹

⁹Geoffrey Kirkham, “It’s More Than Just Being Connected” (August 1999), 5.

¹⁰HDR 68 – 72

¹¹Ibid., 72, Box 2.9 (“There is living proof of successful alternatives”): Alternative ways of innovating are alive and well – in fact, doing very well. The Internet is testament to the power of cooperative, decentralized approaches to solving problems. Rejecting the tight control over software given by copyright, a reverse movement has been launched – “copyleft,” turning standard practice on its head. Rather than guarding the source codes to programmes, software developers allow users to view, modify and innovate with them – as long as they keep the new codes open too. The result? Arguably the best software around. Apache, a Web server developed communally by programmers in their spare time, is one of the most reliable and up-to-date products available. Apache is installed on 50 percent of publicly accessible Web servers, while a no-secrets policy makes the software an ideal tool for teaching and experimenting in programming.

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- *Telecentres.* Many developing countries with support from the development community have invested in telecentres in poorer rural areas where the private sector has been disinclined to invest. A telecentre is a connectivity node that exists to serve a variety of economic and social purposes.¹² It starts from the premise that ICTs exist to serve community-based interests; they are not ends in themselves. The world, whether industrialized or developing, is already chock-full of “wired” schools, with banks of computers, software bundles, Internet links – to what end?¹³ Telecentres, on the other hand, are only established once the community has identified what it wants to use them for and what future purposes they may serve. A telecentre also needs a local champion who will take responsibility for finding the centre a home in a school, co-op, health clinic or other community institution. This process addresses the question of the public good and balancing competing interests to ensure access for a wide swath of the population. Successful telecentres also seem to share three common features: (1) a sustainable revenue stream from users within the community, (2) mechanisms for repair and maintenance and (3) training of local repair technicians and maintenance staff.

In the telecentres, ICT is not just some sort of foreign technology that has been plunked down, nor a tool that only the wealthiest landlord can exploit, but a tool that the community can shape and direct in the service of community development.¹⁴

¹² For extensive information on telecentres, see <http://www.developmentgateway.org> (in search box, enter “telecentres”); also Kirkham, 9.

¹³ It is interesting to note that Industry Canada followed up SchoolNet and Computers for Schools with Community Access Programs, VolNet and NetCorps. The former dealt with the wiring, connectivity and computers; the latter, with the training issues necessary to make the hardware accessible from a skills perspective.

¹⁴ An example of the importance of assessing the social and political context of an innovation is biogas. In India, local landlords monopolized the benefits of the appropriate technology by claiming that the biogas product was their private property. The same technology placed in Chinese communes resulted in gas for the community.

ICTs or Basic Human Needs? A False Dichotomy

One of the critiques of using scarce resources for the expansion of ICTs in developing countries is that for the 1.3 billion people living in abject poverty, ICTs are a distant luxury compared to the struggle for survival. One group of development workers has gone as far as to accuse the World Bank of fraud, corruption and violation of its own Charter, because the Bank's \$7 billion Global Knowledge Project is inappropriately diverting funds from supplying basic human needs to subsidizing the hegemonic power of the ICT superpowers.¹⁵

While development practitioners need to be careful about neglecting the needy today while chasing the holy grail of interconnectivity for future benefits, neglecting the potential contribution of ICTs would be equally foolish. As UN Secretary General Kofi Annan has put it, "People lack many things: jobs, shelter, food, health care and drinkable water. Today being cut off from basic telecommunication services is a hardship almost as acute as these other deprivations, and may indeed reduce the chances of finding remedies to them."¹⁶ While it may be premature for individual entrepreneurs in developing countries to benefit from ICTs in a consistent fashion, organizations that can overcome the accessibility challenges (whether government agencies, community-based groups or national and international development organizations) can benefit enormously from the expanded use of ICTs. In all of the key sectors of development practice (health, education, environment, nutrition, agriculture) as well as the overarching themes of planning, monitoring and evaluation, the knowledge base is too vast for anyone to have all the answers. By tapping into existing databases, Web sites and discussion groups, practitioners can benefit from the research and expertise that exists elsewhere. At its best it becomes a collaborative creation from the beginning. Let me give you a recent example from our own experience. At Canada World Youth we are currently designing an exchange for social workers from India and Canada with a background in HIV/AIDS issues, who will jointly design a community-based peer counselling model for north India. In addition to sharing information between our two organizations, Society for the

¹⁵ Roberto Bissio, "Corruption Claim Against GDG" (2001). This claim has led to the development of a conflict of interest policy for the World Bank in dealing with ICT investments. See http://www.worldbank.org/ict/html/about_disclosure.html

¹⁶ Kofi Annan, speech to Telecom 99, Geneva Switzerland; in Black, 85.

Promotion of Youth and the Masses (SPYM) and CWY, both belong to larger networks in Asia, Canada and within the sectoral community. Without bringing everyone physically together, we have been able to pick the brains of practitioners and policy experts to improve the design. The results of our project will be shared on-line with these same people to nourish their work. Without the connectivity of ICTs we could not dream of undertaking this project. The success lies not in the connectivity itself, but in channelling the use of hardware and connectivity into a productive relationship with a diverse range of people with whom we might not normally interact.

Diversity and Distribution

With regard to issues of ITC diversity and distribution, serious disparities of access persist. The statistics speak for themselves:

- OECD countries account for 15 percent of the world's population but 88 percent of Internet users. South Asia, by contrast, has 20 percent of the global population but only 1 percent of Internet users.
- One of the key measures of telecommunications access is "teledensity": the number of main telephone lines per 100 people. Teledensity ranges from 99 in Monaco to only 0.07 in Cambodia. More than a quarter of International Telecommunications Union (ITU) member states have a teledensity of less than one, and historically it has taken most countries fifty years to move from that threshold to a teledensity of 50. Africa has 14 million phone lines for 750 million people – less than the number of phone lines in Tokyo.
- Eighty percent of the world's Web sites are in English, but only 10 percent of the world's population understands English.¹⁷

Capital investments in promoting accessibility are similarly skewed. USAID has devoted \$15 million over five years to Global Information Infrastructure (GII) technologies, aimed at extending full Internet connectivity to 20 or more African countries. Compare

¹⁷ ITU, World Telecommunications Development Report, 1998; also WDR, 61–64.

this with the \$450 million invested by the State of North Carolina and local telephone companies in building the North Carolina Information Highway between 1994 and 1999, and with the \$1 billion they expect to spend on it over the next nine years.¹⁸

While telecentres, wireless telecommunications and the expansion of private sector service hold some promise for increased accessibility in the developing world, the current distribution of ICTs has given rise to the expression “digital divide” to describe the connectivity gap. Investment, whether private or public, in ICTs takes place disproportionately where people have the incomes and education to benefit immediately from them and where governments have put in place regulatory frameworks and education systems to nourish the continued generation of ICT skills and enterprises. As developed countries invest even more in research and development around knowledge creation, inequalities in income, employment, health, etc. are reinforced. The expansion of broadband technology may actually exacerbate this situation. “Everyone knows that the broadband era will breed a new generation of online services, but this is only half the story. Broadband will destroy, once and for all, the old egalitarian vision of the Internet.”¹⁹ In the early years of the Internet people were predicting ever-decreasing costs for the transfer of data. It now appears that this optimism conveniently overlooked a hidden subsidy: copper telephone wires that allowed digital data a free ride to servers. Enormous investments will have to be made to accommodate broadband technology; but unless governments get involved, users’ locations and their capacity to pay will be the determining factors in the spread of this new technology.²⁰

I may be naive or overly optimistic, but I think that with the private sector seeking new markets, with strategic investments by governments and development institutions in infrastructure and education, and with a framework that allows for the competitive but

¹⁸ Benton Foundation, “Losing Ground Bit By Bit: Low Income Communities in the Information Age,” (Washington, 1998) in Smillie, 9.

¹⁹ Charles Platt, “The Future Will Be Fast but Not Free” (*Wired*, May 2001), 122.

²⁰ In a 21 July 2001 *Globe and Mail* article on public policy and the digital broadband infrastructure, former Minister of Foreign Affairs and Nobel Peace Prize nominee Lloyd Axworthy argues that governments have a role to play in protecting and promoting values and greater public interest on the Internet, and that these cannot be left exclusively in the hands of the private sector. Axworthy also argues for Web-based community development, with public resources being used to finance the public good through the new e-community.

regulated growth of telecommunications, physical accessibility may not be an insurmountable or even primary challenge in years to come. The ICT revolution, after all, is still in its infancy.

Techno-hubris

The last two centuries of rapid technological change have created moments of supreme confidence among the technocratic community about our capacity to apply the power of science and technology to solve the world's problems.²¹ As Thomas Homer-Dixon has pointed out in *The Ingenuity Gap*, the changes in ICTs during the last decade have been revolutionary, and may well be even more so in the next couple of decades.²² Rereading the proponents (and salesmen) of an expanded ICT revolution during the late 1990s, many make grandiose claims that the ICT revolution will be the panacea for our social ills, including the absolute poverty that so many in developing countries continue to experience. After outlining the remarkable achievements of the ICT revolution, Homer-Dixon then remarks:

As we reshape our world, from the atoms in silicon semiconductors to the dams along the world's great rivers, as we make miracles out of the raw nature around us, and as our technologies sweep us into the future, we may become convinced of our own invincibility and infallibility, and dream that our possibilities are truly boundless. If technological progress becomes our *raison d'être* and miraculous machines our gods, we may begin to think that we, as the creators of these machines, are gods ourselves. . . . Technology worship and self-worship can quickly become hubris. We lose our grip on reality, on what we really can and cannot do, on what we really can and cannot know. The dynamo becomes more impressive than the planet, or even nature itself. God is lost, forces and imponderables beyond us are unseen or misinterpreted, and we become the measure and the masters of all things.²³

²¹ The laying of the first trans-Atlantic telegraph cable in 1858 was immediately hailed as an epoch-making achievement in communications and technology. In New York and Boston there were hundred-gun salutes, parades, fireworks and special church services. The *Scientific American* reported, "Our whole country has been electrified by the successful laying of the Atlantic telegraph," while *The Times* of London wrote, "Since the discovery of Columbus, nothing has been done in any degree comparable to the vast enlargement which has thus been given to the sphere of human activity." The telegraph would bring an end to war and promote "the exchange of thought between all the nations of the earth."

²² See Homer-Dixon, *The Ingenuity Gap* (2000), ch. 10: "Techno Hubris."

²³ *Ibid.*, 273.

Homer-Dixon points out that the revolutionary changes in ICTs have not been matched by a similar degree of progress in other areas of science and technology. Progress can often be slow and meandering or even a disillusionment. Therefore, it may be that we can transmit a trillion bits of information a second but do we have enough useful information to transmit? How will that information actually transform lives?

The introduction of ICTs can only have a positive impact if they can be harmonized with the socio-cultural and political context in which we attempt to apply them. It is not merely a question of our socio-political structures catching up with the ICT revolution (a form of techno-determinism); the designers of ICT need to be in dialogue with the end users from the beginning. In the development context this means starting from the existing community development issues and asking how ICTs might help rather than arriving with the latest gizmo and trying to make people adapt to it. One of the greatest dangers in the promotion of ICTs is that Southern organizations will be drawn too quickly into the purchase of expensive and sophisticated technology that they can neither afford nor sustain, beguiled by the hope that they will solve problems that they cannot.²⁴

This raises the issue of how knowledge is actually created. ICTs actually transmit bits of information that the receiver then has to infuse with their own insight, expertise and capability in order for it to become knowledge. In other words, in order for that information to be useful it has to be shaped, adapted and reconfigured by the person or community who might use it. The Internet should be an ideal forum for this to happen, since it allows not just for the receipt of information but also for active participation. In principle, the architecture of the Internet creates a forum where people can collectively share and create almost anything at a very low cost; whoever goes on line can create content collaboratively. The potentially liberating aspect of the Internet is that no one controls it; anyone with a PC, modem and ISP account can enter the network and either download material or share information of their own. "Printing made us all readers," says

²⁴Planners in Africa need to ask why they should invest in relatively expensive ICTs which currently reach less than one percent of the population, when radios reach 75 percent? Why, for that matter, is the World Bank investing in an African Virtual University at a time when thousands of the most skilled ICT students and experts are emigrating to developed countries?

Friedman. “Xeroxing made us all publishers. TV made us all viewers. Digitization makes us all broadcasters.”²⁵

Why then does so much content reflect one dominant cultural and development perspective? Access is certainly a key factor but I think that there are other systemic barriers. The World Bank has started the Global Knowledge Project to “develop a dynamic knowledge management system capable of distilling knowledge and making it available for further adoption and use in new settings.”²⁶ The Bank is trying to pull together the best research in the development field and put it on line so that poorer countries can acquire it rather than having to recreate it at enormous cost over decades. While vigorously supporting intellectual property rights, it sees itself as a broker of this knowledge to the developing world. I am sure that the planners at the World Bank genuinely want to help developing countries; their database will be a gold mine for useful research. However, the approach betrays certain assumptions about the development process that have plagued the Bank for decades. It assumes that the knowledge gap can be overcome if we just collect enough information and research (almost exclusively from researchers in developed countries)²⁷ and upload it to developing countries for implementation. If this approach fails, no doubt the World Bank will report that the market was not open enough, or that the education system was not appropriate, or the culture and infrastructure were not ready to absorb it – rather than attributing the failure to a lack of local participation in the planning process.

The concern among many development practitioners is that the Global Knowledge Project does not leave sufficient place for local and indigenous knowledge that does not fit the World Bank paradigm either of knowledge or of a market economy. To its credit, the Bank has a vibrant on-line discussion group, where these issues are debated at length and quite vigorously – albeit in English and among knowledge workers.

²⁵ Friedman, 50.

²⁶ WDR, 7.

²⁷ Homer-Dixon (259–60) suggests that researchers from developing countries have great difficulty in getting published in scholarly journals, due to the pervasive editorial bias against science from the developing world.

The second systemic barrier to a more diversified content comes from the control of the portals to the Internet. Most recently, ICTs have not only been the grease that keeps the global economy running, but also a source of great wealth and power for those who control the companies. “New information and communication technologies have generally decentralized the capacity to communicate. Globalization is facilitating a counter trend – a growing concentration in the ownership of the media and communications industries.”²⁸ The mega-mergers of the last few years have given certain companies massive influence over how we connect and the range of content that is available. While the Internet is public space, many private Internet service providers have created the virtual community of discussion groups and chat rooms inside the privatized space of their service. “AOL subscribers have, in the past two years, learned some harsh lessons about their virtual community and the limits on the rights of its citizens. AOL, though part of the publicly owned Internet, is a sort of privatized mini-Net inside the larger Web. The company collects the toll on the way in and, like mall security guards, it can set the rules while customers are inside its domain.”²⁹ This has included screening out objectionable behaviour but also closing down some political sites that did not correspond to the company’s vision of family values. As a private company AOL has the right to decide what type of content it will host; but it should not presume to brand itself as a purveyor of the freedom, choice and interactivity that the Internet, left to itself, can – and once did – readily deliver on a vast scale, without any corporate branding whatsoever. Choice still exists on the Internet, where many portals and free information sources still exist for *citizens* who care to dig. However, the access to massive libraries of content and the economies of scale which the consolidated ICT companies enjoy, means that they have comparative advantages to which *consumers* flock. In mid-2000, 80 percent of Internet users entered via one of twenty-four portals; in 2001 the number is down to eight.³⁰

²⁸ See PANOS Perspective Papers.

²⁹ Naomi Klein, *No Logo* (2000), 184.

³⁰ Interview with ICT specialist Jean-Philippe Boutin (2001).

Networking

Despite this consolidation in portals, the architecture of the Internet still allows for a relatively unfettered exchange of uncensored information. This has been used to great effect by advocacy groups and anti-corporate activists to turn the very tools of the big-brand companies (fibre optic cables and shared cultural references) against them. For the private sector there may be one economy and one global market (to use Peter F. Drucker's expression), but for global citizens there are global human rights, global environmental standards and global working conditions. In *No Logo*, Naomi Klein documents this citizen advocacy movement's successful efforts to link the struggles of workers in developing countries with human rights, labour and environmental activists around the world. In addition to targeting individual companies such as Nike, Shell and McDonalds, coalitions of activists successfully stalled the Multilateral Agreement on Investment and created the public pressure that pushed through the Land Mines agreement.³¹ Their capacity to gather, synthesize and disseminate information around the globe and to mobilize grassroots resistance stems from their agile and extensive use of the Internet. How can a corporation, especially one that is waiting for the head office to take control, deal with resistance that is popping up in different forms in different places in a seemingly coordinated fashion but without an identifiable leadership or "organization" that is directing the action? "The Net is more than an organizing tool – it has become an organizing model, a blueprint for decentralized but cooperative decision making. It facilitates the process of information sharing to such a degree that many groups can work in concert with one another without the need to achieve monolithic consensus."³² Even more than the capacity of ICTs to inexpensively facilitate the shared creation of knowledge and expertise, the architecture of the Internet – a series of interconnected networks – would seem to have lessons for how we organize our communities and our companies.

³¹ See Klein, 335–443.

³² *Ibid.*, 396.

Conclusions

The jury is still out on what the impact of ICTs will be on development. As a middle-class male in North America, who is writing this paper on a laptop computer powered by solar energy, I might give quite a different answer from a woman in Mali who spends her day collecting firewood and cooking; but I think we will both have to deal with the further expansion of ICTs in the future. So, rather than trying to speculate on whether this expansion will, or ought to, continue, it might be more useful to answer the following question: what factors will enhance the positive impact of ICTs on development? Three key factors are:

- *Accessibility.* The private sector should be encouraged to continue investing both in ICTs and in expanded ICT markets. For many countries this will entail changes to the regulatory and pricing structure of telecommunications. Private sector-government collaborations should be explored for upgrading the ICT infrastructure and servicing harder to reach communities. Community-based ICT infrastructures such as telecentres should be expanded.
- *Diversity.* With more accessibility, a more diverse range of users should come on line. There needs to be continued research into translation software combined with voice recognition. This would facilitate the inclusion of oral traditions into the body of global knowledge through the use of multi-media rather than text. In the same way global databases or knowledge repositories need to proactively reflect different cultural traditions as well as assumptions related to knowledge.
- *Strengthening of institutions.* At the national level, countries need to develop ICT strategies that start from the premise that these technologies exist in order to serve developmental goals, and not as ends in themselves. Educating and training a pool not only of knowledge workers but also of citizens who know how to use ICTs will be a prerequisite to broad participation. Citizens who are aware of the limitations and the dark side of ICTs will be crucial in reining in exaggerated claims for the role of technology in the development process.

Development remains a process of community building: As we saw with telecentres, the developmental process still starts with communities assessing their collective assets,

identifying their challenges and having a vision of how ICTs might improve their lives. The hardware and software are subservient to the quality of the relationships that the connectivity creates. The architecture of the Internet does seem to be compatible with forms of organization that are more networked, transparent and participatory. In and of themselves, ICTs are neither beneficent nor malevolent. They can have a positive impact if there is imaginative local policy making that reflects the needs and aspirations of all sectors of society.

2

NetCorps Canada International: Getting Connected

In 1996 ICT visionaries David Johnston, former principal of McGill University, and Doug Hull, Director General of the Information Highway Applications Branch at Industry Canada, challenged a group of people to design a program that would address the issue of the digital divide, while building upon Canada's expertise in telecommunications and the skills of Canadian youth. The private sector, young people trained in information technology who might be interns and partner organizations in developing countries came to the table with different positions about the value and direction of such an initiative. The challenge has been to create a story that appeals to the common interests that underlie those positions. In this part of the paper I will explore the story of the NetCorps Canada International initiative and its impact on increasing connectivity.

Overview of NetCorps Canada International

The initiative is built upon the following premises, many of which were outlined in chapter one:

- In a globalized economy, access to ICTs and the capacity to use them will be increasingly important development issues; in a sense, they are the new dividing line between rich and poor, the powerful and the marginalized.
- Young people who have relevant education, training or experience in ICTs can effectively contribute to and learn from the experience of strengthening the ICT capacity of partner organizations in developing countries.
- Private sector ICT companies have skills and resources to invest in the initiative and would be more competitive if their employees had international work experience.

The original project design consisted of sending appropriately trained Canadian young people to work for six months with voluntary sector organizations in developing countries in the establishment or strengthening of their ICT infrastructures. Upon their return to Canada, the interns would receive job search support.

Positions and Interests

In order to build a broader base of support for the NetCorps initiative, there has been a process of identifying potential stakeholders. In our ongoing discussions with the private sector, partner organizations in developing countries and Canadian young people, we have encountered different positions that at first do not always seem compatible. However, by digging deeper into the interests that were underlying these positions, we were able to identify common ground that could serve as the foundation for the initiative.³³

1. The Private sector

“Our organization is profit driven. We would like to expand our overseas market for our ICT products and services. Therefore, we might be interested in young people who could be part of our international sales force or to act as commercial intelligence agents.”

In our meetings with private sector companies, we have not been able to make much headway with the marketing and financial departments. Senior staff in the HR and R&D departments bring a different perspective to the table. When we asked them what the key to profitability for the company would be in the future, the answer would inevitably return to intellectual capital or the capacity of employees to develop new products on a sustainable basis. The challenge was to recruit and retain competent young staff with a global perspective. As Robert K. Greenleaf has noted: “A hopeful sign of the times, in the sector of society where it seems least expected – highly competitive business – is that people-building institutions are holding their own while they struggle successfully in the

³³ This framework for identifying positions, and the interests behind those positions, is derived from Fisher and Ury, *Getting to Yes* (1991)

marketplace.”³⁴ In fact, if “intelligent enterprises and organizations”³⁵ are likely to be more successful in the future than bureaucracies, then it would seem to be a smart move to invest in young people who will have both ICT expertise and the intangible set of qualities (flexibility, creativity, teamwork) that will be necessary in more networked organizations. The appeal of NetCorps to the private sector, therefore, is not a matter of current shareholder value but rather of the sustainability of the company’s human resource base.

3. Partner organizations in developing countries

“We need to develop our ICT infrastructure as fast as we can. Send us the latest IT equipment and experts to set it up.”

In section 1, I noted that the combination of techno-hubris on the part of development/ICT practitioners and a genuine desire on the part of local leaders for rapid amelioration of abject poverty could be an unfortunate mix. Developing countries are littered with turnkey technology transfer projects that have been imported by northern “experts” at great expense, without adequate thought as to how they would be effective in the local environment. Technology and development are not synonymous; the former is a tool that can serve the latter only if people have the skills and knowledge to harness its potential. Roger Harris, a member of the University of Malaysia’s faculty of Information Technology, warns: “The best computer technologies will always add unnecessary costs to a poorly managed organization. Spending more money on the most sophisticated technology will not bring desirable results unless it is accompanied by changes in the way things are done.”³⁶

This is not an easy message to deliver. If one ignores partner organizations’ genuine desire for better hardware and software, they will rightfully accuse us of passing on our outdated technologies to them. My approach is to emphasize the concomitant need for “brainware” – not only the technical skills to use ICTs, but also the capacity to reorganize

³⁴ Greenleaf, *Servant Leadership* (1999), 39.

³⁵ See Quinn, *Intelligent Enterprise* (1992); also Pinchot, *The End of Bureaucracy* (1993).

³⁶ See Harris, “ICTs, Poverty and Development” (1999).

work in a way that improves the management of the organization. For example, ICTs allow for the decentralization of some activities (local offices can access information directly) and the centralization of others through the use of databases. The important “political” questions (Who has power? How are decisions made? What are the community’s assets and liabilities?) raised in the process of setting up a telecentre cannot be avoided. For countries with enormous youth populations, ICTs also allow for a higher degree of youth participation than conventional technologies.

Most of our partner organizations have a love-hate relationship with technology imported from more industrialized countries. They want the technology, but they want it to be subservient to their development perspective. The NetCorps initiative has a very strong training component, more focused on adult education methodologies and community participation principles and practices than on ICT skills. The role of Canadian interns is to build the ICT infrastructure with local staff, who will have to integrate the technology into the culture of their organization – and their society.

3. Canadian young people

“I would like to travel and get international experience but I cannot afford to get behind my peers in the competition to get a good job in the ICT sector.”

In a rapidly changing economy, the key to getting jobs for young people is to develop the “employability skills” sought by ICT employers.³⁷ These include communication skills, the ability to work in a team, creativity, leadership skills, and the capacity to be a life-long learner. The technical orientation of many ICT workers often does not adequately prepare them for their role in dealing with people. In keeping with the people-centred focus of the organizations running the NetCorps initiative, there is a great deal of emphasis placed on the development of these employable skills. The other distinguishing feature of the ICT industry is that it is one of the most global in terms both of production and of market orientation. Knowledge workers who can demonstrate language and cross-

³⁷ The Conference Board of Canada has published many articles on this subject. In highly technical fields, the knowledge base changes so quickly that all employees must be retrained on a regular basis. Companies therefore want new employees to arrive with skills that will serve as the foundation for future technical training.

cultural skills are extremely well placed in the job market. When seen in this light, NetCorps interns with international work experience on their résumé have a competitive advantage over their peers. Finally, the sense of adventure in going to a developing country while honing their skills is a strong attraction for many young Canadians.

Designing a New Model

This original project design of sending Canadian interns overseas for six months responds to many of the interests expressed by potential partners in the initiative. However, it does not address the desire within the private sector to increase the overseas market for their goods. Nor does it entirely reassure the host organizations in developing countries that their upgraded ICT infrastructure will be sustainable once the Canadians leave. Therefore, we are currently undertaking ICT exchanges in which young interns from Canada and the partner countries each spend three months in Canada working together on community-based ICT projects, followed by three months overseas doing the same thing. This exchange model has several advantages. First, southern youth also learn from and contribute to the process of strengthening the ICT infrastructure. After the intern leaves, they remain in place, with the skills to maintain the upgraded system locally. Secondly, since these future ICT leaders in southern countries will be making the decisions about ICT purchases, their exposure to Canadian technology during the internship phase augurs well for Canada's ICT firms. Finally, the exchange model shifts the development paradigm from a one-way technology transfer to a state of interdependence, in which both sides have skills and knowledge to share. The exchange model creates the necessary conditions for the servant-leadership model in which "today's privileged can . . . stand aside and serve by helping when asked and as instructed . . . by leaders from among the dark skinned, the alienated, and the deprived of the world."³⁸

The Story

NetCorps is significant for another reason, in that it reproduces a major component of the McGill-McConnell Program: storytelling as a means to action and knowledge. The young Canadians who participate in the NetCorps initiative pass through the classic stages of the

³⁸ Greenleaf, 34.

heroic rite of passage archetype found in storytelling traditions worldwide. They are called to action; they must journey into foreign lands; they must battle with external challenges and inner demons; finally they return home, transformed by their struggle and ultimate success.³⁹

The Call

Almost all cultures that I have encountered have rites of passage, some more ritualized than others, for passing from youth into adulthood. One recurring theme in both religious and secular traditions is that young people must be tested in order to demonstrate their worthiness to become adults. This test often involves separation from one's family and travel to a foreign land, where certain challenges need to be overcome. In many of these traditions, the journey also involves service to others as part of the maturing process.⁴⁰

Even in North American society, where spiritual traditions hold less influence over the conscious decisions of youth and a culture of consumption offers numerous avenues of escape, this desire to leave home for a foreign land in order to accomplish something beyond one's own milieu is very powerful. "By extending education for so many so far into the adult years, the normal participation in society is effectively denied when young people are ready for it. With education that is preponderantly abstract and analytical it is no wonder that there is a preoccupation with criticism and that not much thought is given to 'What can I do about it?'"⁴¹ After twenty years of formal education, and with a career looming in the future, many young people are very attracted to the notion of an overseas internship. This combination of adventure and service can be irresistible, if it is attractively presented. "From the occult to raves to riots to extreme sports, it seems that the eternal urge for escape has never enjoyed such niche marketing."⁴²

³⁹ Magni, Italo. "Once Upon a Time....The Art of Storytelling," McGill University, 26 August 1999.

⁴⁰ In Buddhist tradition a young man shaves his head, travels to another part of the country and lives as a novice monk for three months. This includes serving the community and begging for food. Other religious traditions have similar rites of passage.

⁴¹ Greenleaf, 11.

⁴² Klein, 64.

Young Canadians bring an interesting mix of advanced ICT skills and that restless desire to test themselves and the boundaries of freedom. “Freedom is perhaps the ultimate spiritual longing of an individual human being, but freedom is only really appreciated when it falls within the parameters of a larger sense of belonging.”⁴³ The NetCorps initiative strives to offer youth both the unique satisfaction of a personal adventure and a sense of belonging to something other than the cultural references and consumerism of the global brands. ICTs are the mechanism for belonging to a movement that not only focuses on principles of solidarity and justice but also, like the architecture of the Net itself, encourages diversity and freedom in the pursuit of common goals.

The Struggle

After the initial “honeymoon” period overseas, in which the interns’ idealism remains undiminished and their new experiences are generally positive, reality sets in. At the work site the interns are often humbled by the limitations of their own skills and frustrated by the shortcomings of others. Routine computer glitches are magnified by electrical blackouts, poor equipment and a lack of technical support. At the same time, the individual interns are faced with the personal challenges of a new language, new surroundings and the absence of family and friends. This combination of culture shock and a sudden sense of professional inadequacy often leads to self-doubt among the interns and, in extreme cases, early repatriation.

The host organizations too can become disillusioned with the experience. Even a simple internship project may consume far more than its fair share of scarce human and financial resources. It may not lead to more effective management of the organization. Worse, the young NetCorps “gringo,” with all his whining about the working conditions and the culture, is not contributing to a positive work environment.

The breakthrough often comes as a result of a blow-up at work. In order to turn this situation around, those involved need to step back and ask themselves what the purpose of the initiative was in the first place. The interns have to reflect on their personal and cultural values about work and how they relate to the larger development objectives of

⁴³ David Whyte, *Crossing the Unknown Sea* (2001), 233.

the partner organization. The moment of truth comes when they look in the mirror and ask themselves: “Is my behaviour consistent with those values and objectives?” The effective leader, as Gardiner⁴⁴ points out, must possess a high degree of self-knowledge combined with a capacity to integrate the perspectives of others. In their obsession to complete certain ICT tasks within the allotted time, interns may have forgotten that the real “product” is developing the skills of people on both sides. This can be particularly difficult for interns in an intense cross-cultural experience because, with so many other parts of their identity and cultural touchstones under constant siege, they tend to cling tenaciously to their self-image as the ICT teacher. The situation starts to improve when the interns learn to “drop their tools”⁴⁵ – and with them their identity as an “ICT expert” – and start to make a “connection”⁴⁶ with other young people at work and in their social life. When they begin to understand and respect the skills of local people, the pressure to act the part of the expert subsides and the interns can transform their role and become servant leaders.

The partner organization has the same crisis of confidence: there is disillusionment with the technology and the magical power of the intern who was supposed to effortlessly reveal its secrets. There is a reaffirmation of national and cultural pride and a determination to keep the value of the technology (and the “gringo”) in perspective. To use an ICT example, it is less important to leave behind a snazzy Web site (which may be obsolete in six months, anyway) than it is to train local colleagues who can assess the site’s opportunities and pitfalls, or create and maintain a simple site by themselves. It may even be a more significant contribution to facilitate an organizational planning process that concludes that a Web site is not what is needed at all. The organization, however, will have gained the capacity to assess its own ICT needs and capacities.

⁴⁴ See Gardner and Laskin, *Leading Minds* (1996).

⁴⁵ Karl Weick, writing in the *Harvard Business Review* (May–June 1996), describes how several firefighters died because they would not drop their tools and run when a blaze got out of control. The firefighting expertise, which their tools symbolized, was an integral part of their identity; but in an acute crisis these tools proved a fatal impediment to a different and more improvisational response.

⁴⁶ Interns have often used ICT language to describe the benefits of the internship. They thought they were going to connect intranet sites and build ICT networks. In the end the human connections and the network of friends prove to be more interesting and durable rewards.

The Transformation

The real impact of the program is only fully comprehensible when the interns return home. Sixty per cent of interns claim that they experience greater culture shock upon returning home than they did during their stay overseas.⁴⁷ They expect everything to be “normal” when they return home; but their perspective on what is normal in consumption, family life and workplace priorities has been substantially altered. Ironically, some of the interns who have been most deeply affected by their NetCorps learning experience make the same mistake at home that they made abroad: just as they once lectured their young colleagues overseas about the wonders of North American technology, they now harangue their family and friends about excessive levels of consumption and our love-affair with technology. Those, on the other hand, who have fully absorbed the lessons of servant leadership will demonstrate a degree of humility and respect for many different cultural traditions, including their own. They will not reject technology nor regard it as the instant cure-all for the world’s ills; instead they will have acquired a coherent vision of technology in the service of human goals. They will have the skills to work in any culture because they will have acquired a more comprehensive mindset that enables them to work cross-culturally rather than merely apply culture-specific skills. As one intern said, “After two months I thought I could write a book about Thailand; after four months, only a chapter; but after six months, I could write a book about myself.” Young people between 17 and 24 seem to be better equipped for this unsettling transformation, because at this age they are accustomed to grappling with their own identity and living the ambiguity and tension between things as they are and the world as it might be. As David Whyte explains,

They have what Keats described as *Negative Capability*, that is *when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after facts and reason . . .* To most of them, uncertainty, multiplicity, mystery and unknowing are understood as a vital way of paying attention to a new epoch forming quickly around them. They see uncertainty as a kind of breathing space from the ironbound nature of the past. . . . There is no doubt that much has been lost with regard to overt spiritual direction,

⁴⁷ Based on post-program surveys of CWY participants since 1971.

but would any of them go back? For direction and domination? Not a chance. For a conversation of equals? Yes, perhaps.⁴⁸

As a tool, the Internet can greatly facilitate this conversation of equals for it simultaneously allows for a great deal of individual freedom and offers the sense of belonging that comes from creating a community. Individualism need not result in that narcissism which ultimately subjects people to conformity and consumerism in the global marketplace; it can produce global citizens who voluntarily enter into dialogue and create shared perspectives and solutions without needing a central authority (whether church, state, family) to dictate the form of that community.⁴⁹

Longitudinal impact assessments strongly confirm interns' reports that they developed advanced employable skills, as well as the knowledge and values associated with active global citizenship.⁵⁰ Employers and university guidance counsellors have remarked that former NetCorps interns possess both personal maturity and valuable communication and leadership skills that separate them from their peers. As one manager said to me recently, "They are no more technically skilled than others, but they have that fire in their bellies of people who know where they want to go. As a result they are able to convince others to follow them." We are often told that knowledge workers will play increasingly important roles in shaping our society. The NetCorps initiative takes people whose technical expertise will lead to positions of significant responsibility, and ensures that this expertise is balanced by a humanist perspective.

Who Should Tell the Story?

One important practical challenge has been to determine the most effective way of telling the NetCorps story. In keeping with the theme of creating a community through a conversation of equals, telling this story has become a collective effort shared by all the

⁴⁸ David Whyte, *Crossing the Unknown Sea* (New York, 2001), 232–233.

⁴⁹ For a discussion on how a shallow emphasis on self-fulfillment actually lends itself to control by the global brand names, see Klein, *No Logo* (2000). From a different angle, Charles Taylor, in *The Malaise of Modernity* (1991) and John Ralston Saul, in *The Unconscious Civilization* (1995) affirm the importance of authentic individualism within the context of building community and democratic decision making.

⁵⁰ See CAC International, *Building a Constituency for Development* (1994).

NetCorps community via Baobab, an interactive Web site and resource centre. NetCorps has evolved from a specific project run by a small group of people into a network of relationships and initiatives that are autonomous but interdependent.

3

Collaboration Within NetCorps Canada International: How Conflict Can Lead to Organizational Learning

Canada World Youth is at the centre of a web of relations that includes other members of the NetCorps Canada International coalition, Industry Canada, private sector companies, exchange country partners and, most recently, multilateral institutions. In this section I will analyze the nature of the collaborations that take place within the NetCorps initiative, using Rosabeth Moss Kanter's framework for defining different types of collaboration.⁵¹ I will then examine some of the conflicts inherent in collaborative relationships – conflicts which nonetheless led to some interesting opportunities for organizational learning within CWY.

Types of Collaboration

1. The NetCorps Coalition

The NetCorps Canada coalition consists of nine Canadian volunteer sending agencies (VSAs). Canada World Youth, as the lead agency in this coalition, manages the program and its relationship to Industry Canada, the key funder, as well as external relations with the private sector, national and multilateral institutions. Individual agencies manage the internships and relations with exchange country partners. As a group of organizations that bring largely the same expertise and resources to the table in order to expand their collective reach, the coalition would fairly be described as a service alliance.⁵² We joined together, first of all because all of us were new in the ICT field and lacked the expertise to manage it on our own. Secondly, there were economies of scale to be realized. Finally, and most importantly, collaboration was perceived as giving the entire coalition more credibility and political weight in negotiating with funders, as well as a greater capacity to generate media and public interest.

⁵¹ See Kanter, "Becoming PALs" (1989).

⁵² *Ibid.*, 185.

Members at present are generally satisfied with the way the coalition works; but this was not always the case. We encountered many of the difficulties common to alliances during our first year of operation.⁵³ The coalition's original lead agency (not CWY) did not share information in a transparent way; common financial resources were not accounted for appropriately. Moreover, the lead agency benefited disproportionately from its position.

In order to avoid these pitfalls when the coalition asked us to assume leadership, CWY undertook four basic improvements.

1. We drew up a set of operating principles, outlining roles and responsibilities for members.
2. We created a very powerful steering committee, which includes all members of the coalition, to guide the lead agency.
3. We set limits on quotas for interns and funding so as to ensure that smaller players would have equitable access to internship opportunities.
4. We managed the NetCorps Secretariat in a fashion that was at arm's length and as transparent as possible.

The coalition's operating principles have been absolutely crucial in keeping the coalition together and productive. They begin by articulating our vision of development and underline that ICTs need to be in the service of development. By establishing our priorities as a coalition prior to entering into any negotiations with funders or partners, we have avoided the kind of divisive debates and opportunistic behaviour (e.g. cutting private deals) that might have torn the coalition apart.

2. Collaboration with Industry Canada

The relationship between the coalition and Industry Canada brings partners who have complimentary skills and resources together into an opportunistic alliance. Industry Canada brings money, ICT software and programs to the table, as well as private sector

⁵³ Ibid., 190–92.

contacts. The coalition brings expertise in sending volunteers, contacts around the world and a broadly based credibility with the development community in Canada and overseas. It was only during the negotiations with Industry Canada that I realized, somewhat to my surprise, the power of the coalition's discursive legitimacy⁵⁴ to act as a counterbalance to Industry Canada's financial resources. Industry Canada sought an alliance with partners who could provide international credibility in order to fend off attacks from CIDA and DFAIT, both of which were arguing that it had no business working internationally. Having committed themselves to launching the program, the staff of Industry Canada became very accommodating on the couple of occasions when we were prepared to walk away from the negotiations. We could live without their money if the compromises were considered too steep; they could not live without our participation and public reputation. This recognition on both sides of the expertise and credibility that the NetCorps coalition brings to the relationship has helped to create a respectful and interdependent collaboration, which goes beyond a traditional funding relationship.⁵⁵ Unfortunately, the champions of this collaboration with the voluntary sector within Industry Canada have moved on to other positions within government. Our challenge is to try and avoid slipping back into the funder/executing agency relationship which lends itself to command and control behaviour on the part of the funder.

3. Multilateral Institutions

The collaborations that CWY undertakes in the NetCorps initiative are a series of complimentary opportunistic or ad hoc alliances. We have not actually brought all the stakeholders together; instead we collaborate with specific partners on limited portions of the entire initiative. The United Nations Volunteers (UNV), however, is seeking to build upon the NetCorps model and actually bring all the stakeholders together in one big alliance. The process is still in its early stages, but given that UNV's approach seems to be creating rather than overcoming barriers to collaboration, this initiative may not get off the ground. Despite a history of mistrust and its overwhelming size, UNV convened a meeting at which half the participants were from UNV, the agenda and process were UNV-controlled and the institutional baggage of the UN was never put on the table as a

⁵⁴ Class notes from Nelson Phillips, "Strategies of Engagement," McGill University, 7 July 2000.

⁵⁵ The importance of recognizing interdependence is outlined in Barbara Gray, *Collaborating* (1989), 11.

matter for debate. I asked, “Are you interested in a genuine collaboration, or in hiring us as resource people to help you build something inside UNV?” Imagine my surprise when, in his millennium address, UN Secretary General Kofi Annan announced that NetCorps Canada International had agreed to participate in the UNV initiative!

Besides these barriers to collaboration, the UNV proposal suffers from the bureaucratic approach which is so ingrained in the UN working culture. It has suggested that all proposals for internships and candidates’ applications be matched in one central location. Furthermore, all interns would have exactly the same terms and conditions of service, in order to ensure quality control of internships and consistency for the young people. Unfortunately, it is also a recipe for a bureaucratic nightmare; what is more, it overlooks the fact that ICT initiatives based on a minimum-specifications approach allow for a much lighter, decentralized system. In contrast to this, the Canadian government is proposing to put money into Global NetCorps, a fund that will help individual countries set up their own NetCorps programs. Each country can design its own type of domestic ICT connectivity and development program, but will have the option of drawing upon common services housed within IDRC.⁵⁶

Conflict and Organizational Learning

1. The Coalition

Within the coalition there were several contentious issues that threatened to destroy our capacity to work together. We had different target groups, quite different program designs and different terms and conditions for our interns. No one wanted to compromise on what they saw as essential features (better described as “sacred cows”) within their organization. Although I could not name it at the time, the answer that we stumbled upon was to create minimum specifications that ensured safety, security and the achievement of results without micro-managing the means. “Complexity science suggests that we would be better off with minimum specifications and general senses of direction, and then allow appropriate autonomy for individuals to self-organize and adapt as time goes

⁵⁶ This initiative was announced at the Summit of the Americas in Quebec City. Ironically, one of the challenges to getting it off the ground has been the need for various stakeholders (DFAIT, Industry Canada, and CIDA) to sort out their respective roles and responsibilities in a collaborative fashion.

by.”⁵⁷ A program framework that allowed for diverse approaches to meet similar objectives was the only way to go in order to keep the coalition from breaking up. Over time and with the benefit of evaluations, we have been able to refine the parameters – sometimes tightening them to increase centralized control (e.g. respect for Department of Foreign Affairs guidelines on safe countries), and sometimes loosening them to allow for experimentation.

Our organizational learning occurred at several levels. Having defended our approach, we were obliged to look at the rationale behind some of our organization’s own “sacred cows.” In doing so, we found that neither the approach nor the rationale could always be justified. What have we learned? We have learned some specific techniques from other organizations; but we have learned especially that received opinions and entrenched approaches need to be questioned and evaluated for their relevance. As such, they may have been immune from a thorough investigation for too long; far from being the solid foundation upon which the organization is built, they may even be the weak links which, if they cannot be mended, must sometimes be broken and forged anew.⁵⁸

We have also learned the limitations of the voluntary sector’s obsession with achieving consensus. Much of the conflict within the coalition occurred because of well-meaning, but ultimately futile, efforts to seek consensus on common approaches. Without a high level of knowledge or agreement, premature consensus building resulted in stifling diverse approaches and any openness to explore new avenues. We have since learned to embrace this conflict as part of the creative tension that is necessary to encourage innovation. It is not easy to maintain openness to diversity and conflict when faced with the bureaucratic, standardizing mindset that lurks within all of us, particularly unimaginative and timid funders (e.g. HRDC).

2. Industry Canada

In building a collaborative relationship with Industry Canada, there was a clash of two cultural and development perspectives. For Industry Canada, the young people are a means to promote ICTs – particularly the products and services that Industry Canada has

⁵⁷ Brenda Zimmerman et al., *Edgework* (1998), 26.

⁵⁸ *Ibid.*, 171–83.

developed as part of its “Connecting Canadians” strategy.⁵⁹ There is an assumption that the private sector is the engine of development (not just growth) and a corporate culture unlike most government departments. For Canada World Youth, ICTs are a means of developing the potential in human beings and communities; they ought not to be made subservient to larger questions of power. The private sector has traditionally been seen, not as an engine of development, but as a source of inequality and exploitation because of the exclusive focus on the generation of profits. Finally, the first few meetings were awkward simply because of the different organizational values that the stakeholders brought to the table.

CWY was able to play a useful role in bridging the gap by demystifying the stereotypes on both sides.⁶⁰ To begin with, we pride ourselves on working with a wide range of community organizations, many of which have very different perspectives than our own. Secondly, the essence of working cross-culturally is to suspend judgement until you understand the values and assumptions underlying certain perspectives and behaviours. This approach was reciprocated by a couple of Industry Canada’s key staff members, so that we were able to come to an agreement; but I know that they were accused of going “soft” by many within their department. During this period of negotiations I felt that I was in creative conflict on three fronts: on substantive issues with Industry Canada; with some of the NetCorps coalition’s members, who felt that I was “selling out”; and within CWY, where all this flurry of new activity was seen as destabilizing.

As a result of our collaboration with Industry Canada, we are now proactively seeking sponsorships with the corporate sector. In the past year we have entered into agreements with three companies to provide goods and services in exchange for recognition in our publicity materials. Despite the fact that the Board has mandated this type of initiative, and despite the existence of a well-researched ethical screen, some staff still have a problem with corporate sponsorship. Some of it is ideological; but there is also a sense that power within the organization has shifted away from educational programmers

⁵⁹ As was mentioned in Part One, Industry Canada recognized that connecting schools and supplying them with computers was not enough. Consequently, SchoolNet and Computers for Schools were followed up by the Community Access Program, VolNet and NetCorps – all focusing on equitable access and the training to use the connectivity.

⁶⁰ For a discussion of the importance of testing assumptions behind stereotypes that can block effective collaboration, see Gray, 13.

toward the people who market the program. In retrospect, the leadership of the organization could have built a more solid consensus around the initiative.

A second impact has been the increased value placed on the skills and attitudes necessary to work in collaboration with other organizations. For most of its thirty years, CWY has delivered its own stand-alone program. The organization rewarded those who mastered the skills necessary to design and run this program (which they usually learned by working their way up through the ranks). There has been a significant cultural and structural change, partly as a result of the success of the NetCorps initiative. In-depth knowledge of the organization and the traditional program design is still valued; but the skills and experience to market variations on this program design, to creatively use ICTs and, above all, to build new types of programs in collaboration with other partners, are in the ascendancy. One of our strategic objectives is to become a global leader in international educational programs – a shift for an organization that has always been exclusively Canadian. CWY’s two newest initiatives – one with the Commonwealth, the other with a coalition of American and Mexican organizations – rely heavily on international collaboration. Both will be founded on our core competence (working cross-culturally in the design and implementation of non-formal education programs); but these programs’ inter-organizational management structure will force us to think and behave “outside the box.” Most staff appreciate the need for change but when it puts into question their own role in the organization, the natural sentiment of self-preservation usually surfaces. According to the authors of *Edgeware*,

In human organizations, the creative destruction phase may require dismantling systems and structures that have become too rigid, have too little variety and are not responsive to the current needs of the community (or market). An additional level of difficulty in human organizations is the consciousness of the participants who may cling to the old ways because they were the keys to success as they moved up the S curve.⁶¹

The fact that the last four significant hirings have brought in people from outside the CWY organization has done nothing to lessen the sense that the old order is changing. I

⁶¹ *Edgeware*, 174.

now realize that my role within the organization is less as an advocate for the NetCorps program and more as a facilitator of broader organizational change. The same skills that helped me to develop the NetCorps coalition need to be applied to the bigger challenge of re-orienting an existing organization with a culture and set of programs that have been fairly closed to outside influences.

The NetCorps coalition has demonstrated not only that volunteer sending agencies (VSAs) can work together, but also that certain key functions can be provided more effectively and efficiently in a collaborative fashion. While the coalition sets the standard for internships and allocates resources, the Secretariat, with four staff members, provides an array of common services (publicity, technical screening of candidates, research, orientation, training, technical support, financial and narrative reporting as well as lobbying) at significant savings to member VSAs. If we can do it on this one initiative, is there not room for similar collaboration on a broader range of volunteer sending programs? All that is needed is for each organization to enter willingly into a conversation of equals, with a goal of creating a more coordinated approach to providing opportunities for Canadians who wish to volunteer in developing countries.

From the experience of the NetCorps coalition, I realize that collaboration, like a marriage, is far more than the sum of the contribution agreements and contracts among the partners. It is a continuous effort to really hear what our equals are saying, and to understand their assumptions and interests; it is a way of working as much as it is a discrete event. Rather than wanting to walk away when conflict arises in the process of building a coalition, I find I am attracted to it, because I have probably touched the nerve, issue or sacred cow that is most in need of examination among the parties. In this case, the main impact, which was by and large unintended, has been to open up CWY itself to new approaches, new skills and new types of relationships.

4

Bringing It All Back Home

The NetCorps initiative has opened the door to a new type of programming that responds to the needs of partner countries and resonates with our main constituency – youth. It has provided Canada World Youth with both the incentive and the skills to undertake collaborative initiatives with a broad range of players on a global scale. Finally, within the organization it has created a department that has the potential to significantly influence the ways CWY organizes itself in the use of ICTs. Because it manages an ICT program, the NetCorps Secretariat decided set an example of effective ICT both internally and interactively with other parts of the NetCorps organization. By introducing advanced hardware and software and, more importantly, actually managing work in a different way through the use of ICTs, the Secretariat has the potential to jump start several aspects of the organizational change process. As long as we were hermetically sealed from other organizations, CWY could be very slow to adopt new technologies; now that we are at the centre of a web of many organizations, we have to demonstrate leadership in this field. In this part of the paper, I will explore some of the lessons that can be transferred and how this can be done.

ICTs at CWY

Canada World Youth has five regional offices, which manage most of its programs in Canada, as well as field operations in some twenty countries in any given year. The national office is responsible for strategic relations with partners, politicians, funders and the public, as well as providing direction to the organization's key services (finance, human resources, development and communications, research and programming). Unlike many federated NGOs, in which strong local branches at a certain point decide to create a national office, CWY began with a strong national office, which until the mid-1990s generated almost all of the funds and partnerships for the organization. The regional offices were created to carry out mandates determined by the head office. Since 1995, the

regional offices have had a mandate to develop and raise funds for partnerships of their own.

I can remember the introduction of computers at CWY in 1985: a handful of ATs, which created plenty of frustration but occasionally performed marvellous tasks very efficiently. I also recall that the CWY employees' union grieved the introduction of computers on the grounds that managers would then be undertaking tasks (such as typing) normally reserved for unionized secretaries. This reflex of the union to protect existing members carrying out existing tasks, regardless of the inherent inefficiencies that this might entail for the organization or of the new potential for creating higher-end unionized positions, is an ongoing dynamic of the organization. Once the organization introduced a local area network (LAN) for the head office in 1994, it hired an IT specialist to provide support services. By 1996 the regional offices were included in a wide area network (WAN), and by 1999 the organization had an Intranet site for connection to our system. Now anyone with a password and access to a computer and modem can retrieve e-mail or enter directories or databases from anywhere in the world.

Through the process of what Peter F. Drucker calls "routinization" as a result of applying ICTs to existing activities, there have been many changes that have resulted in increased effectiveness and efficiencies, despite many bumps in the road while getting there.

- *Budgets and accounting.* The process of furnishing managers with budget information, broken down in great detail, has been greatly enhanced by ICTs.
- *Data collection and storage.* We can now have detailed information on participants, programs, alumni, donors and connect them with each other.
- *Reporting.* We can gather much more information, more quickly and reconfigure it in order to reproduce it in different formats.
- *Communications.* As an international organization, effective and efficient communications are essential for CWY. The economies noted by the World Bank apply to CWY. "A 40 page document can be sent from Madagascar to Côte d'Ivoire, for example, by 5 day courier for \$75, by 30 minute fax for \$45 or by

two minute e-mail for less than 20 cents – and the e-mail can go to hundreds of people at no extra cost.”⁶²

- *Internet.* As a publicity and communications tool, the use of a Web site has opened up enormous possibilities for recruitment and research.
- *Evaluation.* We have an impact assessment system that we were able to computerize to compare findings across a broad spectrum of participants and periods.
- *Intranet.* Key organization policies and documents are available for everyone to see and use.

Many of these changes occurred in a fairly ad-hoc fashion, rather than as parts of a coherent plan. In fact, the last ICT plan developed in 1998 by the organization’s lone ICT employee is not really accessible to employees, because it was written in “technospeak.” This reflects the fact the employee in question, as an ICT “technical” person, not surprisingly tended to see most challenges as technical problems that with appropriate technical intervention could be overcome. Secondly, these changes often created frustration because they seemed to be always several months late and often over budget. Finally, responsibility for ICTs within the organization bounced around between departments since no manager really had the expertise to play a leadership role.

Lessons from NetCorps Use of ICTs

There are several areas in which the NetCorps Secretariat uses ICTs effectively that could inspire CWY as a whole.

Distance recruitment and orientation of interns. The Secretariat has effectively used the Internet and on-line communications to recruit and orient interns.

- *Lesson for CWY.* A vast number of youth now first hear about CWY via the Internet. At the same time the personal testimonies of past participants are

⁶² HDR, Ch.2, 2.

considered crucial in turning casual inquiries into enthusiastic candidates. Right now each regional office manages the recruitment process in their area at great expense. Perhaps a “high tech – high touch” approach in which Internet recruitment is accompanied by on-line follow-up by past participants sharing testimonials and offering to answer questions would be more effective and certainly less costly.

- *Orientation.* Presently all participants are invited to a pre-orientation weekend several months prior to their exchange. In some regions 25 to 30 percent of these participants turn over prior to the program, necessitating a series of mini-pre-orientations which are very labour-intensive and hence costly. Is there some way that these participants could be oriented by a combination of on-line activities and a pre-orientation that captured the key messages? This approach would also overcome the complaint that participants get very different messages in each region.

Interactive Intranet. The NetCorps Secretariat has used the intranet not just as a reference library for all users but also as a meeting place for interactive forums inside the Secretariat and within the broader coalition. With the expanded use of ICTs, “old vertical patterns of information are giving way to more dynamic, less predictable and much less controllable horizontal systems of communication.”⁶³

- *Lesson for CWY.* The CWY intranet is a fairly passive tool in which the head office has posted organizational material. Despite a couple of efforts, it has not really caught on yet as an effective medium for discussions or horizontal communication links among staff. Part of this is attributable to unfamiliarity with the medium but part of it is also a control issue. For example, the Program Committee currently consists of two managers, two unionized staff, two field staff and two past participants, who discuss key programming issues and make appropriate recommendations. Instead of limiting this committee to eight people, I would like to open it up to a broader forum via the Intranet. Young people and staff from around the world could participate, rather than relying on representatives. This can actually be threatening to the union and the field staff

⁶³ See PANOS Perspective Papers.

association, whose power comes from speaking on behalf of individuals and mediating their participation in public forums so as to make sure that a constituency speaks with one voice. Therefore, the obstacles to creating these open spaces for discussion are more than matters of technical or personal aptitude; there are power dynamics involved as well.

Distance support. When the NetCorps Secretariat was formed, we promised to provide technical support to 255 interns around the world – a daunting task. How could one IT person who could not possibly be an expert in all the IT specializations provide support to all those interns? The answer, of course, was that the expertise lay in the NetCorps community itself. Individual interns post their problem on the community bulletin board and there are almost always several people who have ideas on how to solve the problem. One of the encouraging aspects of welcoming IT types into the organization is that they are coming from a “gift economy” that surrounds the ICT culture: status and credibility comes not from the amount of knowledge an individual can hoard but from the extent and quality of the knowledge they can impart to others.⁶⁴

- ***Lesson for CWY.*** At any given time we have 45 field staff supervising 400 participants around the world. When they need support, the traditional method has been to contact their supervisor which in many instances would still hold. However, imagine the pool of expertise that could be accessed if all these groups and staff were networked. The possibilities not only for problem-solving but for creative educational stimulation are enormous. Once again, supervisors would have to feel comfortable with this more open forum for discussion. Being connected to a larger network of groups could actually rein in the odd rogue group.

Inter-organizational links. In Part Three we noted that the NetCorps Secretariat had successfully connected itself electronically with other members of the coalition, actually sharing a distributed database. There are issues of having technical protocols, confidentiality and firewalls but there are also distinct advantages. Much of the

⁶⁴ Pinchot, 270–72.

literature on private sector entrepreneurship refers to the degree to which companies have integrated their ICTs with suppliers and customers to allow for one integrated but more horizontal system.⁶⁵

- *Lesson for CWY.* There is also great potential for working in a distributed way with partners. We could certainly place all of our common documents on a partner Intranet site where everyone could have access to protocols, budgets and policies. In a limited number of these partnerships where we co-manage certain activities, we could integrate certain information systems to allow for equal access to information and where appropriate co-creation. Presently, we work with 25 partners in 25 distinct bilateral relationships. By creating an Intranet site for partners we could help to form a community of organizations working in non-formal education. Of course, CWY would lose control of the process but it could expand and diversify the range of activities among the entire group. While it could threaten some bilateral programs, it could open the door to CWY, translating its expertise into that of broker, facilitator or consultant to other partnerships.⁶⁶

Key Issues

It is interesting to note that the key issues facing CWY in the process of using ICTs effectively are very similar to those facing developing countries that were discussed in Part One.

- *Accessibility.* From the beginning, the introduction of hardware, software and connectivity has always begun in the head office, where we already have the best access to information, expertise and staff. Field staff are expected to rent or borrow equipment while they are in the community, and participants have access only if their work placement or host family happens to be on line. By contrast, in

⁶⁵ See Quinn and Pinchot.

⁶⁶ We have already started to help nurture World Youth organizations in Holland, Britain and Sweden. We may not undertake our own programs with Poland when it joins the EC, but we may be contracted to help Polish organizations their own programs in Vietnam. The higher value-added may be not in running programs but in consulting with other VSAs and brokering relationships.

NetCorps programs each group has a laptop computer – obviously an important tool for managing the program, providing support to interns and in nourishing the educational program. Therefore, the people who work consistently at a distance, and who stand to benefit the most from being connected with the organization and each other, need to be equipped and trained to use these laptops. Given the age of field staff (generally under 30) and participants (17 to 24), we can assume a high level of interest and skill among the youth.

- *Knowledge as community dialogue.* In developing countries, as we have seen, having computers and Internet connections does not in and of itself lead to effective development. The same applies at the organizational level. Peter F. Drucker writes:

What we call the Information Revolution is actually a Knowledge Revolution. What has made it possible to routinize processes is not the machinery; the computer is only the trigger. Software is the reorganization of traditional work, based on centuries of experience, through the application of knowledge and especially of systematic, logical analysis. The key is not electronics; it is cognitive science.⁶⁷

In a review of research on the impact of ICTs on the creation of knowledge, Richard McDermott makes a clear distinction between building an electronic library of best practices and the creation of a community that thinks and creates together.⁶⁸ According to his research, the introduction of ICTs in and of itself does not create the conditions for a thriving virtual community. ICTs tend to reinforce whatever norms already exist within organizations. If an organization documents well and has a culture and structure that encourage innovative collaboration, then ICTs can enhance these tendencies; but they will not change an organization with the opposite attributes. Knowledge, making sense of the information, is something that is created in the conversation among members of the community – be it a culture, academic discipline or organization. “Sharing knowledge,” McDermott writes, “involves guiding someone through our thinking or using our insights to help them see their own situation better. To do this we need to know something about those who will use our insights, the problems they are trying to resolve . . . even the style

⁶⁷ Drucker, 57.

⁶⁸ McDermott, 103 – 117.

of thinking they use.”⁶⁹ Our use of the Intranet has to be thought of not as a repository of models that have worked well in the past but as a place where staff and participants meet to collaborate on line.

- *Organizational Structure.* CWY has gone through waves of centralizing certain activities and then decentralizing others, sometimes simultaneously. There are certain activities that call for us to function like a professional bureaucracy because the situations call for a “repeated use of highly developed skills on relatively similar problems.”⁷⁰ There are economies of scale to be achieved by concentrating the expertise in one location. At the same time we have been able to decentralize some of the programming aspects that call for innovation and local flexibility. Using national models, regional offices have been able to develop customized programs with local and international partners from widely dispersed locations, thanks in part to a more extensive use of ICTs. The organization still suffers from bottlenecks as information flows between regional offices and the head office and back out. Certain departments in the head office are overwhelmed by their role as synthesizer of lessons learned and coordinator of regional activities. As such they have become bottlenecks to effective communication and action. The answer, as Gifford and Elizabeth Pinchot have pointed out, is not simply more decentralization as it is the other side of the coin in a bureaucratic paradigm.⁷¹ By decentralizing extensively, coordination among the regional offices becomes the problem – inefficient mini-empires can be created. While CWY is certainly not ready for “free intraprise,”⁷² more conversation and creative networking among regional offices without the direct mediation of the head office would facilitate effective communication and action. The role of the head office becomes one of facilitating that dialogue, with or without the use of ICTs, and setting the community boundaries to independent action.

⁶⁹ Ibid., 107.

⁷⁰ Quinn, 260–63.

⁷¹ Pinchot, 110–12.

⁷² The Pinchots extol the virtues of “free intraprise” within companies, in which departments can seek multiple suppliers and markets for their goods within the company itself.

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- *The politics of initiating change.* At CWY, we are currently in the process of evaluating our structure to see if it is well aligned with our goals and resources. We are also looking at our organizational capacity and structure related to the use of ICTs. As James Brian Quinn points out, it is better not to identify the application of ICTs with the reorganization process itself. “As you break organizational barriers, change and redefine some of the functions in the organization, there is a certain amount of pain involved. But it is better to do the re-engineering and re-organization first, then do the automation.”⁷³ The politics of any restructuring is a crucial factor in circumscribing the options available to us. Much as we would like to move to a more networked organization in which self-managing teams could take more responsibility for controlling their own work life, the traditional style of our union is an impediment. Individual employees might appreciate broader job descriptions that would allow for employee initiative and satisfaction but the union prefers narrowly defined roles that are strictly enforced by a collective agreement. Such increased flexibility could lead to more participation in decision making by individual employees but it also might lead to more employee accountability and expose some under-performing employees. Our union is certainly not prepared to “cease adversarial protection of workers and help everyone participate in shouldering the burden of tough choices.”⁷⁴ Outsourcing functions that could be done more effectively and efficiently by non-unionized staff is out of the question unless we come up with some other concession. We are trying to move toward an organizational culture that encourages innovative programming and alliances. Such an approach needs a flexible employment structure to respond to opportunities that arise rather than a closed system of command and control that the current collective agreement favours.
 - *Training and professional development.* We also have a history of investing in hardware and software without providing sufficient training and support. Research has suggested that 70 percent of an organization’s IT budget should be spent on training and support. More important than training employees in the mechanics of using a particular software is to consider their capacity and authority

⁷³ Quinn, 160–61, quoting Mr. Melvin Ollestad, Senior VP of the CIGNA companies.

⁷⁴ Pinchot, 307.

to use that software to do a higher-level task. If the computer can automate the routine part of their work, are employees then trained to use the results of that work? For example, instead of just collating statistics on participant profiles, an employee can then analyze the data as well if they are trained to do so. “The astonishing quantity of information that is available can be used to increase employees’ feedback, learning and self-management rather than to deskill and routinize their jobs or remotely supervise them.”⁷⁵ If employees are going to embrace an expansion of ICTs, this should help them find more personal job satisfaction and feel connected to a social community within the organization.

- *The way forward: Importing the lessons of NetCorps.* Changing an organizational culture seems to happen more by contagion than by decree. In that sense, I would like the learning culture and practices of NetCorps to infect the rest of the organization. The NetCorps Secretariat has always existed on the edges of the organization; now I would like to bring it more into the hub of the network. In trying to find a new home for an expanded IT department, both the Finance and the Development and Communications departments had arguments for managing the IT strategy of the organization: one is the largest user, while the other manages external communications. NetCorps has demonstrated a much better grasp of ICT, both as a development issue and as an agent of organizational change. Therefore, the first step was to give the NetCorps Secretariat overall responsibility for managing ICT within Canada World Youth.

The second decision was to hire an ICT manager with a background in the management of information systems rather than a narrow technical background. This manager will be shared between the NetCorps Secretariat and CWY. All of the IT staff currently in three departments will be consolidated under the direction of the manager for NetCorps. They will have a common perspective, focused on building an effective community of knowledge creators and users, regardless of their specific tasks. Finally, as the supervisor of the NetCorps Secretariat I will be the champion of an integrated and holistic approach to the use of ICTs within Canada World Youth, with the authority to allocate resources and support initiatives, In order to practice what we preach about a conversation among

⁷⁵ Zuboff, 151.

equals, there must be a participatory planning process to determine what end users – participants, partners, field staff, appropriate members of the public and office employees – really need in order to make effective use of the new ICTs. In the best tradition of Canada World Youth’s approach to community-based learning, if we absorb and adapt the lessons of NetCorps to the larger CWY environment – evaluating changes as we go, and never losing sight of the perspective that ICTs are enablers not ends in themselves – we should be better equipped to proactively shape our future with the help of ICTs.

5

Conclusion

Commentators like to speculate on the impact of the increased use of ICTs on society. There seem to be three distinct camps: positive, negative and neutral. There are those who see increased ICT use as a potential panacea for many of our social ills. From this perspective, technology, as a manifestation of instrumental reason, in and of itself will lead us to “conquer” the challenges facing us as a species. A second and contrary position is that ICTs are the servants of the expansion of global capital. They grease the way for a dot-com universe in which the mono-culture and market philosophy of globalization crush everything in its path.⁷⁶ In this paper I have tried to make the point that ICTs, at the level of the organization, the country and the individual are best viewed as “enablers.” They can be used to facilitate creative medical research or the widespread distribution of pornography; they can create a global marketplace, or inform and mobilize people in the interests of human rights or the environment. The value of ICTs can only be ascertained by looking at how and why they are integrated into the life of the individual or community. Are they imposed on employees or a community in the service of external goals, or are they part of the community development process? As Thomas L. Friedman puts it:

The Internet and computers are just tools – wonderful tools that can extend and expand one’s reach enormously. But you still need to know what to grasp and how to get the best out of them. These tools can help you think, but they can’t make you smart. They can browse and search but they can’t judge. They can enable you to interact far and wide, but they teach you nothing about how to be a good neighbour. They can empower you to touch the lives of many people, but they can’t tell you what to say at a PTA meeting, or why to say it.⁷⁷

⁷⁶ See Taylor, chapter 9, “An Iron Cage?” for an interesting discussion of these two perspectives and his perspective that a morally inspired technology that is not based on dominating nature is possible.

⁷⁷ Friedman, 472.

The poet David Whyte also suggests that what really counts cannot be reduced to the messages passed through ICTs.

Loaves and Fishes⁷⁸

This is not
the age of information.

This is *not*
the age of information.

Forget the news,
and the radio,
and the blurred screen.

This is the time
of loaves
and fishes.

People are hungry,
and one good word is bread
for a thousand.

Stemming from this view of ICTs as enablers is the perspective that their impact is neutral: they only have “value” when infused with the socio-political context in which they are placed (e.g. biogas in India versus China). However, I do not adhere to this view, because I think that it underestimates the degree to which ICTs have changed our self-image and our sense of human relationships. Harold Innis once wrote: “Any technology which changes how people deal with time and space will – in the end – be a revolutionary technology. It will change how society is organized and how society does what it does.”⁷⁹ The revolutionary impact lies not in the actual content (good or bad), but in the medium itself. As I noted in Part One, the Internet is not just an organizing tool for resistance among anti-corporate activists. More significantly, the Internet architecture itself is a

⁷⁸ David Whyte, *The House of Belonging* (1997), 88. Copyright © 1997 by David Whyte. By permission of the author and Many Rivers Press for J. W. McConnell Foundation Web site printing only. All rights reserved. <http://www.davidwhyte.com>.

⁷⁹ Harold Innis, *The Bias of Communication* (1951), quoted by Sam Lanfranco in a presentation on ICT and Development, October 1999.

model for cooperative but voluntary coordination among a diversity of groups. Similarly, the NetCorps initiative is very interesting but long after it is finished the networked relationships and capacity to collaborate across traditional bureaucratic lines will still be there.

As someone who works with young people and has two children of his own, I sometimes worry that the information revolution sacrifices quantity for quality, busyness for genuine accomplishment. My children can download a ton of interesting material but do they have the time and skills to separate the wheat from the chaff? Employees can process huge amounts of information but do they have the time to step back and reflect on what it really means for themselves and the organization?

*Where is the Wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?*

T. S. Eliot, "The Rock" (1934)

David Whyte is less concerned by the fact that the electronic community and its relationships seem far shallower than the deep but controlling relationships of the old order:

. . . perhaps, in the greater perspective of things, the instincts of our present surface loving world are correct. In a normal maturing human being, freedom allows us to make surface choices that almost always deepen into belonging: to partnership, marriage, children, or commitment to a life's work. It is as if on a grand scale across many countries and cultures, we are suddenly being left alone to explore as many surfaces as we wish and the prospect is both amazing and daunting. We do not know yet where to dig for treasure, but perhaps that will come in time. We have been orphaned from the depth of our old spiritual and organizational structures and we are refusing to go underground again until we find something freer in those depths, or until we find a newer, more spacious inheritance in which to live and breathe above ground.⁸⁰

⁸⁰ Whyte, *Crossing the Unknown Sea*, 234. In Frederick Franck's collection of essays, *What Does It Mean To Be Human?* (1998, p. 93), Ram Dass expressed a similar sentiment: "Perhaps, for example, the technology which has given rise to the 'information age,' if used wisely, can help us to escape from our ethnic-socio-egocentrism and through dialogue awaken in us a perspectival vision – the ability to see situations from many different perspectives and thus from a more compassionate vantage point."

Information and communication technologies give us the tools to explore a diverse range of surfaces as individuals, communities and organizations. It is in the act of creating meaning through a conversation of equals that we will find the balance between freedom and belonging within our lives, between complexity and order within our organizations.

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Development Gateway. <http://www.developmentgateway.org>
Portal on development issues developed by the World Bank.

Global ICT: portal for World Bank Group.
http://www.worldbank.org/ict/html/about_disclosure.html

Global Knowledge Partnership Portal for ICTs and Development.
<http://www.globalknowledge.org>
(This includes the Global Knowledge Discussion Group, of which I am a member. – J.C.)