

COMMUNITY-BUILDING IN CYBERSPACE

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Abstract

This article explores two of the central theoretical perspectives for promoting and understanding community-building initiatives in cyberspace. One is referred to as “virtual democracy” and contains reference to many of the key concepts taken from classical democratic theory: universal access to information, participation in public debate and political decision-making, empowerment and equality of citizenry. The other perspective, urban entrepreneurialism, is based on an analysis of late capitalism and the place of consumption in determination of self, culture and society. Proponents of this second perspective see possibilities for urban regeneration and economic renewal through emphasis on locally-situated entrepreneurialism operating within a global market.

A case study of community-building in cyberspace currently being compiled — the Craigmiller Community Information Service (CCIS) Network in Edinburgh, Scotland — is sketched in the remainder of the article. Although the case clearly reflects aspects of these two perspectives in its stated objectives, limited evidence is found among user groups in the housing estate expressing value for and use of network services. In spite of this, both users and network spokesmen remain optimistic that the initiative will eventually contribute to both entrepreneurial and community-building aspirations shared for the Craigmiller housing estate.

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Paving New Roads: Electronic Networks

Electronic networks have been under construction for several decades, but primarily for servicing military — and later — academic communication needs. More general electronic bulletin boards emerged about a decade ago which provided similar communication services for groups with broader ranges of interests. Only since the very recent popularisation of Internet services, however, has concern with development of electronic networks become a major issue. This current interest has been further facilitated by new digital data compression techniques and the spread of high-speed fibre-optic cabling. One of the concepts emerging from these new communication technology developments is the Information Highway, a high-level, high-speed communication and information superstructure which is to span the globe (Kahin 1995, 3).

Organisations and communities situated in the real world are beginning to construct “virtual” settlements along this Information Highway, operating in and out of virtual and real-world spaces. The electronic networks these organisations and communities utilise may facilitate communication which can be local and/or global, one-to-one, one-to-many, or many-to-many in a manner impossible with traditional media. This development enables new types of interdependence and interaction, and creates interrelationships which simultaneously promote globalisation, localisation and individualisation. As a result, a range of social, cultural and economic transformations emerges, creating advantages and disadvantages, opportunities, threats and risks (see Hall et al. 1992; Report of the Commission on Global Governance 1993; Ashforth and Voogd 1994, 40; Thompson 1995).

New communication technologies are being implemented in areas which provide citizens opportunities under the banner of “social, cultural and political benefits,” e.g. public information services, education and electronic democracy. As Johnson (1996, 81) argues, though, the potential for this form of common good will only develop universally if appropriate proposals are addressed and policies implemented. Still, a discourse of freedom and democracy has developed around the concepts of the Information Highway and cyberspace. In its most deterministic form, this thinking is elevated to the height of “techno-utopianism” (Johnson 1996). At a more realistic level, the emerging digital environment is providing potential for more horizontal communication arrangements, replacing the traditional influence of predominantly top-down hierarchical structures. There is little doubt that broader organisational structures are beginning to accommodate the communication requirements of virtual cities and communities, citizens, factories, offices, companies and corporations. Universal access is absent, but large numbers of people are beginning to routinely cross the boundaries of time and space using military, commercial, academic, personal and local community access systems. For a number of different reasons, people are beginning to interact routinely in cyberspace in a business or personal capacity, or as members of networked or virtual communities (Hunter 1995, 89).

Until the late 1980s, many community — oriented networks in the United States were noncommercial (Kahin 1995, 6), but financial difficulties began to emerge for community-based systems. One obvious solution to such problems was to develop a dual structure in which a market-based component would provide financial support for the community-based system. This seems to be the current basis for those networks fusing a civic agenda with opportunities for “cybernetic capitalism.” This strategy has already been followed by other media, local and community-based radio and television

stations in particular, and some of these media are also at the forefront in developing electronic networks for serving their localities and communities.

Two Theoretical Scenarios

Here, two central scenarios are considered which suggest how these electronic networks are being developed. The first examines how new city and community-based electronic networks may contribute to a rejuvenation of the democratic process; the second considers how digital community networks may be seen as a component in the current era of late capitalism.

Virtual Democracy

Interest in utilising electronic instruments for democratic purposes can be traced back to the introduction of the telegraph and telephone, and later to radio and television. Further experimentation took place with early videotex systems and two-way cable operations such as the Qube experiment in Columbus, Ohio, in the mid-1970s (Arterton 1987). Many of the community television initiatives in North America and Europe also contained objectives related to principles of democratic government such as encouragement of public debate and monitoring of (local) government decision-making (see Jankowski et al. 1992). The most recent wave of interest in harnessing electronic instruments for aspects of democratic operation is found in proclamations of the Information Highway and — of course — the Internet (e.g. Kahin and Wilson 1996a; 1996b). Again, a surge of experimenting is underway as to how these new communication technologies can best be used to involve citizens in the political process. Current initiatives operate under a number of names — teledemocracy, cyberdemocracy, electronic democracy, virtual democracy — and academic discussion on the meaning and differences between terms has begun in earnest (e.g. Hacker and Todino 1996).

Underlying this discussion is concern for a large array of issues regarding the nature of democracy, democratisation, public sphere, political action, and — most important for the purposes of this article — the possibilities and limitations of electronic instruments considered within these overarching concepts. Many observers have rightly noted the difficulties of engaging in serious discussion without clarification on what is meant by democracy.

In this vein, Held (1995, 172) argues that democracy, as it is understood presently, is still largely a “privileged domain operating in favour of those with significant resources.” People may appear to be “formally free,” but they “do not enjoy rights which shape and facilitate a common structure of political action and safeguard their capacities.” There is a need to reconstruct democratic theory and organise a diverse set of sites which represent particular “power needs.” Held argues that democratic autonomy has to be explored with respect to the organisation of life chances and participative opportunities which systematically stratify collectivities or groups in relation to a wide array of phenomena. While Held talks generally in terms of democratic theory and not specifically in relation to developments in cyberspace, his proposals regarding “sites of power” and “realms of action” (Held 1995, 173) are applicable to developments there as well.

Experimentation with new communication technologies is often grounded in a belief that the innovations can provide a much-needed stimulus for rejuvenating citizen

involvement in the political process. Indicators such as increasingly low voter turnout at elections are said to point to a “crisis” in the functioning of many modern democracies. One solution to this trend, it is thought, may be utilisation of interactive media in various phases of the democratic process. As several observers (e.g. Brants 1996; Bryan 1996) have pointed out, this belief is based on the disputable assumptions that people are actually interested in being politically engaged and that some form of participatory democracy is desired by the citizenry.

The arguments against virtual democracy initiatives succeeding are substantial. One of the more obvious is, that, given the characteristics of persons presently connected and capable of using the facilities, electronic networks can provide democratic possibilities for at best a very small elite mainly composed of young affluent males with technical training or interest. This argument is admittedly based on present-day limitations regarding connection and skill, and it is highly plausible both aspects will change rapidly in the coming years. Whether electronic networks will ever reach the stage of universal services and whether all economic and social strata will ever be adequately represented among those with the required skills to make use of computer-mediated communication is seriously questioned (e.g. in Williams and Pavlik 1995).

Another problem has to do with one of the central features of cyberspace: the absence of grounding in a specific geographical space. Several commentators (e.g. Brants 1996) have argued, often without empirical evidence, that use of electronic instruments within a democratic framework function most successfully within a local context where a certain degree of commonality in interests and concerns exists among a homogeneous population. A similar problem has been expressed regarding use of small-scale radio and television for community-building objectives (see Jankowski 1988)

Empirical studies of locally-oriented media suggest these media work best where a certain sense of community already exists (e.g. Stappers et al. 1992). Such a situation may also be the case for using electronic networks for democracy-building, but empirical evidence on this point has yet to be collected and assessed. Leaving the lack of findings aside for the moment, it is obviously the case that many politically relevant issues at the local level also have versions salient at regional, national and international levels. A common political strategy involves linking areas of commonality at all of these levels, and it seems at least plausible that electronic networks could perform this task better than existing media or forms of communication. The jury, in other words, is still out as to whether electronic networks can contribute to such political objectives.

Preliminary studies are beginning to appear on the various varieties of virtual democracy. Connell (1996), for example, sketches some of the initial efforts by British governmental ministries and departments making use of the Internet. He observes much duplication of already available informational services with little added value in the form of interactive services or those which involve or solicit the opinions of citizens. Brants, in the same vein, contends that most examples of electronic instruments used in relation to democracy are aimed “at improving the existing representative democracy. In general they [the instruments] are initiated from the (political) top and mostly based on giving more and better (user-friendly) access to more information” (Brants 1996, 64).

There are, though, experiments which offer more than “more of the same” and seem to stress interactive engagement of citizens among themselves and with elected representatives. One example of such initiatives, subjected to empirical scrutiny, was

a month-long experiment held in late 1996 in the Netherlands which incorporated debate opportunities, opinion polling and voting (Leeuwis, Jankowski, Martin, Van Roosum and Noordhof 1997).

Urban Entrepreneurialism

The second theoretical scenario guiding many community-building initiatives in cyberspace is based on the principles of urban entrepreneurialism. The expansion of capitalism and role of new media therein is increasingly the subject of much debate (e.g. Jameson, 1984; 1991; Harvey, 1990; Lash and Urry, 1987; 1994; Mulgan, 1994). Capitalist organisations formed in and through their relationship with new forms of communication technology, according to Smart (1993:17), are dominated by "time and time-space logic," and are "articulated with the emergence of a new global economic formation." The process of time-space compression, proposed by Harvey (1990) and others, suggests that information, capital and people can now travel very large distances in short periods of time. Sophisticated advances in new communication technologies have combined with a system of deregulation, and the global market has become more integrated (see e.g. Report on Global Governance 1993). Nations, it is argued, must maintain a global play of power centred around capitalism, competition and economic liberalism. In recent years, localities have begun to enter the highly competitive global marketplace.

Local electronic networks are coming to be in a prime position to mediate communication, promote particular internal and external relations, and transmit images into local and global cyberspace which are appropriate to given cultural and economic requirements. However, places must actually strive to make these images real, otherwise they will not live up to promotional expectations (see Ashforth and Voogd 1994). In addition to product and place promotion in cyberspace, city-based networks can also play a powerful role in targeting niche markets. Interactive network services can offer local users and private enterprises the ability to create and meet fresh entrepreneurial challenges and develop a new, more powerful role for the community or city whose image they promote. According to Odasz (1995, 117), "networking will enable citizens and their local businesses to create and pursue entrepreneurial opportunities through global niche markets." For example, individual entrepreneurs and businesses in different cities and countries will be able to use electronic communication networks to coordinate operations with more flexibility, allowing global niche markets to become more accessible.

A process known as "global localisation" is emerging, where multinationals deepen investments in particular areas and become "insiders" in foreign markets (see Morris, 1992). This process is currently promoting greater cohesion between multinational corporations and local economies. Multinational companies involved in niche marketing strive to keep ahead of competition, and in order to be flexible and meet local needs, it is necessary for them to operate from inside individual markets. The "global/local nexus" is of "key and strategic importance" for the global corporation (Robins 1992, 319). Cities which have developed digital networks along with trained, dynamic and energetic local communities are in a position to offer immediate services and economic goods. It is likely that these cities can also more easily promote training programs, encouraging more local people to acquire skills which can then be offered to incoming commercial enterprises.

On-line community systems can emerge under a cloak of democratic values and are often promised for the “common good.” At the same time, they are sometimes tied to market ideology which permit new forms of “cybermarketing.” Jameson (1991, 262-263) takes issue with the idea that “freedom and equality” is generated by market ideology, arguing that although everybody “wants to want them,” they are contradictory outcomes which can never be realised.

Some community networks continue to reject all commercial or for-profit organisation, even when needs indicate that the community would undoubtedly profit from an enhanced local economy. Protagonists of this perspective (e.g. Schuler 1996) reject any alliance between democratic and market values, ejecting those networks involved in any form of commercial gain from the category of community networks. However, others see scope for different degrees of union between commercial and community services (e.g. Morino Institute n.d.) and believe economic and community activities can overlap, particularly when community life is enhanced by such arrangements. For example, people living in rural areas, and the old and the disabled, are among those who can conceivably benefit from the development of home shopping facilities, banking and other services organised by a community system.

To summarise, components relevant to urban entrepreneurialism have been examined here. Our argument is that an understanding of global/local capitalism is essential for analysing the significance of new community networks in a position to consider developing a “telepreneurial” strategy. The following section introduces research currently in progress in Scotland, designed to explore the foundation, development, use and significance of a community-based electronic network: the Craigmiller Community Information Service Network (CCIS) located in Edinburgh.

CCIS: A Case Study

The purpose of this study is to trace and explain human, institutional and structural involvement in the development of CCIS in Edinburgh. The work of Thompson (1990) provides a good starting point for this study. Beginning with a combination of socio-historical analysis and ethnographic research, Thompson (1990, 307) outlines a general methodological framework and comprehensive approach to address a mass communications perspective and interest in ideology. Three key analytical areas — production, construction and reception of media messages — are analysed and then interrelated.

In this case study, production is examined by a combination of socio-historical and ethnographic analysis to describe the broad institutional and background elements which influenced the emergence of the CCIS, and — where applicable — reference is made to relationship between structure and agency (see Giddens 1993). Second, a description of media messages as “construction” is provided in order to indicate the ideological nature of interaction. Third, the views and opinions held by developers and users are collected and analysed through extensive ethnographic field research. A total of 31 in-depth interviews were held with local government officials and sponsors, system developers and users, and non-users. Given the emphasis on collecting “thick” data, no attempt was made collecting material from a statistically significant sample.

Background

The CCIS network is a community-based on-line telematics system set in Craigmiller, a housing estate located on the eastern periphery of Edinburgh. The Craigmiller area suffers from a number of social and economic disadvantages when compared to other areas of Edinburgh, and because of this has been targeted by the European Community and Scottish Urban Aid for financial support.

Like all areas, Craigmiller has its own unique history which has shaped the local environment, local needs and local identity. The area houses around 11,000 people, 3% of the entire city, and is ranked as the most distressed district in Scotland. It is claimed the area was deliberately created in the 1930s "as an experiment in social engineering" (Crummy 1992). At that time large, poor, crowded families were up-rooted from overcrowded city slums in central Edinburgh and transplanted to the periphery of the city into newly built but badly designed, dull and lifeless flats and houses (Crummy 1992). Low income groups were trapped in a new low amenity space known ever since as the Craigmiller Housing "scheme."

The original idea for a local electronic network was conceived at the local level. Ordinary residents were not directly consulted, but several local representative groups and existing projects were approached for feedback to gauge the level of local support for a telematics project with a community focus.

The central focus was on the potential of commodified information technology services and possible benefits for the community. The initial idea was to develop a self-financing enterprise-based service to deliver low-cost computerised communication services to a wide audience, particularly small businesses and 'third sector' community and voluntary organisations seeking to strengthen social cohesion. After assessments, the enterprise-based element was abandoned and interest in 'benefit to community' retained. Funding application to the Scottish office was sponsored by the Local Council's Strategic Services Department. Following successful allocation of urban aid, the non-profit venture became a registered charity known as the Craigmillar Community Information Service (CCIS).

CCIS Aims and Objectives

Virtual interaction, according to CCIS, is not intended to replace face-to-face communication, but is expected to provide a useful supplementary dimension to rebuild local cultural and economic identities. Local issues have been an important focus for CCIS from the beginning. A non-profit motive was established along with directives to develop concern for community development and social change, a mandate generally to benefit the people of Craigmiller and Edinburgh. The system was set up to provide community information and a means to communicate through the telecommunications infrastructure. In the original application for financial support, the stated objective was to ensure that a range of computerised information was made available in at least five organisations. It was felt that local groups would not otherwise have access to resources provided by electronic networking, and as a result would be left out of what was perceived as a swiftly developing Information Society.

Technology and the technological environment have altered over time and CCIS has adapted to the emergence of the World Wide Web, which was not established when the initiative first emerged. However, community aspects were implicit in the original goals. The social strategy for the "public good" as formulated in the

organisation's provisional statutes was "to improve access to information, increase self confidence" and "reduce dependency for isolated individuals and groups." The aims were generally to "improve educational attainment, enhance skills and improve access to jobs." In an attempt to regenerate local cultural identity, the service also intended to "increase social interaction, community organisation and community identity," as described in an application for financial aid. Economic aspects were also emphasised. In the same financial application, the core objectives at the heart of the economic strategy were said to "increase local economic activity, enterprise and self-employment."

From its beginning, CCIS developers displayed optimism that the development of the local network could help reduce social isolation in the community and that the system could play a vital role in regenerating the geographic community and local identity. Developers aimed to encourage a participatory process so that a co-ordinated electronic exchange of information about community interests and the needs of particular groups — such as the elderly, disabled and unemployed — would facilitate the kind of virtual action that would also bind the community in real space and time.

In 1995, the CCIS mission was to encourage community-based agencies to migrate to, and through, the Information Highways by increasing access to new computer communication networks, and bringing low-cost, user friendly and efficient facilities to individuals and community groups with little or no knowledge of new communication technologies (CCIS 1995/6, 1). With emphasis on "civic computing networking," developers claimed to be "harnessing the benefits of new technologies for sectors of society that traditionally lag behind in exploiting new data and communication possibilities" (CCIS 1995/6, 1). CCIS has stressed a "noble" approach in documentation describing the service. For example, in the CCIS (1995) booklet *Guide to Services*, the CCIS manager outlines the ethos of the service as follows: "We must strive to create an information democracy and prevent the creation of a two-tier information society of information 'haves' and 'have nots'."

Use of CCIS

A number of individuals, groups and businesses were connected to the CCIS during the first few years of existence (CCIS put the figure at around 700), but by mid-1997, users had fallen to around 500 due perhaps to the proliferation of local hosts commercially available. CCIS provides local groups with dial-up access to the CCIS Intranet and a range of related services free of charge, such as email, file transfer, on-line conferencing and software. In addition to the community driven free service, a new partnership with a commercial Internet service provider enables CCIS to operate as a full service provider and develop a commercial arm. Charges are made for access to the Internet and a range of commodified services: networking, multi-media consultancy and production services, electronic publishing, HTML authoring and full-colour printing. Network conferences may be specific to particular groups and either visible and publicly accessible to all users, or private and invisible to other users.

Networks which can be accessed free of charge from the CCIS server include BlackboxNet, ScotEdnet, Mediaworx, OneNet, Craignet and the Internet. BlackboxNet is mainly concerned with youth-oriented electronic bulletin boards and provides a gateway to around 30 networks through the main server in Vienna. Many schools are linked into the ScotEdnet service which is free to account holders. High schools in a

neighbouring estate share the network with other hubs in Scotland. Users here have access to newsgroups dedicated to curricular activities and issues. Mediaworx specialises in multimedia technology and provides access to numerous FirstClass bulletin board services. CCIS is one of five hubs around the world connected to OneNet, the wide area network in Boston. The Edinburgh system is the European gate, feeding around 650 OneNet sites and linking into user networks and bulletin boards through five superhubs in the United States.

Craignet is the local community-based wide area network. Access is free to community groups and other organisations throughout the city, including Citizens Advice Bureaux, Housing associations, Trades Unions, Tenants federations, the Benefits Agency, Consumer Education, Trading Standards, the Council and schools and colleges. Bulletin boards here provide around 600 conferences covering a range of local, regional, national, and international topics which focus on a broad range of social, economic, political and educational subjects. Groups also share information about computers and software. Those who gain access to Craignet are provided free services including email, file transfer, chat-lines, local bulletin boards, cd-roms and software.

CCIS statistics detailing the actual use of all these services have not been made public. On-line observations of visible activities indicate Craignet has established a number of information databases and "virtual forums," where interest groups are enabled to interact and form new interrelationships. Virtual spaces provide information about citizen rights, housing rights, welfare benefits and trade union information. Discussion groups relate to other topics as well, such as employment, gender issues, health and legal problems. Community initiatives, civic issues and interest areas are too numerous to mention here, however, observations indicate that these spheres of activity correlate somewhat with topics related to "power needs" and have some similarity to several of the "realms of action" and "sites of power" mentioned earlier in this article (see further: Held 1996). In addition to the open visible systems described above, CCIS also provide private networks for specific groups, not visible or accessible to other users of the system. Some of these private networks are involved in regenerating local culture, the local environment and the local economy.

Perceptions of Use and Potential

Respondents generally displayed positive enthusiasm for the local project and its community-building aims. At the same time, many of the individuals interviewed voiced disappointment that information posted on Craignet was less useful than expected. Nonetheless, some claimed to use the system to their advantage, logging on daily to check incoming email, send email and browse information posted to the Craignet. On the other hand some respondents did not understand how to log on. Many of those interviewed had not yet developed basic knowledge, skills and confidence to use the system to advantage. Those who did have skills and confidence had not always developed the routine practices that were also necessary to allow regular use of the CCIS to happen. One respondent, for example, pointed out that only a few people in each organisation knew how to operate the system.

Most respondents felt they did not use the Craignet to its full potential. Several felt that information posted could be found more easily and routinely elsewhere, for example, in community newspapers and existing libraries. One urban program participant whose group joined the CCIS when the urban aid program was under

threat and cuts were on their way found the Cragnet to have very limited use. This respondent reported:

we joined it, one, because we wanted good contact with other agencies in Edinburgh and we were told it was quite strong, and the other reason we wanted to use it was to get on to the Internet so we use Scotland On Line (SOL). The SOL part was in March and since we joined we've used that fairly regularly. But Cragnet...we can never get into it...every time I try to get in there is a message saying that the line's not good enough. I've been in a couple of times in the first week or so and was just kind of looking through the folders and so on and there was nothing. I've got more information about Craigmillier and Pilton here in my library than there is on the Cragnet.

As far as I can see, we can make a bigger contribution to Cragnet than Cragnet can currently make to us. So in terms of the program around urban regeneration contained in Cragnet, it's not all that good...[I]t would be good to have some good debates and discussions but we can't get through regularly and also it doesn't seem to be the lively place we expected it to be.

A few respondents did not know how virtual communication might be useful in their area of work. Some wanted more and better information databases, since much information posted was insufficient for needs. Developers had expected local groups and projects would divert information about their work on to the local network's bulletin boards and forums. However, many of the interviewees appeared to have misinterpreted the network's role and had anticipated CCIS staff would be responsible for accumulating and posting information. Most respondents had never contemplated feeding regular, relevant up-to-date information into the system to describe their own community-building efforts and/or development. The dichotomy about who should take on responsibility for amplifying information offered one feasible explanation for the limited use of Cragnet. On the whole, there appeared to be little sense of community ownership of the network.

While a number of information resources and communication forums relating to local issues were established on Cragnet, not much "lively" public debate was noticeable. Respondents commented that forums were not as vibrant as they expected, particularly since much of the public information about electronic networking had highlighted the potential for profound social transformation. The more skilled "visionaries" used the network to post information and communicate regularly, but many felt the system was under-utilised. Some respondents appeared to know little about the philosophy and principles behind electronic community-building. In addition many had not yet developed the knowledge, confidence, skills or routines to use the network regularly or in depth. Nonetheless, all those interviewed said they welcomed the idea of a civic community network and wanted to see fuller development at that level.

As mentioned earlier, Craigmillier has a long history of maintaining community values via face-to-face real time communication. Some respondents emphasised the importance of face-to-face communication, and sometimes viewed electronic communication technology as a poor substitute, even a threat to real-life interaction. Contradictory to this view, most respondents were also convinced of the worth of electronic communication when used for increasing democracy in the community.

One respondent, for example, urged that a local system “could be useful to provide direct access and a direct communication link with the local authority and government agencies who are using it, also the local Member of the European Parliament.”

CCIS is developing virtual forums for the expression of opinion on the local Craignet, however, developers suggest it is too early in Craigmiller to speak in terms of democracy or teledemocracy. While more democratic citizen involvement is considered a possible element for a future agenda, developers feel they must currently work at a more realistic level, to raise awareness of the information and communication possibilities made possible by electronic networking and to frame an information and communications infrastructure where more community-enhancing possibilities can come to pass.

Drawing from experience thus far, the CCIS management feels that asking local groups what they want does not work since they are unlikely to know what is technologically possible. Instead, preference is given to waiting for potential users to approach the network with particular requests. Several such advances have been made and the feeling is that along with this approach comes responsibility to organise use of new technology from the bottom up. Here, empowerment is related to having developed a reason to use information technology in a way suited to each context and specific area of need.

Users generally expressed concern for community over technology, however, there was recognition that, with knowledgeable guidance from local activists, Craigmiller residents would be able to acquire and use information technology skills to develop more power, self-awareness and advantage. Some respondents drew attention to the different ways information and communication technologies could be used by representative groups. One respondent argued:

just putting technology somewhere would not make a difference and if people are empowered it's because other people do it to them, not technology...because technology is a tool, if the people, the community activists, the workers are enablers in the style in which they work with other people then that will be one tool. However, if activists are patronising or do things to other people rather than enabling them, then involvement with the technology is fruitless.

Conclusions

In this article we have examined two of the theoretical perspectives underlying many community-building initiatives currently being developed in cyberspace. One of these perspectives, termed virtual democracy, has strong parallels with earlier theoretical formulations used in pronouncements and academic discussions of community radio and television experiments during the 1970s and 1980s. It contains reference to increasing involvement of citizens within the political process, improving access to information and the tools of communication technology believed capable of empowering them to gain greater awareness and ultimately control over their lives.

Much criticism have been voiced regarding this perspective: that it reflects a technological deterministic vision of society, that it is based on mistaken assumptions regarding citizen interest in the political process, that it shuns difficulties in operationalising a participatory democratic strategy on a large scale, that it at best encourages already active elite groups towards greater involvement in the political process. These criticisms are fundamental and deserve attention in future studies of how current

initiatives with virtual democracy and virtual communities attempt to attend to these issues.

The second theoretical perspective presented in this article examines economic considerations of initiatives with locally-based electronic networks. Termed urban entrepreneurialism, this perspective highlights the development of public and private partnerships and accentuates shifts in the economic basis for cities. Public sectors must now shoulder responsibility for local economic development, while the private sector reaps many of the resulting benefits. With a focus on locally-based and global concerns, city governments now seek new economic opportunities. Small-scale community or city-based electronic networks are in a position to develop enterprise-based directions themselves. They are also in a position to offer information and communication services to meet the information technology service needs of other local and global sectors in the area.

With the two above-mentioned theoretical perspectives in hand, an ethnographic case study of the Craigmiller Community Information Service (CCIS) in Edinburgh, Scotland, is in process of development. This initiative is particularly suitable for examination because its stated objectives seem to suggest a fusion of the principles of virtual democracy and the realisations and strategies of entrepreneurialism. The case study is intended to provide insight into how, why and in what way new cyber-cities develop, and to explore the significance for cultural and economic needs of the area. Preliminary findings from field research suggest most respondents do not believe that a quick "fix" of new technology will solve the problems of the Craigmiller area. Nonetheless, respondents believe that community-based networks can be the means to accumulate relevant information and, with persistence, the CCIS network may eventually host public spaces for the development of information databases and the kind of interactive participatory communication that will help people in Craigmiller develop new knowledge and move out of the cycle of poverty.

Central figures of CCIS claim it is the intention to develop a network with an open democratic structure, and to operate an open-door policy. Although residents in Craigmiller are not prevented from using the system, in reality the majority of ordinary people currently have little chance of gaining direct participatory access to the networks served by CCIS. Few possess a personal computer and modem; moreover, there are no public access points yet available to provide direct access to Craginet, outside the CCIS base and the institutions, organisations and projects which make up the bulk of registered on-line users.

Craigmiller's socio-historical background indicates the area might also be likened to Castells' (1996) notion of a "fourth world," and the local people who live there might be equated with a "fourth sector." Direct contact and consultation with ordinary fourth sector residents about the CCIS is limited, and it is not yet known whether local citizens want a community-based network in the area, whether they want to use it, and how they would want to use it.

While a blend of communitarian and capitalistic values revolves around social and economic directives and mechanisms for rejuvenation, there also remains a lack of direct communication between the marginalised and the other members of the community. Local people, i.e. the fourth sector, living in the "real" (residential) community, appear to be included in the "virtual" partnership under the broad heading "community," but are not in a position to directly contribute to or challenge the direc-

tives and principles. The majority of local people are largely remote from developments and do not engage in forms of “virtual” communication.

The full impact of activities generated by use of electronic technology on behalf of the Craigmillar community has yet to materialise. Collaborative communication is at a relatively early stage of organisational development. An electronic public sphere for the voluntary sector is in creation at present, but participation is very limited. It cannot yet be known whether the CCIS network will provide an effective way to address the complex needs of the whole community, and it is too early to tell whether better social and economic aspects for ordinary (often marginalised) local people will emerge, or whether benefits will accrue primarily for social and/or economic entrepreneurs operating in Craigmillar and elsewhere in Edinburgh. What is apparent now is that while the technology is described as able to create participatory communication and more democratic dialogue at the community level, in reality this discourse applies only to representative groups and other users with access to Craignet. Very few ordinary local residents have access to this network, and are not included in the local electronic public sphere. It remains uncertain, in other words, whether the voices and opinions of local citizens will contribute to community actions and other forms of community involvement through the communicative facilities of this local electronic network.

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