

## Computers in homes: A technological revolution for families?

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### **Abstract**

*A strong political and social agenda exists in New Zealand for redressing 'digital divide' inequities within diverse communities, in view of a perceived need to create a "smart nation" (Maharey, 2002). Assumptions abound in this technologically determinist context regarding a rational connection between more computers, more knowledge, and stronger communities. This paper touches on theoretical territories relevant to research aiming to assess the connection between Internet access and community outcomes, outlines the early stages of a New Zealand study of the effects of free high speed Internet access on volunteer families within a low decile<sup>1</sup> urban school community (the "Computers in Homes" project), and reflects on methodological issues such as ethical considerations for longitudinal communication research in a family setting.*

### **Introduction**

It is clear that we live in a time of debate about the social consequences of Internet access. One powerful set of arguments favours the idea that new forms of community are evolving by this means: this has been called "the community-building" (Bimber, 1998, p.1) claim, and is opposed on the other hand by a series of assertions stating the Internet will erode social structures. Does electronic communication improve social inclusion for all those who live within diverse communities, and how is this "transformative" (Kiesler, 1997, p. xii) potential manifested? Or does increased use of electronic communication create more opportunity for social isolation, leading to extreme detachment, such as was recently reported in the case of a young man whose "virtual [chat-room] friends" (Craig, 2003, p. A16) watched him take an overdose of drugs on web-cam, and failed to intervene in his suicide? Evidence is available for both inclusion and detachment outcomes, but the pro-technology agenda enjoys strong political and community favour worldwide. It is essential therefore that the social outcomes of ICT projects aimed at drawing as many people as possible onto "the Infobahn" (Slouka, 1995) are critically assessed, so that research can lead funding in the direction of the most worthwhile

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<sup>1</sup> New Zealand rankings of school catchment areas on the basis of socio-economic level: 10 represents the highest, and 1 the lowest socio-economic indicators. The school that is the subject of this research is ranked Decile 1a, indicating a community in the greatest social, economic and health need.

applications. This is an important consideration in view of the financial resources required not only to close the digital divide, but also to sustain people's access to and effective use of the technology.

The problem of the digital divide is now well recognised. Servon (2002) points out in a slightly acerbic way that the US government "discovered" (p.2) the digital divide in 1995 with the release of the first of its "Falling Through the Net" reports, documenting the nature of the problem in the US; since then, much has been written on the subject, much data has been assembled, and the metaphor itself has been taken up with zeal for a wide variety of purposes. The digital divide is certainly an empirically definable phenomenon. Now, it may be that unintended consequences arise (as occurred after the widespread adoption of television in the 1950s and 1960s) from encouraging people to spend time at a computer terminal engaged in a range of activities which may or may not be described as social, an issue about which some writers are worried (Wresch, 1996; Postman, 1992; Slouka, 1995). However as Bruce Bimber (1998) suggests, it will be a long time yet before the last word is written on the subject of the Internet: it is simply too soon to know with any certainty whether the Internet is a force for the creation or erosion of community capacity.

Nevertheless, strong social and economic rationales justifying government ICT/social inclusion initiatives are easy to locate:

*Urban areas could well continue to congeal into introverted, affluent, gated communities intermixed with "black holes" of disinvestment, neglect and poverty – particularly if, as the unrestrained logic of the market seems to suggest, low-income communities turn out to be the last to get digital telecommunications infrastructure and the skills to use it effectively (Mitchell, 1999, cited in 2020 Communications Trust, Computers in Homes Draft Progress Report, 2001, ¶ 4).*

Such reasoning is behind the many worldwide initiatives to extend the reach of information and communication technologies. Evidence of progress is available: US researchers comment that since 1995 and especially since 1998 and 2000 there has been an unswerving trend towards "domestication" of the Internet (Cummings & Kraut, 2001), and that the Internet population has increasingly come to resemble the US population as a whole (ibid.; also, Rainie & Packel, 2001) – in other words it is becoming more heterogeneous, or inclusive. However, there remain considerable gaps in access, characterised especially by ethnicity, income, and education differences. Lisa Servon (2002) notes "in virtually all countries, Internet users tend to be young, urban, male, and relatively well educated and wealthy" (p. 1), a trend borne out in New Zealand where statistics show that "groups most likely to be disadvantaged ... are: Maori and Pacific Island peoples, those on low incomes, sole parents, older people, people with low or no qualifications or poor literacy, the unemployed or underemployed, people in areas lacking a sound telecommunications structure such as rural areas, women and girls<sup>2</sup>, and people with disabilities" (Maharey & Swain, 2001, ¶ 4).

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<sup>2</sup> A 1998 AC Nielsen survey found that "males were more likely than females to have ever accessed the Internet. While home was the most common place for accessing the Internet, females were more likely than males to gain access

Statistics documenting ICT gaps, their dimensions and particulars, are legion (refer to Maharey & Swain, 2001, for the New Zealand picture). Broadly, New Zealand data show a dramatic increase in *access* to the Internet among all groups – from 42% with access in New Zealand in 1998 to 72% by 2001 (Ministry of Economic Development, 2002) – and US research comprehensively shows that there are “more online, doing more” (Rainie & Packel, 2001; Horrigan & Rainie, 2002), and “women, minorities, and families with modest incomes continue to surge online” (ibid.). However pockets of poor access continue to exist, such as in low socio-economic suburbs in New Zealand where communities struggle with poor educational attainment and high unemployment.

It is fair to say that much “digital divide” rhetoric is premised upon the idea that the gaps are simply issues of access (Servon, 2002) and that, therefore, inclusion in the information society is a matter of wiring up schools, and putting more computers into more households, public meeting places and the like. Servon suggests that a redefinition of the digital divide is needed, and should encompass dimensions not only of *access* at the ground level, but also *IT literacy* and whatever strategies are required to create and maintain it, and *content*: “access is a necessary precondition but then engenders a need for training in order to use the tools. Once people have facility with the tools, they demand content that serves their interests and meets their needs” (Servon, 2002, p. 8).

This inclusive definition of the digital divide is almost exactly paralleled in the New Zealand government’s digital divide website (Maharey & Swain, 2001), which adds one further dimension: that of *attitudes* (ibid., 2000, ¶ 5) – “do people have a favourable attitude towards ICT, and can they see the relevance and the possibilities it holds for them?” (ibid.). Bruce Bimber, too, has hinted at the attitude dimension in his analysis of how the Internet will affect politics. In the process of countering the “populist” position which argues that the Internet is promoting “a resurgence of individual-level influence on government and politics” (1998, p.2) he points out that “it is not simply the availability of information that structures engagement; it is human interest and capacity to understand many complex issues” (ibid., p. 5).

Reassuringly, New Zealand’s “closing the digital divide” website points out that simply providing more computers is no answer. Government rhetoric acknowledges that New Zealand urgently needs to catch up with other developed countries, especially in view of e-commerce and e-government strategies that depend on having “a critical mass of e-literate citizens” (Maharey & Swain, 2001) as a means of “restoring trust in government and providing strong social services...[and giving] greater access to government and government services” (NZ Government Agencies, 2002, p.5). The ICT agenda is clear at the highest levels in New Zealand: social justice and inclusion are viewed at least partially through a technological lens. Yet “e-government can’t happen without e-citizens” (Thomson, 2002). Is the wired community an engaged community, and in what

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through school/tech/university while males are more likely than females to gain access at work” (Maharey & Swain, 2001, section 27). The same survey noted that Internet usage by gender for 1998 was 38% male, 31% female. However a Ministry of Social Policy national standard of living survey in 2000 showed that this gap had narrowed, with 46.5% of males and 42.7% of females having Internet access, and the website authors noting “this overall population data indicates that in general, females are as connected as males” (ibid., section 40).

way? Local studies are urgently needed in order to assess the social impact of increased computer use among previously underserved communities of new users. How are novices really using the Internet? Is it enhancing their participation in the community, both locally and in a broader sense? How should we define “community” for this purpose?

It is against this background that I have framed a study of a recent community ICT project, with the aim of assessing its significance for the participants and its value more broadly in promoting a strengthened community.

### ***Researching the Internet and community***

In what ways can links between the Internet and “community” be assessed? The study introduced in this paper will track a sample of households over an extended period, and address the community question on three levels. The research encompasses not only the interpersonal dimension of individuals’ social networks, but also that of civic engagement and neighbourhood solidarity, and the broader context of “community”. It will come as no surprise to other researchers in this field that such territory is fraught with grey areas and differences of opinion.

Scores of researchers, research teams and critics are ranged along both sides of the ideological battlelines concerning the long-term outcomes of an increasingly digitally connected world. For every Mark Slouka (1995) eloquently arguing that “part of the risk involved in setting up residence in these electronic communities...[is] that we might begin to devalue the significance of physical reality” (p. 52), there is a Barry Wellman, asserting that “even as the Net might accelerate the trend to moving community interaction out of public spaces, it may also integrate society” (1999, p. 356), or a Lelia Green, referring to concerns over children’s interactions with computers as ‘Internet moral panic’ (2002, p. 50, citing Marshall, 1997, p. 71) that is part of a ritual cycle of panics surrounding new technologies such as occurred with telephones and automobiles a century ago. A dispassionate bystander could argue that, because those who use the Internet do so overwhelmingly in order to communicate (using e-mail: refer, for example, to Shah, Kwak & Holbert, 2001), that the outcomes of spending time online could be expected to be positive in terms of creating a sense of belonging and connection, on all sorts of levels (Kiesler, Kraut, Cummings, Boneva, Helgeson & Crawford, 2001). Yet such an observation is simplistic. A deconstruction of it could begin by noting “building community in a normatively rich sense is not the same as increasing the amount of social talk” (Bimber, 1998, p.2).

The range of opposing assertions in regard to the Internet and societal change may be caused in large part by the different ways in which “community” can be defined. An extremely useful analysis of this central issue is presented in Bimber’s 1998 paper on political engagement and the Internet, in which he counsels against seeking an answer to the question of whether the Internet will produce community, but rather asks us to

consider notions of “thick” and “thin” community (those pursuing a common good vs those pursuing self interest to the advantage of all), and in this context, “what kind of community the Internet can sustain?” (p. 8). In this sense, a question such as “is virtual community possible?” lands somewhat wide of the mark. The issue is qualitative rather than quantitative.

Community could be said to be about relationships, and is therefore “not a place, but... a place-orientated process” (Meegan & Mitchell, 2001, p. 2172-3). The ‘Internet as community-building agent’ argument works easily within this schema, in the sense that the Internet enhances “citizen to citizen communication” (Bimber, 1998, p. 6) – and, *ipso facto*, enhances community. Exploring the integration of “technoculture” into households, Lelia Green (2002) argues that household members become part of a wider community by electing to incorporate technologies into its rhythms. In other words, community is something people may consciously opt into by technological means, and this is one of its benefits:

*Incorporation ... describes the process through which the household opts to incorporate itself as part of a wider audience, or community of consumption... By watching a television programme such as a soap opera, or the news, the family incorporates itself within the wider community that is also watching that programme, and responding to the same information (2002, p. 45).*

Although at some distance from “real” community, as in sitting together at an arranged event with people with whom you are acquainted and sharing enjoyment in the same space, Green’s “imagined community” (2002, p. 46, citing Anderson, B., 1991), available also through the Internet, nevertheless provides opportunities for reinforcing social ties in everyday life by creating shared experiences and a shared knowledge base. Green believes that this perception of community has the effect of “unifying elements of domestic life across different cultures and communities” (*ibid.*).

Yet relationships of interdependence or processes of incorporation do not in themselves create a community, as implied by Michael Sandel (cited in Bimber, 1998, p. 7) in his refutation of the community-building claim: “Converting networks of communication and interdependence into a public life worth affirming is a moral and political matter, not a technological one”. Bimber’s (1998) powerful critique of both populist and communitarian claims about the supposed benefits of the widespread use of the Internet rests principally on the premise that increasing the amount of information and communication will lead neither to more political engagement nor an improved social function. Additionally, in regard to the New Zealand study exploring what happens to *a* community, and to the *quality* of that community with the arrival of Internet-capable computers, it is important to think of both neighbourhood and community as “open systems” (Onyx & Bullen, 2000, in Winter, 2000, p. 127) that are fluid and changing, not fixed and atomistic entities. This is a challenge for both research design and process validity in this context: both will require an intuitive, inductive approach. For example, households will change in composition over the course of the proposed study, and the

research itself will follow a school child with computer and the child's caregivers in each case. There may be a shifting family grouping on the periphery of this focus.

### *Empirical context*

Evidence emerging from numerous ICT/community research projects is, as yet, contradictory. An influential series of studies in this area is the Carnegie Mellon University (CMU) series. The first of these studies, a longitudinal field trial in which 93 households were tracked during their first 12-18 months online, appeared – controversially - to show that novices experienced increased isolation and depression (Kraut, Patterson, Lundmark, Kiesler, Mukhopadhyay & Scherlis, 1998) within the first few months. This study became known as the Internet paradox study (after the title of the 1998 paper in which the results were published), since the technology used for communication purposes actually had an unexpected and somewhat contradictory result: it created a negative impact on wellbeing.

However a follow-up by the same research team of the participants remaining in 1998, showed that over a longer period of time the depression and alienation disappeared, and social interactions increased (Wellman, 2001): “the use of the Internet led to negative outcomes early in participants’ history online and more positive outcomes later” (Kiesler, Kraut, Cummings, Boneva, Helgeson & Crawford, 2001, p.14). Furthermore, Kiesler et al report “using the Internet generally predicted better outcomes for extraverts and those with more social support but worse outcomes for introverts and those with less support” (2001, p.2). A replication of the 1998 “Internet paradox” study was undertaken by a team of researchers in Sweden, who found only a partial confirmation of the decreased psychological wellbeing paradox (Wästlund, Norlander & Archer, 2001). Hampton and Wellman’s “Netville” study (1999) based on a lengthy ethnographic study of a wired suburb of Toronto, found that “much online activity is between people who live (or work) near each other” (p. 489), and that the Internet “supports a variety of social ties” (ibid). In this study, then, the Internet promoted local social solidarity.

Kiesler et al (2001) provide a useful overview of the divergent findings in research so far: on the one hand, some studies show “online social relationships are weaker...people who use email heavily have weaker social relationships than those who do not ...and... people who use the Internet heavily report spending less time communicating with their families” (p.4). Other research “shows that people who use the Internet heavily report more social support ...and that people use the Internet to bolster existing community” (ibid.). A key point noted by this CMU team, and that requires further research, is that it is not possible in cross-sectional studies to distinguish between “self-selection (in which socially engaged and disengaged people use the Internet differently)” and “causation (in which use of the Internet encourages or discourages social engagement)” (ibid.).

In New Zealand, limited research has been carried out on a home-based pilot project aiming to encourage community involvement and achieve a number of other goals related

to access to ICTs for disadvantaged groups, such as improving their future contribution to the economy (Wellington City Council, 2001). This project, called Computers in Homes (CIH<sup>3</sup>), operates in Newtown, a suburb of Wellington and is paralleled by ICT initiatives in other countries, such as Computers Within Reach in the UK (2020 Communications Trust, Computers in Homes Draft Progress Report, 2001, p.7).

CIH is supported by the 2020 Communications Trust, a national body whose aims are to empower more community groups by facilitating their access to the Internet through partnerships between local councils, community and businesses and using donated computers (Eaton, 2001). Families who pay a nominal joining fee receive a recycled computer, an ISP connection, six months of free Internet access, and training and technical support. Like US researcher Lynette Kvasny from Penn State University, who believes “the technology needs to be integrated into people’s lives ... we need to put it where people will go for social networking – in barber’s shops, in Laundromats, churches and community spaces...” Hopkins, 2002, ¶ 2), those involved in CIH recognise that underserved groups need to have computers installed in a central place in their lives in order to make the technology their own.

Another CIH pilot project has existed for two years in Auckland, New Zealand’s largest city, in another community in need, Panmure. This particular project and the research that is being undertaken in that suburb is outlined in the following section.

### ***The Panmure study: Methodology***

On the basis of the broad span of research and controversy on the subject of the Internet and community, as outlined in previous sections, the following research question has been developed:

*What are the consequences of Internet access for perceived and actual “community” for new users in an urban family context, at each of*

- a. Micro (social ties) level*
- b. Meso (neighbourhood) level and*
- c. Macro (civic engagement) level?*

A range of subsidiary questions is implied:

- What is the effect of the introduction of computer technology upon intra- and interfamilial relationships?
- To what extent is community cooperation and networking enhanced as a consequence of the introduction of community-based computer technology?

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<sup>3</sup> The CIH project was modelled on Books in Homes, a successful New Zealand initiative aimed at “breaking the cycle of booklessness in low socio-economic homes” with donated books. Computers in Homes aims to “develop confidence, self-esteem and important life skills ... and promote positive relationships within the family and community groups while going some way towards bridging the digital divide” (2020 Communications Trust, 2001, ¶ 2).

- What is the impact of the introduction of computer technology upon community networking and relationships between families, the primary school and other organisations and agencies?
- To what extent does the introduction of computer technology contribute to enhanced cultural identity and inter-ethnic group cooperation?
- What evidence is available of increased social capital and enhanced community capacity? (Wellington City Council, 2001).

The research design focuses on an “opportunity sample” (Kiesler et al, p. 5) of a minimum of 12 families (with a child of 8 or older) of novice users, within a low socio-economic urban context centring on a primary school. This ethnographic case study aims to “develop an enriched sense of the meanings of the technology...”(Hine, 2000, p. 8), and to assess over time in what ways the meaning of the Internet changes for them, what their perceptions are of it as a social and informational tool, and what impact can be discerned in regard to membership of online and offline networks. Jung, Qiu and Kim (2001) point out, in arguing that research must avoid dichotomous approaches that compare, for instance, “haves” with “have nots” while ignoring the social context, that “media connectedness” (p. 509) is qualitative, and that researchers should approach the digital divide problem as one of people “developing a relationship with the technology”, not of “ownership of the technology” (p. 514).

A methodological assumption arising from the research question is that the user (family/household) perspective needs to be captured over a substantial period of time, and data are required on perceptions of belonging, involvement in the locality (focused on the school community), and engagement in broader civic activities. In order to capture this data, the researcher will need to establish a trusting relationship with subject families, becoming participant observer as well as interviewer, and developing acceptance within the group that will sustain several visits over the course of a minimum of two years.

Hampton and Wellman’s longitudinal ethnographic study of “Netville”<sup>4</sup> (1999, p. 475) endorses the usefulness of a friendly relationship between researcher and subjects. Hampton lived in Netville for two years in order to facilitate the necessary trust and rapport to carry out ethnographic observation while managing the risk of a Hawthorne effect in gathering data among participants who were very aware of the importance of the outcomes of the study. While considerable survey data were also collected using both online and in-person methods, “the ethnographic observations tell much of Netville’s story...serv[ing] as a record of the group perspective... a historical contextual account” (Hampton & Wellman, 1999, p. 483), and “a powerful source of information” (ibid., p. 489).

An important and influential series of studies has been taking place in Los Angeles, where the Metamorphosis project conducted by the Annenberg Center for Communication at the University of Southern California aims to address, for example, “the ways in which communities themselves can affect the way in which the technology

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<sup>4</sup> Pseudonym.

is incorporated into the patterns of everyday life of the participants” (Ball-Rokeach & Hoyt, 2001, p. 355). In particular, the concept of a more robust measure of “internet connectedness” than mere access (Jung, Qiu & Kim, 2001, p. 507), shown to be “capable of capturing the multidimensional disparities persisting between different income, education, age, and gender groups” (ibid., p. 528) in one of the Metamorphosis studies, has been useful for the planning the inclusion of complementary data collection methods.

### ***Informed consent***

In the Panmure study, the subject families will include children, and decisions need to be made over the extent to which their contribution is required in order to answer the research question, and in what form (or forum) those contributions will be sought. Nevertheless school-aged children are an important sub-group within the sample households whose receptivity to the Internet and use of it as a communication tool may differ from other age groups; therefore it is important to include them. However, as pointed out by Charles Ess and the Association of Internet Researchers (AoIR) Ethics Committee (2002), “the obligation – and attendant difficulties – of researchers to protect their subjects is heightened if the subjects are (a) children and/or minors” (section II, part A). In view of the fact that families who are participating in the CIH project are, however, volunteers who have agreed to be interviewed for research and evaluation purposes, parents’ consent has been explicitly established already; also, only those children over the age of 8 who are participating will be included in interviews or focus groups. Parents’ consent will be sought for the use of observational data involving any children.

Since the research site from which the participant sample is to be drawn includes a range of ethnic groups, cultural considerations are relevant<sup>5</sup>. Once again, however, participants in CIH are volunteers, and the research will be based on consultation and negotiation with the parent group in regard to the benefits of the research to them as a parent community. However the matter of information sheets and written consent will be discussed with the group and provided in participants’ first language if required. Such matters as translation or facility with English have yet to be raised and resolved with the appropriate people as required in order to manage the research relationships responsibly and sensitively.

The action research model is applicable here, especially since there is a good deal of interest in the outcomes on the part of the 2020 Communications Trust, and the Panmure Bridge School family community. A participatory approach to the research will lend itself to evaluation and recommendations for continuation and improvement, and “development of a model that is useful and practical to them for policy purposes and for assessing needs” (Balnaves, Caputi & Williams, 1991, p.114). Unquestionably, some form of documentation or other system of providing appropriate relevant feedback (such

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<sup>5</sup> The ethnic breakdown of the school population is 12% Pakeha (European), 45% Maori, 29% Pacific Island, 6% Chinese, and 4% Indian (Education Review Office, 1999).

as on the school website) will be provided, and again, is a matter for discussion with all school stakeholders.

Research plans include interviews with families in their homes around the time of the computers being installed, so that data on goals for the use of the computer can be compiled, and family diaries distributed for recording time spent and on what activities. Family computer goals will be followed up in subsequent interviews within a few months and then again in a second round approximately one year after the installation of the computer. In addition, a variation on the “Internet Connectedness Index” (Jung, Qiu and Kim, 2001) for each participant may be calculated after each interview. At all times throughout the research period (approximately two to three years), the priority will be to assess what influence the Internet is having on individual and family social connectedness, and in what particular ways.

A limitation of this study is the nature of the sample: essentially it is relatively small convenience sample (although in practice a minimum of 12 and possibly up to 25 households will consist of many more individuals and relationships) and will therefore have limited generalisability. However there are considerable research advantages in the sample context, among these being the facilitation of consent, being part of the CIH agreement in receiving the donated computer, and an anticipated receptivity of the participants towards the research process. It is also likely that additional data will be available through the first group of households (who joined CIH as novice users in 2000 and have now had their computers for over two years) who may well opt to continue involvement in the CIH programme and be willing to continue their contribution to the research.

### ***Research outcomes: Early stages***

At the time of writing, phase 1 of the study (the first series of family interviews planned for March-May 2003) had not begun. However findings in both the Wellington CIH scheme and the Panmure project within the first few months of provision of free Internet access in 2001 indicated strongly positive outcomes in terms of use of e-mail for contact with family and friends (2020 Communications Trust, 2001).

Midway through 2002, I began to interact with the Panmure research setting in the course of negotiating and planning the research, noting through observation of a parents’ group meeting that evidence was present of mixed outcomes for families. Benefits such as children helping their parents to check out their bank balance and pay bills online; improved IT skill levels for family members, who then go on to teach other family members or friends (Bright, 2002); and parents working with the school Principal to develop a school website with the assistance of videoconferencing were offset by problems with slow computers, “losing” the Internet, and neighbourhood children gathering to download song lyrics (which could, conversely, be regarded as an endorsement of the way ICT can forge social ties). In addition, the CIH social environment has created the conditions in which the parent group has developed signs of

being self-supporting. For instance, parents began planning additional meetings at the school in June 2002, so that some of the more skilled individuals could help others who were having problems with their e-mail. These indications, though scant, are an encouraging sign of strengthened community on a local level.

Findings from the previous Wellington and Panmure studies (2020 Communications Trust, 2001) list parent concerns about “the problem of neighbours or members of the extended family visiting and using the computer without any regard to the family rules” (ibid., p.17). Such families did however come up with a way to solve this problem – changing the password on the computer so it could not be used during the day when they were not home. This type of change to family dynamics and practices will be of interest in the 2003/4 study, during the course of which I plan to gather comprehensive detail that will expand upon these sketchy indications.

### ***Discussion***

The HomeNet trials conducted by the CMU Human-Computer Interaction researchers from 1995 until 2000 suggest a number of tentative expectations we may have about the outcomes of this New Zealand study. One significant point of note is the CMU hypothesis (Kiesler, Kraut, Cummings, Boneva, Helgeson, & Crawford, 2001) that because the Internet environment itself is changing, with for example many more people being online by comparison with 1995/1996 when they began their “Internet Paradox” (Kraut, Patterson, Lundmark, Kiesler, Mukhopadhyay, & Scherlis, 1998) series, that the social relationships dimension of electronic communication is likely to be more positive overall for research participants in 2003, especially those who are novice users who may for various reasons be somewhat detached or introverted at the beginning of the study. It may be that there is less reason for negative experiences among the 2003 New Zealand sample, if participants find they have access to many more members of their networks who are also online. In addition, the CMU authors point out that the Internet now provides many more services and pleasurable activities than were available in 1995/1996; this in itself may be a highly motivating factor for use of the Internet. We can assume that this trend over time is likely to continue, so that the longitudinal study in Panmure during 2003/2004 will track research subjects through a period in which they themselves may be changed by participation in the online setting, but the setting itself will also continue to change.

Another reason to tentatively predict a positive correlation between free Internet access provided by the CIH scheme and beneficial social outcomes, is that the scheme relies on a pivotal role for interpersonal communication in several ways. For example, participating families are required to attend monthly meetings as part of their involvement in CIH, during which time they learn from interactions with other parents and the trained professionals on hand. Secondly, families attend a training session at the school and they are assisted by volunteer tertiary students; and third, each project consisting of about 25 participating families has “six family coordinators who act as mentors to four or five families and provide assistance” (2020 Communications Trust,

2001, p.12). Clearly therefore learning to be participants in an online setting is a process facilitated almost entirely by a mentoring approach to families, often one-on-one. This approach was found to be a strong factor in the success of another family-based information programme in New Zealand, Parents As First Teachers, researched in Auckland in 2000 (Williams, 2001; Williams, Comrie & Sligo, 2001).

Findings from the Panmure study will emerge in stages over a two to three year period. A particular point of interest toward the end of the process will be to what extent the study participants make use of their Internet connection to become engaged in the political processes surrounding the New Zealand general election due to take place early in 2005. This event will provide the opportunity to gather evidence of the extent to which ICTs are to be taken seriously by politicians as an informative and even mobilising channel, especially in this case within a low socio-economic community. Will the Panmure research participants become politicised in any discernible ways? Will they become more empowered citizens, taking advantage of the “transformative potential” (Weitzner, cited in Bimber, 1998, p. 3) of the Internet because it supposedly can facilitate “a kind of one-to-one interaction between citizens and between citizens and government” (ibid.)? Or will Bruce Bimber be shown to be correct in his view, that “there are many theoretical and empirical reasons to doubt a simple and direct connection between changes in information and communication technology and the political behaviour of the public” (1998, p.4)? Watch this space.

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