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## Agency, Isolation, and the Coming of New Technologies: Exploring "Dependency" in Coastal Communities of Newfoundland Through Participatory Research

*How does one effectively and ethically conduct research with community members who are steeped in histories of economic and social dependency, so that the people themselves take charge of their futures? This question is explored in a Canadian context as the authors study the potential of new technologies to bring hope to traditional coastal communities that have been devastated by the collapse of the east coast fishery. Findings highlight the tension inherent in combining traditional knowledge with contemporary "solutions" through technology, as well as the authors' own ethical participation in suggesting uses for the new technology.*

*Comment mener une recherche efficace et éthique visant la prise en charge par la communauté de son avenir quand ses membres sont imprégnés d'histoires de dépendance économique et sociale ? Cette question se pose dans un contexte canadien alors que les auteures se penchent sur le potentiel qu'ont les nouvelles technologies de faire renaître l'espoir dans les communautés côtières traditionnelles qui ont été affectées par le coup dévastateur de la débâcle des pêcheries de la Côte atlantique. Les résultats mettent au premier plan la tension qui se rattache à la rencontre entre les connaissances traditionnelles et les 'solutions' contemporaines reposant sur la technologie d'une part, et les propositions des auteures quant aux façons d'employer la nouvelle technologie d'autre part.*

### Introduction

In this article we explore an attempt to involve members of traditional communities in southwest Newfoundland through participatory research methods in planning and directing their own futures using new technologies. Videoconferencing, placed in schools and health clinics by the not-for-profit Burgeo Broadcasting System (BBS), is the technology of focus. Although this research agenda sounds straightforward, the problem of engaging community members in collective responsibility and action has a long and discouraging history in Newfoundland, as in other traditional communities. In addition, the fear

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and confusion surrounding the use of new technologies is real, and we uncovered a resistance that came in a variety of conscious and unconscious forms.

The near-collapse of the Newfoundland fishery, marked officially by the federal government's closure of the cod fishery in 1992, created numerous and ongoing social, environmental, and economic problems for coastal people. With little or no economic base and a substantial dependency on government aid, small communities are often threatened with relocation to larger centers as the "solution" to their problems. Added to this is the isolation of communities that can be reached only by ferry, helicopter, or snowmobile in winter. This renders them "inefficient" for governments whose accounting takes place in monetary terms only, and it marginalizes them in terms of access to many of the things larger communities take for granted such as new technologies, immediate medical services, comprehensive school curricula, and adult learning opportunities.

The BBS, financially supported by district health and education boards and by regional and federal government economic programs, recently installed videoconferencing in five communities along the province's southwest coast—Burgeo, Ramea, Grand Bruit, Grey River, and Francois—as one response to relocation threats and community isolation. The planning committee intended that this technology, and technologies related to broadband Internet services, would enhance health care, stimulate business, and provide greater learning opportunities through links to outside educational, medical, and communication services (Hollett & Sons, 1999).

In 2002 we were invited by the BBS<sup>1</sup> to study the promises and problems encountered by people in their understanding and use of the technologies and the overall effect of the new technologies on the resilience of communities. The purpose of our research was not only to report to the BBS, but also to explore community members' collective agency and to focus on the contribution of women in the achievement of their goals. We are a team of six faculty members, graduate students, and consultants, centered at the University of Victoria where Harris, the principal investigator (PI), is involved also in the interdisciplinary and related *Coasts under Stress* project ([www.coastsunderstress.ca](http://www.coastsunderstress.ca)). An important feature of the BBS/ICT team composition relating to our intention to involve communities on both coasts of Canada, and to study *with* community members rather than *on* or *about* them, is that it includes Newfoundlanders as well as CFAs (come-from-aways), and community workers as well as academics. Newfoundlanders have an especially well-formed sense of place; one is either *from here* (a livyer) or *from away* (a stranger, for the roots of this categorization, see O'Dea, 1985). In recent years one hears increasingly the term *summer resident*.

The team includes two researchers familiar with the area, language, and culture, in addition to the PI, who has worked seven years in the area and another 20 years in the educational system of Newfoundland and Labrador. We intend to avoid as much as possible the situation noted by Matthews (1976) some 30 years ago whereby "a distinct difference [emerges] between the values of planners and those for whom they plan" (p. 134).

Here we examine the participatory methodology used in our project as a process to challenge existing links between technical knowledge and meaning-

ful decision-making. In an earlier study, Harris (2002a, 2002b, 2002c) heard repeatedly from town leaders in two of the communities that people's dependency on the leadership and initiative of others constitutes a major impediment to economic development and community change. Thus in addressing dependency, we speak of people's willingness to stand back and wait for others—village merchants, teachers, priests, politicians, or economic development officers—to articulate specific needs and to gain the resources necessary to effect change. We begin with a brief history of the province, underscoring several theories of social and economic dependency. In defining dependency in the context of these coastal communities, we also tackle the thorny issue of how it coexists with strong evidence of a people's indomitable will and ability to overcome harsh living conditions. We then discuss key elements of participatory research in relation to the methods we are using in the communities and highlight some of the challenges we encountered through one key method: the workshop process. We conclude the article with a discussion of the issues of dependency, resilience, and power/knowledge in the framework of participatory research and technology.

#### *Dependency in Historical Context*

The history of Newfoundland and Labrador centers on the sea and its single resource, fish. Around this resource is woven a complex story, each phase of which affects people's ability to control their own futures. The story involves an early migratory fishery, expansive coastal settlement, an historical and paternalistic social order, educational inequity, and colonial governance. In the 20th century the socioeconomic story becomes one of government policies to resettle coastal people in urban "growth centers," to extend privilege to large fish plants and trawlers over the inshore fishery, and with overfishing and the eventual collapse of the cod fishery, to encourage economic diversification, retraining of the work force, and a further consolidation of communities.

In the voluminous literature (Alexander, 1980; Barkham, 1994; Hiller, 1991; Janzen, 1987; Long, 1999; Mannion, 1986; Neary, 1996; Story, 1997; Thompson, 1961) on Newfoundland history, several themes of dependency can be traced. First, it is evident that early settlers brought with them well-established patterns of hierarchical society. When the English, following the Treaty of Utrecht, began to set up permanent posts along the southwest coast, they brought with them their merchant, or mercantile, social and economic arrangements—with their landowners and capital on the one hand, and nonpropertied laborers on the other—similar to that of Cornwall, Devon, Somerset, Dorset, and Hampshire (Fay, 1956). In the new communities, local merchants provided fishermen with boats and equipment for their work and food and supplies for their families. The fishermen in return brought their catches, except for the fish needed for the immediate use of their families, to the merchant who processed and sold the fish abroad. This "truck system" persisted in Newfoundland into the 19th century and accounts for one theory of dependency.

Related to the reliance of fishermen and their families on local merchants to supply basic material needs was their dependence on the merchant's educational advantage. With inadequate or nonexistent schools, many fishermen could neither read nor write, a condition that extended well into the 20th century (McCann, 1987; Rowe, 1964; Sawyer, 1998). Szwed (1966), describing

one of Newfoundland's few agricultural districts, writes of an inside-outside social dichotomy whereby villagers remained rooted in local affairs during their lifetimes while calling on the merchant to intervene with the outer world when an emergency arose. It is hardly surprising, then, that the Newfoundland Royal (British) Commission in 1933 was able to note a concept widespread among Newfoundlanders

that "someone else" is somehow responsible and more capable of making decisions that will affect the common good of the community. Usually the priest, the merchant, or the politician were held to be the most responsible persons, but responsibility was also seen to extend from the local "outsiders" to those at the top of the government. (Szwed, 1966, p. 161)

Lewis (1997), introducing a more positive slant on dependency, traces it to the Island's colonial status and elected legislature as established in 1832. Quite unlike the voting patterns of England and Ireland, Newfoundland was granted "virtually universal male suffrage" (p. 146), with little local government mediating between the voter and St. John's. The outcome, according to Lewis, was to produce a politically active working class that took a direct role in the political process, "both at the ballot box and on the streets" (p. 146). The practical outcome was a rejection of the ultraconservative measures (e.g., about suffrage, the nature of charity, and Poor Laws) of England that favored landowners and penalized the laboring classes. Although services were not at all equally available to residents of St. John's (and other centers) and those living in the outports (Godfrey, 1985), Newfoundlanders came to value collective care for the aged, sick, and unemployable, and they expected social services from their government.

Other contributors to what some call dependency can be traced in the 20th century, although their roots are inextricably intertwined with the earlier forms of feudal organization. We cannot, for example, view the effect of community resettlement and welfare dependency apart from the disruption of traditional ways of life. Nor can we view Harris' (2002a) findings about the reliance of fishers on plant owners and later on international fish processors as unusual in the light of several centuries of merchant-fisher relationships. Finally, a serious blow to the self-esteem and self-reliance of Newfoundlanders was brought about by the collapse of the cod fishery, and by the economically necessary but socially demoralizing series of retraining programs, make-work projects, and government subsidies to individual fishers and plant workers.

#### *Theoretical Framework*

Theories of dependency relate to Foucault's (1980) and Freire's (1986) descriptions of the symbiotic relationship between power and knowledge. A dependent party must by definition be dependent on another agent. The knowledge that interacts with power, and that makes power possible, goes beyond mere knowing. The knower to be recognized as such must act.

The most common action involves speech. Freire (1986) argues that language is never neutral, but rather always conveys a certain culturally transmitted world view or aspiration. As such, language is much more than simply "a means of communication" (Finger & Asun, 2001, p. 83). As Foucault (1980) points out, those who possess knowledge about a phenomenon—event, cir-

cumstance, machine, and so forth—also possess the ability to name what is known. Those who possess the ability to name possess the ability to control and create. With the naming we create images of the *real*. Organizational theorist Greenfield (1984) maintains further, “Language is power. It literally makes reality appear and disappear. Those who control language control thought, and thereby themselves and others” (p. 154). Language organized along themes or in disciplines becomes discourse, another central concept in Foucault’s analytical framework. “Discourses are about what can be said and thought, but also about who can speak, when, and with what authority. Discourses embody meaning and social relationships” (Ball, 1990, p. 2). They can question the taken-for-granted or strengthen it. That is, they “constitute both subjectivity and power relations” (p. 2).

As we bring to our research these assumptions about dimensions of power in ordinary speech, we are aware also of power dynamics embedded in particular institutional practices and relations. It is vitally important to us that people understand relations of power and “perceive the reality of oppression not as a closed world from which there is no exit, but as a limiting situation that they can transform” (Freire, 1986, p. 34). This is not a simple task, Freire maintains, because those who have power can transform everything surrounding it through interaction and discourse. It is also not simple because our educational institutions, political systems, and the digital revolution in particular have tended to reproduce or reinforce social inequities, exhibiting the power either to empower or to domesticate.

Understanding that discourses constrain the possibilities of thought, we note in our study who speaks and who remains silent. We attend to words that are unspoken, for discourses stand in antagonistic relationship to other discourses, other possibilities of meaning, other claims, rights, and positions. When we apply this “principle of discontinuity” (Foucault in Ball, 1990, p. 2) to the language of new technologies, what has not been said about problem areas assumes an overarching significance.

#### *Questioning Technology*

Information and communication technologies (ICT), or the digital revolution as it is often called, has brought us both dream and nightmare. For some it is viewed as a tool, ushering in major benefits and instrumental improvements to people worldwide, particularly those in rural or remote areas who do not have access to things that many urban dwellers take for granted. For many others, however, digital technologies instill suspicion, fear, and confusion, for three primary reasons. The first is that ICT change and evolve with lightning speed. This requires in the user a series of quantum leaps that only the most agile and determined can negotiate. Second, the commonly held view that technological change serves human needs or wants equally excludes an analysis of conflict and power and portrays all “members of the human race together” (Jarvis, 1987, p. 34) rather than recognizing that one group may be isolated for whatever reason from another. The third factor is an educational limitation. Winner (2001) argues that our current technological aspirations are almost totally devoid of any understanding of context and need. Who people are and what they might need or want in terms of seeking knowledge, creating mean-

ing, and making change takes a back seat to technical training and to the technological device itself.

Dependency, the apparent inheritance of each of our five communities, exists only in contrast to its opposite: independence. Our task through the participatory process is to underline the complexity of this dualism. In terms of self-determination, technology, and knowledge creation, we also ask why it is that talk of teaching and learning (i.e., what one would expect to be the focus of a pedagogical process) has become displaced by talk of technical problems and solutions. How is it that one particular statement or approach has appeared rather than another (Foucault, 1974)? Why is the focus on delivery of content or the best technological method of learning rather than on the purpose of the education in the first place? Does this approach create, whether intentionally or unintentionally, dependency?

#### *Participatory Research, Knowledge Creation, and Community Change*

Participatory research (PR), a community-based method of investigation conceived over 25 years ago, is best described as "a form of inquiry where subjugated people work together with [research facilitators] to gather information and implement solutions to their problems" (Gormley, 2001, p. 41). In particular, PR has become an important tool for researchers interested in identifying and disrupting inequitable knowledge or power patterns. Through their work, participatory researchers strive to equalize uneven or unbalanced social relations, challenge inequities, and help people to develop skills and abilities to exercise greater self-determination and control over their futures (Freire, 1986; Hall, 1996).

Hall (1982, 1996) proposes a number of key foundations of PR that are relevant to our work in the five coastal communities. First, the research must be of direct benefit to the community. This means that we outsiders do not simply enter communities, collect data, and leave "without offering any contributions to the research 'subjects'" (Gormley, 2001, p. 42). Second, the research is part of a total educational experience. We use workshops and interviews to draw on people's knowledge and experiences, help them gain access to and/or reappropriate knowledge from the "knowledge elite," and create new knowledge. We believe that collectively people have the knowledge and skills required to make change in their own lives. Third, and related to the point above, the research becomes an interaction "between the community and the research facilitator(s), and between popular and academic knowledge" (p. 42). Fourth, PR is political; it is not neutral. This means that we have clearly chosen a side in the issue or problem; this side is to advocate on behalf of the users rather than the planners and installers of technology. Finally, PR is intended to liberate human creativity and imaginative potential as it mobilizes people's abilities to solve problems. Applying the above theoretical and participatory frameworks, we use diverse methods to enter and revisit the field, introduce the study, learn together, and extend the involvement of community members.

#### *Our Research Methods*

Learning together takes place on a one-to-one basis through interviews and observations, as well as in group situations. As participatory researchers, we meet with community members, listen to their experiences with new and old

technologies, observe them interacting with technical tools, and bring their ideas back to the BBS and other partners for consideration. Two years into the study, we have held approximately 80 interviews and met with 10 focus groups through workshops. In addition, we have visited all Community Access Program (CAP) sites—which house computers, printers, scanners, and digital cameras for the general public—school classrooms where students engage in distance learning over the Internet, and schools and clinics to observe the physical environments and usage of videoconferencing for instructional and medical purposes.

#### *Entering and Revisiting the Field*

With others engaged in university-community relations, we realize that any involvement in sharing local or traditional knowledge requires careful preparation on our part (Bannister, 2003). It also calls for “new skills, including diplomacy and negotiation and a willingness to engage the ‘other’ in a respectful manner over long periods of time” (Song & M’Gonigle, 2000, p. 986). Now slightly past the midway point, our team has made three major trips to each of the five communities. In the autumn we visit the three smaller communities, and in the spring go to the two larger ones. During each field season, researchers fan out in two teams, thus scheduling the maximum possible number of days in the villages. Even so, we manage only about four or five days at each site. Although we sense that we are forming close ties with some 10 to 20 individuals at each location through these on-site visits, we realize that additional means of communication are needed.

#### *Introducing the ICT Study*

The first step in communication and planning for the project was to outline the study and invite potential partners to join the project. We take this link extremely seriously as we believe that little long-term progress will be made without the follow-up that can take place in our absence. Organizational partners for this project include two health boards, a school district, a community education network, a coastal community research project with related objectives, and a regional status-of-women center (see Table 1).

Before the first trip, letters of intent were sent to potential key participants who had been identified as community leaders during earlier research projects: school principals, teachers, town clerks, economic development officers (in the two larger sites), and mayors or chairpersons of local service committees. Although these steps are essential to the success of the program, they do not lead necessarily to the people who are disempowered. Nor does interviewing through a snowball approach (in which one interviewee recommends others) close the gap between those who hold power and those who do not.

Before each initial team trip, Harris (PI) made a preparatory visit, meeting representatives from the widest possible range of social groups; learning about new and recent economic starts, social events, and technology linkages; and scouting out issues that might warrant detailed attention later. The PI also began the long process of planning for the upcoming workshops. Although word of mouth was the most effective means of communicating, she posted notices in public buildings, handed out brochures describing the study, and contacted the local town or community council. On two occasions she was

Table 1  
Partners at Local, Regional, and Provincial Levels of Organization

<i>Local</i>	<i>Regional/Provincial</i>
Town Council (incorporated)	Regional Health Corporation
Local Service District Committee (not incorporated)	Community Health Services (provincial)
Burgeo Broadcasting System	Status of Women Center (regional branch)
All-grade Schools	Regional School District

In addition, the research team collaborates with the bi-coastal research project, *Coasts under Stress*.

interviewed about the project and workshops by local TV hosts. These actions, with the exception of televised interviews, were repeated by all team members in an ongoing process during the major visits. Nevertheless, attendance at workshops was disappointingly low in the two towns. Regardless of community size, we drew in from 10 to 15 participants at each session.

#### *Workshops as a Space for Learning*

The workshops, however, quickly became the centerpiece of our study (Grezetic & Sheehan, 2003) as it was in these spaces that the complexity of doing PR on technology in remote communities became most apparent. To date we have conducted two community workshops in each of the five communities, bringing together where possible youth and adults. Primary objectives of the first workshops were to learn about the community and to share what we hope to achieve collectively by working together. Two other goals were to tap into people's feelings and concerns in a nonthreatening way about the new technologies and to begin what we hoped would be a gradual process of demystifying technology, ultimately leading to a greater ability by community members to use, adapt, envisage, control, and even manipulate ICT for their own benefit.

To accomplish the objectives, we introduced ourselves, the outside researchers, and then divided participants into smaller groups to draw the highlights of their community on pieces of flip-chart paper. A spokesperson for each group then explained his or her map of the community. Through the community mapping and discussion groups, we learned which aspects of rural community life were most valued by the people themselves, but we also heard about people's fears of relocation and the associated trend for young people to leave the community and not return. We learned about the Local Service District (LSD) Committees and numerous other important volunteer committees and groups, which were run almost exclusively by women in three communities and by men in the other two. We also heard about the people's dependency on the fishery and on government funding and services. This complex coexistence between community resilience and dependence reflects one of the major themes of our article: that dependency exists only in contrast to independence. We saw an indefatigable self-sufficiency through neighborliness and volunteerism juxtaposed with almost total external dependency.

To address the goals of technology, we asked participants to tell us their most comical, embarrassing, or distressing stories about encounters with tech-

nologies used in everyday life. We deliberately made the category of technology broad by including everything from clotheslines and washing machines to staplers and color printers. From these discussions emerged a striking generational divide and convergence. Whereas the adults had no trouble recounting tales of woe from their own backyards, the youth found it extremely difficult to remember any problematic encounters with technology. Although the adults stressed more concern about the isolating factor of the new technology than did the youth, it became clear that both held fears of possible diminished face-to-face contact in the areas of education and health.

These preliminary workshops opened the door for us to meet new people, arrange for future interviews, and gain a sense of what was important to the people themselves. At all sites, answers to our questions about technology became embedded within larger issues of community dependency and resilience, knowledge, and power.

The second set of workshops conducted several months later raised some of the most important ethical and educational questions for us as researcher facilitators. Although the theory of PR does not discourage outside facilitators from contributing knowledge and ideas to a community process, it does warn against researchers or facilitators planting ideas that then become the sole basis for future action. After the initial introductions, we discussed with participants some of the findings that emerged from the research. Although some problems were particular to certain communities, we noted that most people faced similar issues about what they perceived to be inadequate training and a lack of access to equipment. We placed our emphasis, as we had in the previous workshops, on the need for communities to take control of the new technologies and construct plans for their future use. If community members did not see the value of these technologies and/or design a future trajectory, they would either be controlled from the outside or the equipment would simply gather dust, both of which were happening now.

When we attempted to break the workshop participants into small groups to envisage future uses for the ICT in terms of community development and adult education, both young and old fell silent. We realize that one reason for this might be people's reluctance to speak in the presence of strangers, especially when our dialects differed widely as was the case, for example, when we took charge of the program. Another reason, however, was that we were asking participants to move from the concept of ICT as infrastructure, hardware, and training, toward a deeper appreciation of capacity and confidence-building, communication skills, creativity, critical inquiry, a sense of ownership, and most important, a culture of learning. Yet another reason was that when it came to having any knowledge or experience of the capacities of ICT—what they could do, what they could be used for, what people could learn through them—there was simply nothing to draw on. We note here that although implementation of video technology for health care is progressing slowly—and for business it is not yet progressing at all—both videoconferencing and the Internet are being used widely in schools. Moreover, it became apparent that given the size, intimacy, and remoteness of the community, there would never be sufficient knowledge or resources to develop ideas for future action. We began to suggest a number of specific uses for the videoconferenc-

ing equipment that immediately seemed to excite community members. For example, we suggested that it could be used to bring together people who were interested in either small business creation or tourism, from each of the five communities, to talk about how they could cooperate and learn from each other. Another idea was that a young person might be hired on summer contract to work with adults in the community.

In spite of the excitement generated, we have to ask ourselves if we have simply reproduced the culture of dependency through our research, if we have misunderstood them, and have—with our knowledge, power, and capacity to name—silenced them. In short, what had our efforts accomplished in terms of addressing inequities and imbalances, and did the ends really justify the means? While continuing to struggle with these questions, we perceive a continual challenge to be one of balance: balancing constructive suggestions with our silence, and balancing our listening to justified complaints, yet keeping people on a track that leads to community resilience. The major challenge remains the methodological one of focusing on the collective aspect of the world they want. Frequently community leaders (of council, church, or profession) are simply unaware until they attend a gathering such as the ICT workshop that information held by them has not filtered down to others.

#### *Extending Community Participation*

An essential part of our planning was to include outside educators, researchers, and collaborators who work in or near the geographical area of the study. With this in mind, a team member from a women's center oversees the workshops, an experienced student/researcher from Memorial University focuses on health care, and a curriculum developer with the local school board advises (or collaborates with) the team. Each person by his or her own actions and affiliations is known by outport people as a community advocate. We find that the team as a whole, however, has little time for debriefing apart from the days spent together in the field. To rectify this in part, we held a research seminar last year at the Congress of Social Sciences and Humanities, Halifax (i.e., in May 2003). At this, two collaborators, the workshop coordinator, and three researchers presented papers. The advantage for us, in addition to having our papers critically reviewed for the Congress, was to bring community workers and academe together to hear one another and to discuss our progress with interested others.

A vital communication link, not surprisingly, is with the Director of Technology and Community Outreach with the BBS. The Director, who has provided detailed information about technical problems and their solutions with each researcher in at least one interview, continues to be our key informant. The technological project, planned outside the communities and initially implemented by the Director and one assistant, is maintained today with the help of another BBS employee. To these people fall the tasks of extending broadband Internet, repairing equipment, and enhancing wireless transmission. In addition, the Director and his assistant are expected to teach people in the communities to use the equipment. We believe that our participatory evaluation has demonstrated to all actors in the ICT project that implementation requires a much more prolonged process than the BBS can possibly offer alone. We have recommended, therefore, that various partners become more in-

volved in the training: that the School District assume responsibility for pedagogical training, and the health care organizations for the preparation of clinic workers and nurses, and that economic development officers use available electronic means to promote conversations among business people. Most important, however, is that community members themselves arrange for the training they need if they are to accomplish their dreams. This will be the test of dependency: or rather the mark of independence.

The most meaningful extension of our research, of course, comes from the links we are able to form with people in the communities. Here we see important connections between the object of our study (how technologies affect people in coastal communities) and our methodologies. As we look back on earlier research projects, we realize that the combination today of electronic mail, Web sites, and digital photography enable a richness of communication impossible even five years ago. We can now send posters for circulation in the communities and photos of the workshops; and we can share formal reports and a host of e-mail messages about ideas and events. We can also respond to personal requests for letters of recommendation and reference and quickly form new alliances with other researchers who are studying rural and coastal community resilience.

Although all this looks both appropriate and exciting on paper, undertaking this type of research in the framework of technology and isolated communities that have always been dependent on the outside brings many challenges and raises a number of issues. If PR is fundamentally about drawing from people's experiences and knowledge, what does one do when the people have little or no knowledge of technology? What role, then, does the researcher play, and how does she or he move community members forward without "finding" the answers and "creating" and/or "controlling" future actions? If one is dealing with a not-for-profit organization that is not at all the oppressor, but rather has only good intentions, how does one choose sides appropriately? Are we not simply replicating through our research what other dominant groups are doing? The answers to these questions are complex and multi-layered.

### *Discussion*

In this section we explore some of the complex interactions we encountered or created as a result of our research about the issue of technology. On the whole, we believe that our research process is making a positive contribution to these communities. However, we cannot ignore some of the lessons we have learned in terms of community research and learning, dependency, discourse, power and knowledge, and ICT.

Any community process for change takes much time, and there are no short cuts (Clover, Follen, & Hall, 2000). Moreover, there is often a healthy distrust of experts who "parachute" into these communities offering help (Harris, 2002a). We have learned that an outside research facilitator must gain the confidence of the people and must become familiar with their daily lived realities; he or she must spend time in the communities and participate in activities meaningful to them such as bingo, community fests, and church; but he or she must also have confidence in his or her own ideas and abilities.

Opportunities for people in remote areas to take part in community-based adult education workshops are few, and historically created dependency is real. The people in these remote communities, as we show in the brief history recounted above, are more accustomed to being informed about major changes than to being asked. Although some people have created their own work and learning opportunities, and others would be leaders in any context, most have never been asked to design plans for their own future because these have been designed for them by one authoritative body or another. In spite of the numerous committees that meet regularly, people lack experience with open dialogue about things such as technology that are not necessarily familiar. In our workshops we prepared a space for open dialogue, we asked people to speak out, to create and to imagine, and they were almost speechless. As mentioned above, it may be that their silence was caused simply by their reluctance to speak in front of relative strangers. On the other hand, it may indicate what Freire (1986) refers to as fear of freedom. Creativity, the hallmark of a participatory democratic process, requires a journey into the unknown and an ability "to break with what is supposedly fixed and finished, objectively and independently real. It is to see beyond what the imaginer has called normal or 'common-sensible' and to carve out new orders in experience" (Greene, 1995, p. 19). Perhaps fearing this kind of freedom, community members unconsciously resisted our attempts at a democratic learning process, which then put pressure on us to "adopt more traditional tried and tested methods" (Mayo, 1999, p. 139).

Technology itself and the processes of learning and teaching exacerbate this problem. With its strong connection to conservative economic policies, technology is perceived by Newfoundlanders as having played a major role in the destruction of the fishery. After all, more efficient and technologically advanced fishing methods and boats—coupled with government policy or lack thereof—have assisted the decimation of Newfoundland cod stocks (Harris, 1998; Hessing & Howlett, 1997). Over the past decade new technologies such as satellite television have come to the five coastal communities. As elsewhere, the technologies have opened up a new world of entertainment and information, but they also have had a negative effect. People who used to congregate in the streets with neighbors and family are now dedicated to watching certain shows, and the streets have become relatively empty, even in mid-summer. As reported by Harris (2003), many outport people have become conscious of the health benefits of regular physical exercise. Walking on a regular basis, noted in three communities, now can be considered a rationally purposeful pursuit rather than solely a means of meeting one's friends. In many cases young people are more interested in playing video games than in contributing to the numerous volunteer activities we mention as forming the backbone of the communities. In terms of culture and the arts, much of what drives the TV programs is totally foreign, emerging from and designed for an audience in a different country: the United States. Although cultures have always shared and borrowed, this one-way transmission of culture neither understands who these people are nor cares to make any contribution to what they can collectively become. Much the same can be said for the Internet. Approximately 80% of the content and language comes from the US and people, particularly teens, enjoy

playing video games and traversing this murky sea of information. These changes in life habits increasingly infect the language people use as they talk about what they are doing and indeed who they are.

Accustomed as we are to living with continual scientific breakthroughs, we have yet to come to terms with the fact that most new technologies bring new and varied problems that require a critical analysis (Joy, 2001). In small communities, where change is slow and evolutionary, the speed at which ICT not only operate but change and grow, can be totally overwhelming. The capacity to contract time and space—as when we instantly reach into other communities and countries—is part and parcel of contemporary capitalism and the globalization of economics (Meiksins, 1998). Also inherent in current versions of job restructuring whether of schools, lighthouses, or weather stations, technological change is a process these communities have learned through years of painful experience to distrust.

When learning something new “and beginning one’s own experience, there is a critical sense of ownership that surrounds the outcomes of the learning experience” (Wolsk, 2003, p. 92). In our communities people did not know where to start, where to begin to talk about how they could use the ICT in the future, because there was absolutely no feeling of ownership. The teaching and learning process that has gone on about these ICT for most of the adult population has been, as Winner (2001) argues, “a debilitating fixation on technical instruments and the conditions of their operation” (p. 7). The term *interactive*, which to community-based researchers and educators meant that dialogue, debate, discussion, and needs were at the core of the learning experience, now means that “a computer [or other ICT] is at the centre of what’s going on” (p. 7). This has been the case in these communities. Rather than learning, they have experienced only training, which has focused solely on the use of the technology itself: the device.

### Conclusion

We used participatory research to create the opportunity for people to understand the fusion of technological tools with who they are and create the directions in which they themselves wish to grow (Misangyi Watts, 2003). As research facilitators, we too are learning about learning in reference to technology and how it challenges our research assumptions. Although it could be argued that we are quite critical of technology, we found ourselves advocating for it by making suggestions about how the technology could be put in place, monitored, and used. We did this because we came to realize that with no knowledge or experience of these technologies and with limited training and education, community members were ill equipped to identify the best ways forward. Our approach was different in that instead of focusing on the *device*—videoconferencing in this case—we emphasized learning needs and how the equipment could be used to facilitate a dialogue among the communities. The sustainability of these communities will depend not on competition, but rather on collective work and mutual support.

In spite of these criticisms, both technology and our research have brought benefits to the community. The technology has opened doors to the outside world of information, especially for young people. Among the adults we can see the circle of leadership, or power/knowledge in Foucauldian terms, which

was originally small, growing larger. Our workshops have initiated a forum for sharing concerns and putting forth ideas. Connections are appearing through our Web site and Web connections, between the means and content of technological communication. We have been able to tell outside audiences about the communities: about their arts and crafts, tourist attractions, warm hospitality, and about research conducted by community members themselves. And many fine craftspeople in the communities have received from us the *gaze* (Jay, 1994) and appreciation of the outside world.

It takes time for people who have not held the power-knowledge package in the past to see themselves as power-holders. Although the people have extraordinary stores of tradition and local knowledge about the fishery, crafts, community coherence, and—when they search their own histories—about healthy foods and exercise, they do not yet necessarily include new communications technology (i.e., computers and videoconferencing) in their power purview. In their own knowledge realms they are independent; in a superimposed knowledge framework they can be seen, and have been viewed historically, as dependent.

Having referred frequently to a collective *them*, we hasten to point out that each community has developed a distinctive culture. For example, in leadership terms two communities are dominated in council, church, and development initiatives by women. In the two larger communities similar committee roles are held almost exclusively by men. One community would stand out in any context, rural or urban, for its cleanliness, health-consciousness, recycling efforts, and environmental care. Another community has far to go in this direction, yet is remarkable in its social cohesion. The people in one community are fiercely independent economically, boasting almost total employment; in another there is high unemployment and dependency on government payments and make-work projects. Yet given this wide variation in life and work patterns, the people of all communities (and those like nurses who come periodically to work in the communities) demonstrate a common fear and distrust of new technologies and a reluctance to assume control over how they will be used.

Our own role continues along its perilous course, in which we reflect on each action we take, whether on-site or in the relative security of academe. We continually remind ourselves of the indeterminate nature of research outcomes and our responsibility to walk the fine line between superimposing our ideas of progress and listening to the suggestions of the people we work with and for. More important, we must observe the space in which we can act (or even suggest action) and that space where the people initiate and take up the task. This must be negotiated anew in each situation. Together we may be able to redefine dependency as a positive social goal that leads to a greater sharing of knowledge among recognized leaders and followers in sites and a new and burgeoning form of interaction among communities about education, health care, and small businesses.

*Note*

1. From 1999-2002 an SSHRCC grant enabled Harris to conduct research on educational restructuring at Burgeo and Ramea. The invitation from the BBS was an outgrowth of this work.

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