# SSOAR

# Open Access Repository

## www.ssoar.info

# Online Community and Democracy

Feenberg, Andrew

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

# gesis
Leibniz–Institut
für Sozialwissenschaften

Mitglied der

Leibniz-Gemeinschaft

# Online Community and Democracy

Andrew Feenberg

**Abstract**

The debate over the contribution of the Internet to democracy is far from settled. Some point to the empowering effects of online discussion and fund raising on recent electoral campaigns in the US to argue that the Internet will restore the public sphere. Others claim that the Internet is just a virtual mall, a final extension of global capitalism into every corner of our lives. This paper argues for the democratic thesis with some qualifications. The most important contribution of the Internet to democracy is not necessarily its effects on the electoral process but rather its ability to assemble a public around technical networks that enroll individuals scattered over wide geographical areas. Medical patients, video game players, musical performers, and many other publics have emerged on the Internet with surprising consequences.

**Keywords:** online community; democracy; the information model; the consumption model; the community model

**Andrew Feenberg:** Professor, Canada Research Chair in Philosophy of Technology, School of Communication, Simon Fraser University, Canada - Email: feenberg@sfu.ca

## Introduction

In 1996, I published what must be one of the first studies of the impact of computer networking on medicine (Feenberg et al., 1996). My article concerned online meetings of patients suffering from ALS, a fatal neurologic disease. The patients exchanged social support, lore about living with the disease, and information about medical experimentation. This new type of patient organization defied standard assumptions about the sick role. Instead of waiting in isolation for individual help from the medical profession, the patients worked together to further their interests as patients.

Although only a small number of patients participated in such forums in the early days, I foresaw their tremendous future growth. I argued at the time that "It seems clear that we are dealing with a change in the communicative environment as basic as the telephone. The most important difference between that earlier innovation and this new one is that here for the first time we have the possibility of electronic mediation of small group interaction. It is this unique property of computer networking that promises interesting applications to patient education and social support."

Despite my enthusiasm and in diametrical contradiction to what we now know, the medical journal to which the article was submitted objected that it lacked 'findings'. Under some pressure it finally published the article which announced a major transformation in the field of medicine.

My article reviewed online patient groups as early as 1990. Some of these groups were active on proprietary networks that performed many of the same functions the Internet performs. I was especially interested in two groups for which I obtained extensive transcripts. The ALS Digest was a kind of online journal published on the Internet. It had over 800 subscribers, primarily patients, caregivers, and physicians. The format is reminiscent of the earliest newspapers in which readers themselves contributed most of the material as 'correspondents' in the literal sense of the term. They recounted such things as experience with voice synthesizers and where to get them, reports by participants in drug trials, questions and answers about medical problems and symptoms, abstracts of relevant medical articles, lists of online information resources, addresses of drug companies, news of patients' condition or death, and so on. Often patients or caregivers pose difficult questions

concerning management of symptoms in the hope that someone among the subscribers will have had previous experience to share. Generally their hope is not disappointed. Quite a bit of accurate scientific information was available.

The ALS discussion group on the Prodigy Medical Support Bulletin Board engaged dozens of patients and caregivers in conversation with the emphasis on social support. There were about 500 reading the exchanges. The exchanges included news about clinical trials, symptomatic treatment and devices. The conversations contained much open personal self-expression. The tone was warm and friendly. Interestingly, the politics of ALS come in for considerable discussion as well.

These discussion participants actually organized themselves to try to influence the voluntary health agency lobbying on their behalf. A list of priorities was discussed and eventually presented in a meeting to the association. The 'demands' included combination trials and the replacement of placebo by historical controls. These interventions in the design of clinical research by subjects and potential subjects resemble later activities in the AIDS community.

## Online Forums and Human Communications

I mention this early study here as it has shaped my confidence that the Internet is an essentially democratic medium. These patients not only used computer networking for personal reasons, they anticipated many other online groups in mobilizing through it to advance their interests. The fact that they were concerned with issues we would not normally consider political is significant. Their priorities as a group were defined in terms of their relation to the technical system in which modern medicine consists. As more and more such activities appear on the Internet, we are forced to enlarge our definition of politics to incorporate various forms of negotiation with technical experts over matters as diverse as environmental problems, educational issues, urban design, and many other issues. I will have more to elaborate about this later in this paper.

In this respect the Internet seems to fulfill its early promise, as announced by one of its founders, Vinton Cerf, in the following piece of doggerel.

40

> Like distant islands sundered by the sea,
> we had no sense of one community.
> We lived and worked apart and rarely knew
> that others searched with us for knowledge, too...
> But, could these new resources not be shared?
> Let links be built; machines and men be paired!
> Let distance be no barrier! They set
> that goal: design and build the ARPANET!
> (quoted in Abbate, 1994.)

Those like Cerf who worked on computer networking in the early days foresaw a radical transformation of social life, privileging new forms of community with democratic implications. In 1978 Murray Turoff and Roxanne Hiltz published a serious work of analysis and prediction entitled The Network Nation (1993). They foresaw widespread adoption of computer networking for telework and education. They believed networking would promote gender equality and speculated that electronic discussion and voting would revivify the public sphere in democratic societies.

They may have over-estimated the transformative power of their favorite technology, but their projections were modest compared to many that came afterwards. According to a whole new genre of Internet hype, networking was a change comparable in significance to the Industrial Revolution and would soon transform every aspect of our daily lives. Cities would be depopulated as people retreated to electronic cottages in the woods. Government as we know it would be replaced by continuous electronic plebiscites. Artificial intelligences would learn our preferences and control the mechanical world around us without our having to lift a finger. Even sex would be transformed through remote access to virtual partners.

Naturally, the hype called forth its demystification. The technology critic David Noble wrote "visions of democratization and popular empowerment via the net are dangerous delusions; whatever the gains, they are overwhelmingly overshadowed and more than nullified by the losses. As the computer screens brighten with promise for the few, the light at the end of the tunnel grows dimmer for the many" (Noble, consulted Nov. 11, 2006, p. 12).

Noble expressed the widespread skepticism about the Internet that appeared in the 1990s as it became a theme of popular discussion. Social critics point to a number of phenomena that seem to them inimical to democracy. Some argue that the digital divide excludes the poor from participation while enhancing the powers of the well-to-do. Others complain that on the Internet people are able to segregate themselves from those with whom they disagree so that discussion there merely reinforces preexisting prejudices. Still others argue that the Internet is so thoroughly colonized by business that it is little more than an electronic mall.

But, of all these critiques, the most serious challenges the ability of the Internet to support real human communication and therefore human community. Without face-to-face contact, it is said, people cannot take each other seriously enough to form a community. How can moral roles bind us and real consequences flow from interactions that are no more durable than a flicker on the screen? Albert Borgmann writes, "plugged into the network of communications and computers, people seem to enjoy omniscience and omnipotence; severed from their network, they turn out to be insubstantial and disoriented. They no longer command their world as persons in their own right. Their conversation is without depth and wit; their attention is roving and vacuous; their sense of place is uncertain and fickle" (Borgmann, 1992, p. 108. But for his later view, see Borgmann, 2004). Mark Slouka is even more alarmed, writing, "I believe it is possible to see, in a number of technologies spawned by recent developments in the computer world, an attack on reality as human beings have always known it" (Slouka, 1995, p. 4).

**Internet and Democracy**
In this article I intend to respond to these sorts of criticisms and to argue that the Internet does have value for democracy. I do not want to exaggerate the significance of the Internet. It will not replace our customary democratic institutions with a universal electronic town hall meeting. On the other hand, exaggeration in the opposite direction seems to me to reflect a lack of perspective. It threatens to blind us to real possibilities that should be seized rather than dismissed. These possibilities have to do with online

community, supported by the Internet, and given over, as the critics note, to endless talk. But I will argue that since discussion lies at the heart of a democratic polity, any new scene on which it unfolds enhances the public sphere.

Complaints about the Internet are similar to complaints about television broadcasting and in fact it seems that bad experience with the latter has shaped negative expectations about the former. Recall that television promised a 'global village' in which new solidarities would arise from easy access to information about other peoples and their problems. It is true that lots of information circulates on the evening news but the consequences of broadcasting are not entirely benign. It is also used for propaganda and to influence lifestyle choices. Aldous Huxley published Brave New World in the early 1930s, only a few years after the first commercial radio broadcasts, but already his dystopian vision of a totally manipulated public captured the very real threat. Many social critics seem to have concluded that technical mediation as such leads to mass alienation. Can the Internet be squeezed into this same pattern? I do not believe so.

The difference between television and the Internet is a consequence of their different technical structures. In broadcasting a single source sends out messages to a mass audience. The Internet enables reciprocal communication among small groups. The members of these groups both receive and emit information. There is a return here to the normal pattern of human communication in which listening and speaking roles alternate rather than being distributed exclusively to one or another interlocutor.

The original military design of the Internet comes to the aid of ordinary users by rendering it difficult to transform it into a broadcast technology. Military planners were more interested in survivability than control. For this reason their design was non-hierarchical and redundant, qualities that later turned out to privilege the free flow of information and innovation. This design persists and poses significant problems for business and repressive governments while also enabling both public spirited and socially stigmatized activities to go on unhindered.

The possibility of normal reciprocal communication on the Internet is decisive for an understanding of its social impact.

This is in fact the first technical mediation of small group activity. There used to be only two forms of mediation: the telephone allowed two individuals to interact and broadcasting addressed mass audiences. The huge range of human activities that go on in small groups could not be technically mediated and therefore could only be carried out in face-to-face settings. That limitation is now overcome and this is an important advance that we tend to overlook since it seems so obvious after 20 years of widespread online communication.

What is missing in the critics' account is any sense of the great victory represented by ordinary human communication on the Internet. There is a long history of communication technologies introduced for broadcasting or purely official usages that ended up as instruments of informal human interaction. The telephone, for example, was originally intended for serious business conversation. When women appropriated it to organize the social life of their families, engineers complained bitterly about the waste of their beautiful instrument. Even more surprising, the telephone was at first imagined as a broadcasting technology. In the early days, several companies distributed live musical performance to subscribers. In France the Théâtrophone Company thrived until 1920 broadcasting operas (Bertho, 1984, p. 80-81).

The Internet story is similar as we will see, but in fact there is an earlier precedent in the history of computer networking. The first successful domestic network was not the Internet but the French Minitel. Concerned about the slowness of computerization in France, the government established a network based on technology similar to that of the Internet. Six million free Minitel terminals were distributed to telephone subscribers in the early 1980s. These terminals were designed to consult a national electronic phone directory, to read news and ads placed on the system by newspapers, to view train schedules, examination results, and other official documents. But soon after the system was deployed hackers introduced instant messaging. It did not take long for this unexpected application to become the Minitel's single most important usage. Ironically most of the messaging consisted in the search for dates and sex. The cool new information medium was transformed into a hot electronic singles bar (Feenberg, 1995, chap. 7).

Like the Minitel network, the Internet was not originally designed to support human communication and it could have excluded the public. The technology underlying both systems is called packet switching. The United States military saw potential in this technology for building a secure communication system. The telephone network is too vulnerable because it depends on a central computer to connect up correspondents. A single bomb could take out the whole system by hitting this center, but packet switching makes it possible to route messages on the Internet through many different computers and so the system does not depend on the survival of any one of its nodes. Strange as it seems today, radio communication among tank commanders was suggested as an early application of packet switching. Connecting university computers turned out to have more promise (Abbate, 1999).

This original version of the Internet was intended to test the new communication technology on university based military researchers. After World War II, military planners were convinced that American power depended on scientific research, and they believed the scientists who told them that research depended on communication and collaboration. The Pentagon hoped that university scientists would share computing resources and data over the Internet.

Soon after the introduction of the new system, at a time when it connected only a few universities, an engineer introduced an e-mail program. Back at the Pentagon the leaders of the project met to decide if human communication was a legitimate usage. Like the early telephone company engineers, they were disturbed by wasteful socializing. Fortunately, they agreed to allow the experiment in e-mail to continue. We inherit the consequence of that decision.

The Internet's critics overlook the human significance of the technology. They focus on commercial exploitation, surveillance and the triviality of most of the communications but they fail to realize that without opening a channel for trivial speech, no serious speech gets through. The parasitic activities of business and government do not cancel out the value of free communication. Rather than comparing the Internet unfavorably with edited cultural products like newspapers, it would make

more sense to compare it with the social interactions that take place on the street. The coexistence there of the good, the bad and the trivial is normal, not an offense to good taste or intellectual standards because we have no expectation of uniform quality. In what follows I will outline an approach that allows for the dross and also the gold in the flood of words on the Internet.

I intend to do this through an account of the political significance of online community on the Internet. I will not discuss the myriad examples of democratic applications in the usual sense of the term. By now everyone should be at least vaguely familiar with the role of the Internet in the Zapatista movement in Mexico, protests against the WTO and the IMF, American opposition to the War in Iraq, and the Arab Spring.

These examples seem to me to provide strong evidence for my position, but they need to be backed up with more fundamental considerations on how we understand the technology and its potentials. A theoretical framework must give them substance. After all, they might be odd exceptions without larger significance and the Internet defined by its role in the distribution of information, goods and pornography. Darin Barney, presents such a view, writing that "these alternative and resistant practices still represent a tear in a salty sea of hegemonic encounters with the broad scope of digital technology and its culture. To take the measure of the present conjuncture we need careful work that documents and even promotes tactical political uses of these technologies, but we also need to place these uses in the broader context of what remains a very powerful set of technologies configured to advance and secure what Jacques Rancière has described as the 'unlimited power of wealth'" (Barney, 2011). In sum, the Internet is essentially a corporate instrument whatever other functions it may exceptionally serve.

My main concern in what follows is to develop a coherent alternative to this critical assessment. To anticipate my conclusion, I will argue that these political usages of the Internet are instances of a much broader phenomenon, the emergence of new forms of agency in online communities of all sorts.

I want to begin by introducing some essential methodological considerations. The Internet is a technical system first and foremost. Its social meaning is inextricably intertwined with

its technical character. By the same token, our social life is now inseparable from the technology. Much social theory fails to make this connection. We are accustomed to think about society in abstraction from the technologies that make it possible. In arguing for attention to technology I am not returning to an outmoded technological determinism. We need a method that recognizes the essentially technical character of society and the social character of technology. Just as there are divisions in society, so this method must uncover the conflictual character of the technical sphere, reflected in the ambivalence of technical systems, the potentials they contain that are foreclosed by the dominant social powers and the resistance to those powers. I call such a method "critical theory of technology," or "critical constructivism" (Feenberg, 2010, chap.4). It is based on ideas drawn from Frankfurt School Critical Theory, from Marx, and from constructivist technology studies.

From Marx and the Frankfurt School I derive the notion that important technologies in capitalist society are adapted to the requirements of the capitalist system but also contested from below. I borrow from the constructivist approach the emphasis on the role of interpretation and networks in technical development. The constructivist contribution introduces contingency into the analysis of technical development, while the Marxist contribution ties the contingent social influences on technology to hegemonic forces and counter-hegemonic struggles. Design is the terrain on which social groups increasingly attempt to advance their interests through technology.

It is a commonplace error to consider the Internet finished and complete before it has actually achieved its final shape. Critics repeatedly generalize from rapidly changing characteristics to timeless conclusions about the technology that are soon outdated by further changes. But how can we evaluate a technology that is still in process that is radically incomplete? This problem has been addressed by constructivist approaches to technology studies (Pinch & Bijker, 1987).

The chief idea shared by these approaches is negative: the success of a technology is not fully explained by its technical achievements. There are always alternative paths of development at the outset and social forces determine which are pursued and

which fall by the wayside. Behind each of the technical devices that surround us there lies a halo of alternatives that were eliminated at some stage and which we have forgotten or notice only in the quaint illustrations of old books. What is called the principle of 'underdetermination' teaches us that technical considerations alone cannot explain why we are living with this particular survivor of the process of elimination rather than that one, why for example we drive gas powered rather than electric cars.

To make matters still more complicated, the struggle between alternatives is not a straightforward competition to achieve the same goal. Subtle differences in goals are often at stake in the contest between means. Approximately the same technology, with a slightly different design, can serve the interests and needs of very different social groups. For example, the early bicycle came in two main varieties, a speedy type with a large front wheel and a slower, more stable version with wheels the same size. The difference between them was not which was better in general, but which value, speed or stability, was to be supreme in the world of bicycles. We know which won out. Thereafter all later evolution of the bicycle benefited the successful line of development. The defeated alternative was left frozen in time like a dinosaur fossil and so appears obviously inferior today in a typical illusion of progress.

Constructivists call this variability of goals the 'interpretive flexibility' of technologies. What a technology is depends on what it is for and that is itself variously interpreted in the beginning. The interpretive flexibility of technologies is greatest at the outset and diminishes as the competition between alternatives is sorted out. Finally, closure is achieved in the consolidation of a standard design capable of prevailing for an extended period. This is what happened to the bicycle, the automobile, and all the familiar technologies that surround us. This has not yet happened to the Internet.

This constructivist approach represents technologies not as things but as processes in more or less rapid movement. The process pulls at first in several different directions but is finally stabilized in a single more or less durable form. Because our lives move quickly with respect to these stabilized forms, it appears that they are finished and fixed rather than ultimately temporary

arrangements that may enter into flux again at a future date. We assume the functions they serve are the obvious ones similar technologies ought to serve rather than noticing the contingency of their purpose on a particular configuration of social forces that interpreted the problems in a certain way at the outset. Constructivism aims to overcome this illusion in order to restore a more accurate picture of the process of development.

To apply the constructivist approach to the Internet, we need to identify the various versions of it that currently coexist and from among which a selection will finally be made. Note that the closure of the Internet around one or another of these possible configurations does not preclude the survival of the others in subordinate roles. Although operas are no longer heard on the telephone, radio and television broadcasting accommodate many usages. At its inception radio broadcasting was dominated by education and public programming and television was originally conceived for surveillance and education. Both quickly fell under the domination of business oriented networks and are defined today as entertainment media. Other usages were not excluded but the technical and legal possibilities of these alternatives are largely determined by the requirements of entertainment (McChesney, 1999).

## Three Possible Futures of the Internet

I identify three possible futures for the Internet which I call 'models' since they aspire to define the dominant features of the technology. Each of these models represents a possible configuration that might have prevailed in the past or that may prevail in the future. I call the three models, the information model, the consumption model, and the community model. As we will see only the community model bears the democratic potential of the Internet.

### The Information Model

This model presided over the origins of the Internet and similar systems such as the Minitel network in France. It aims at improving the distribution of information, a function that the Internet fulfills and will undoubtedly continue to fulfill so long as it exists. The information model is not just an implementation

of this technical function. It depends on a larger vision in which the widest possible access to information contributes to a higher level of rationalization of society as a whole. This vision reflects sociological theories of the information age according to which knowledge is replacing industrial production as the most important activity in advanced societies. This is what inspired attempts to spread the information model from professional into domestic settings in the 1980s in France and a decade later on the Internet. In fact it quickly became apparent that personal communication was far more attractive to users of these systems than any economically significant exchange of information. Thus the information model has little chance to prevail as an overall interpretation of the meaning of the Internet.

**The Consumption Model**

 It is a curious and little known fact that the early Internet was virulently hostile to business. Attempts to sell goods and services on the system were severely repressed. An individual who scandalized the community by engaging in commercial activity would be attacked by hundreds, even thousands, of hostile emails and hackers would go after him. But once the decision was made in the early 1990s to allow commercial activity on the Internet, a tidal wave of corporate initiatives swept over the rather sedate virtual space occupied by individual users and universities. The Internet was the technology behind the famous dotcom boom and even the later bust did not diminish the pace of business activity in cyberspace for long. Today Internet based markets are a factor in the prosperity of nations.

This new type of market inexpensively links up people and goods over a global territory. The most profitable Internet businesses resemble Amazon and E-Bay in stocking little or no inventory, but in delivering a smooth connection between supply and demand. Although email remains the most used function of the Internet, e-business does not lag far behind.

The consumption model has enormous potential for growth because film and television have not yet been fully adapted for delivery over the Internet. We can expect a huge boost in consumption usages when every sort of recorded entertainment is readily available. Already this prospect is pressing on the

legislative agenda of the United States government. Entertainment companies and Internet service providers are anxious to obtain the legal right to convert the Internet into an enhanced version of television by privileging high speed delivery of entertainment over other functions served by the system.

This means the end of 'network neutrality,' the current rule under which all types of communication are treated equally. If the companies prevail, the Internet may soon become impractical for communication and public usages as bandwidth is monopolized by profit making enterprise. While so far this is primarily an American debate, its effects would be felt worldwide, as is the case with the Digital Millennium Copyright Act. Further development of the technology would undoubtedly follow along lines determined in the US. The triumph of the consumption model would thus transform both the dominant interpretation of the system and its technology.

**The Community Model**

This is the model that most resembles the Internet as we know it today in which free communication prevails in cyberspace. The two main types of personal communication are individual email and various forms of group communication such as listservs, forums, blogs, and social sites. Communities form around these spaces of virtual social interaction. This is significant because community is the primary scene of human communication and personal development. It is in this context that people judge the world around them and discuss their judgments with others. Any technology that offers new possibilities for the formation of community is thus democratically significant.

The Internet is a terrain of struggle between the consumer and the community models rather than a definite 'thing' with a singular essence. The critics usually emphasize the intrusion of the consumption model in recent years while ignoring the continuing vitality of the competing community model. But incoherence is characteristic of a technology that is still in its early stages of development, before it reaches closure around a univocal definition of purpose. The critique of the Internet should focus on the struggle rather than assuming it is already over and done with to the exclusive advantage of business. In what follows

I will attempt to unravel the complexity into the two distinct strands that describe the Internet today.

From the critical constructivist standpoint, the Internet is an ambiguous phenomenon. The struggle over its technical code is an attempt by the actors to resolve the ambiguity by privileging the layers of the technology that favor their interests. Closure around one or another technical code can occur in two different ways, through a radical simplification of the features of the Internet or a new configuration that recombines and reconfigures those features to the satisfaction or at least the passive acceptance of all influential actors. I contend that we do not and indeed cannot know how the ambiguity will be resolved at this time. The best we can do as theorists is to chart the conflicting layers and identify the actors behind them.

## Conclusion: Online Community and the Challenges of Democracy

In the concluding section of this paper I want to discuss challenges to my argument, the struggle over online community and its implications for democracy.

The principal challenge concerns the question of the limits of computer mediated communication. Critics have argued that online communities are not real communities, engaging their members significantly. This challenge has been posed forcefully by critics who claim that without face-to-face contact no serious human relationship is possible. The supposed prevalence of anti-social behavior such as 'flaming' on the Internet is brought forward as evidence of its inability to support the levels of moral engagement we associate with the concept of community. These arguments are confounded by the testimony of participants in online community as well as by extensive research. For example, surveys conducted in several countries by Japanese researchers reveal that the ethical assumptions guiding Internet users resemble quite closely their everyday ethical assumptions (Nara & Iseda, 2004). Not technology but character determines behavior online. And character is precisely what community requires, i.e. the ability to commit to a group of fellow human beings. The behaviors and symbols that sustain and support the imagined unity of community are routinely reproduced on the Internet (Feenberg & Bakardjieva, 2004).

The essence of the community model is reciprocity. Each participant is both reader or viewer and publisher. To maintain this structure, the community model requires the continued neutrality of the network so that unprofitable or politically controversial communication will not be marginalized. It must be possible to introduce innovative designs for new forms of association without passing through bureaucratic or commercial gate keepers. The involvement of open source developers and other unpaid volunteers is essential and cannot be expected to survive a commercial take-over of cyberspace. Embedding a strict regime of intellectual property in the technology of the system would surely be incompatible with free communicative interaction. The conditions of community are both social and technical. Should community prevail, commercial, entertainment and informational applications would certainly find their place, but they could not dominate the evolution of the system with their special technical requirements. Indeed, we can expect business to adapt to the requirements of community in a process that is prefigured in the commercial takeover of certain community sites as platforms for the sale of advertising.

Commentators noted early that online communities form around a shared interest or concern. In this they differ from geographically based communities in which a far more mixed population is related by place. Is this good or bad? Disadvantaged publics can pool their forces online and have a greater impact. This has made it possible for ordinary Americans to raise huge sums of money for political candidates who might have been swamped at the polls by adversaries with the support of a few wealthy businessmen or party organizations. On the other hand, public debate involves disagreement and it is said that debate is sidetracked by the homogeneity of Internet groups. Whether this is really true is unclear but even if it is, practically no one associates only with like-minded interlocutors on the Internet. Everyone has many other contacts in which the opportunity for disagreement arises. This is not a persuasive reason to condemn the Internet and all its works.

These familiar debates overlook a more important issue. The most innovative democratic implications of the Internet are only beginning to emerge, and they have less to do with traditional

politics than with new forms of agency that will redefine and enlarge the sphere of politics. What we commonly identify as politics on the Internet is merely an instance of this broader phenomenon, a kind of social politics emerging in the myriad online communities that populate cyberspace. To understand this new politics we will need to reconsider how we think about technology once more.

In modern societies, geographical bonds are no longer the only or principal ties people share. Economic ties produce communities of interest that are widely dispersed in space. Unions, business associations, and professional organizations have had considerable success influencing the political process on behalf of these dispersed communities. But with the exception of short-lived communist and fascist experiments with corporate representation, these alternative forms of community have never achieved political legitimacy and representation in the legislative bodies of the state. Economic interests are still generally seen as private even though they organize so much of our common life in modern societies. Geography and the concerns that flow from it are still defining for the political.

Yet as we move into a more advanced phase of technological development, this rather narrow definition of politics inherited from the preindustrial past is less and less plausible. More and more aspects of social life are conditioned by commonalities among people who share a similar relation to the vast technical systems that shape most social life. Technologically advanced societies enroll their members in a wide variety of technical networks that define careers, education, leisure, medical care, communication, and life environments. These networks overlay the geographical communities and compete with them in significance in the lives of citizens.

The representation of technically mediated communities is complicated by the role of experts in the creation and operation of technical networks (Feenberg, 1995, chap. 5). Experts represent the community constituted by a technical network in the sense that they implement some fraction of the participant interests of its members. But expertise is based on technical knowledge which, unlike the wisdom sought in political representatives, is cumulative and must be acquired through extensive training.

Like technologies, technical disciplines are underdetermined and realize specific social interests in technically rational forms. These bodies of technical knowledge transmitted to successive generations of experts contain the outcome of past struggles over design. Current designs are responsive to this technical inheritance and to the agency of current participants bringing pressure to bear on those in control of technology.

In the domain of technology the enormous cost and the long time delays in generating a cadre of experts forbid abrupt and drastic changes. As new groups emerge, they must impress their concerns on the same body of experts, convince them to modify existing designs, and eventually install their concerns in the training of the next generation of experts. The participant interests of members of technically mediated communities are thus represented differently from political interests of geographically based communities.

Obtaining adequate representation was well beyond the means of almost all technically mediated populations in the days before the Internet. Only groups organized around politics in the traditional sense were also able to function effectively as technical pressure groups. The labor movement, for example, was able to impress governments with the importance of health and safety rules for industry. The movement for Gay rights was able to penetrate the health system with demands for access to experimental AIDS drugs. But most participants in technical networks went unmobilized and it appeared that some sort of technocratic order would be the outcome of further technological advance.

Already in the 1920s John Dewey foresaw the problems that would result. Dewey argued that the mobility of a modern society was destructive of traditional forms of local community. Meanwhile, the new links being forged by the advancing technical system were still inarticulate. Dewey described the dilemma as follows: "Indirect, extensive, enduring and serious consequences of conjoint and interacting behavior call a public into existence having a common interest in controlling these consequences. But the machine age has so enormously expanded, multiplied, intensified and complicated the scope of the indirect consequences, have formed such immense and consolidated unions in action, on

an impersonal rather than a community basis, that the resultant public cannot identify and distinguish itself" (Dewey, 1980, p. 126).

Dewey hoped that the free and cosmopolitan communication made possible by modern technology would to some extent mitigate this problem and revitalize local community. But the two terms of the dilemma--large scale technical networks as the form of our social future, and local community as the only possible site of true democratic deliberation--remained fixed for him.

This has begun to change. Technical communities have begun to use the Internet to coordinate their demands for a fuller representation of participant interests. Despite discouraging developments in other domains, agency in the technical sphere is on the rise. The ease of communication on the Internet has made it possible for these new communities to organize. In the process they are shifting the tendency away from technocratic counsels toward more democratic forms of representation. These new forms of online politics cannot replace traditional geographically based representation, but their existence does mean that activity in the public sphere can now extend to embrace technical issues formerly considered neutral and given over to experts to decide without consultation. This has had the effect of creating a social and technical environment in which agency in the traditional domain of politics has begun to recover from the passivity induced by a steady diet of broadcasting.

Online communities engage not only in conventional politics but in an expanded notion of politics in every area of common life. As we have seen, Medical patients form groups to share ideas about their illnesses and to influence care and research. Parents use the Internet to organize protests over school policy. Users of public resources such as parks mobilize through the Internet when the resource is threatened with budget cuts. All sorts of civic problems and frustrations become the occasion for community action. In each case the participant interests of members of a socio-technical network are articulated politically. This "subactivism" is an extension of politics into daily life; it shifts the boundaries of the personal and the political (Bakardjieva, 2012).

In conclusion, I will mention a few examples.

1. Medicine. I began this paper with an example from medicine.

At the time I wrote my early article there were only a few patient groups dedicated to ALS. A recent Google search turned up more than 100. Today similar patient forums proliferate on the Internet and create a very different social environment for medicine (Feenberg et al., 1996).

2. Music sharing. Everyone is familiar with the emergence of networks for the sharing of MP3s. This is a response to the conservatism of the established record companies. Between an $18 album with one good song and a free or 99 cent download of that same song, there is no competition. The huge overhead of top heavy music companies forms an obstacle to adaptation they are only gradually overcoming. But the issue here is not merely economic. Music has always been an important social activity, mobilizing and gathering the community for pleasure. The invention of individual listening is recent and the packaging of music as a commodity even more recent. The celebrity culture and cult that goes along with these innovations has an unhealthy aspect. A very different musical world with far more space for more musicians and their performances appears likely to emerge in the new situation. Online music sharing has the potential to contribute to a restoration of music as a social activity, and a return to its historic role in social life.

3. Software. Software users form an invisible community that has until recently been helpless before gigantic firms such as Microsoft. The willingness of such firms to respond to users' demands is severely limited. But the software business is young. In the early days of the IBM mainframe, users rather than commercial suppliers developed software. Habits of free exchange acquired then gradually merged with an ideological movement for free and open source software initiated by Richard Stallman in 1985. The rapid development of the field thereafter has had a huge impact on the Internet. Each software project gathers an online community that tests the programs and suggests or actually codes improvements. Software users and producers are no longer separated by the barrier of commercial enterprise but like readers and writers in

other types of online forums, can exchange places and engage reciprocally with each other.

4. Libraries. Libraries have struggled to redefine their role as information providers in the face of competition from the Internet. As part of this process, academic libraries are undergoing an interesting evolution. Aggressive companies have gone too far in commercializing scholarly publication. Institutional subscriptions for medical journals now cost tens of thousands of dollars a year. The presidents of large journal publishing firms such as Kluwer in Holland earn as much as one million dollars a year, a princely sum extracted from royalties and subscriptions. In response libraries have begun to cross the line between stocking and publishing information. They now support the creation of open access online journals in an effort to fulfill their traditional functions as non-commercial brokers of academic information. Scholarly communities that formerly depended on the costly services of publishers can now organize themselves on their own with the help of libraries (Willinsky, 2006).

5. Video games. The video game industry is now larger than Hollywood and engages millions of subscribers in online multiplayer games. The players' gaming activities are of course structured by the game itself, but online communities organize them in informal relationships that the industry does not control. These online forums are venues for various unexpected appropriations of the game environment. For example, players auction items acquired in games for real money. Hackers have modified games and the modified versions have occasionally become popular. Legal issues arise in such cases since players usually have to agree to extremely restrictive policies when they subscribe. So far companies have generally responded to violations of these restrictions by protesting at first, but in most cases they soon ignore the violators or modify their policies to accommodate them. The online game world thus supports an unusual degree of interaction between customers and suppliers, rather different from what we have come to expect from television and film (Grimes, 2006).

6. Online education. The invention of online education goes back to the early 1980s. Only online discussion was possible then and so a pedagogy developed based on dialogue and collaboration. Later, university administrations were attracted by the still unfulfilled promise of automated learning. The collapse of that project has left a confusing situation in which online education means very different things to different people. Millions of students use online sites and forums today. Many of them are adult learners who would not be able to study in a traditional university setting. The reciprocal communicative potential of online education represents a great improvement over the one way model of traditional distance learning. For other students, online education offers opportunities for discussion as a supplement to lectures held in a conventional classroom setting. This too seems an improvement over the traditional lecture course. Nevertheless, there is a risk that because it is a new and poorly understood technology, online education will provide a cover for the reduction of education to the mechanical delivery of materials. The struggle over the future of the Internet is paralleled by this controversy over how best to employ it in education (Hamilton & Feenberg, 2005).

I will conclude with these examples. They suggest a significant change in the way we live. The return of agency in these various domains may appear non-political but what is democracy if not the activity of individuals in determining their own collective life? And to the extent that so much of life is now mediated by technology, more and more of it becomes available for these new forms of community control. Let's be clear: This is not a revolution and its effects are still small enough to be ignored. But give it ten more years and we will see if I am right to argue that the Internet has made a difference.

That is, if the community model is able to sustain itself. This is the ultimate challenge for online community: to preserve the conditions of community on the Internet. A democratic Internet? That depends on the capacity of ordinary users to defend its democratic potential in the coming years.

## References

Abbate, J. (1994). From Arpanet to Internet: *A history of ARPA-sponsored Computer Networks, 1966-1988*, unpublished Ph.D. dissertation. University of Pennsylvania.

Abbate, J. (1999). *Inventing the Internet*. Cambridge: MIT Press.

Bakardjieva, M. (2012). Subactivism: Lifeworld and politics in the age of the Internet. In A. Feenberg & N. Friesen (Eds.), *(Re)Inventing the Internet*, (85-108). Rotterdam: Sense Publishers.

Barney, D. (2011). Interviewed by Laureano Ralon for Figure/Ground Communication April 12th, 2011. Available at http://figureground.ca/interviews/darin-barney/ (accessed on November 15, 2012).

Bertho, C. (1984). *Histoire des telecommunications en France*. Toulouse: Editions Erès.

Borgmann, A. (1992). *Crossing the postmodern divide*. Chicago: University of Chicago Press.

Borgmann, A. (2004). Is the Internet the solution to the problem of community, in A. Feenberg & D. Barney (Eds.), *Community in the digital age*. Lanham: Rowman and Littlefield.

Dewey, J. (1980). *The public and its problems*. Denver: Swallow.

Feenberg, A. (1995). *Alternative modernity: The technical turn in philosophy and social theory.* Los Angeles: University of California Press.

Feenberg, A. L., Licht, J. M., Kane, K. P., Moran, K., & Smith, R. A. (1996). The online patient meeting. *Journal of the neurological sciences*, *139*, 129-131.

Feenberg, A. (2010). *Between reason and experience: Essays in technology and modernity.* Cambridge, Mass.: MIT Press.

Feenberg, A., & Bakardjieva, M. (2004). Consumers or citizens? The online community debate, in A. Feenberg & D. Barney (Eds.), *Community in the digital age*. Lanham: Rowman and Littlefield.

Grimes, S. M. (2006). Online multiplayer games: A virtual space for intellectual property debates?. *New Media & Society*, *8*(6), 969-990.

Hamilton, E., & Feenberg, A. (2005). The technical codes of online education. *E-learning and Digital Media*, *2*(2), 104-121.

Hiltz, S. R., & Turoff, M. (1993). *The network nation*. Cambridge:

MIT Press.

McChesney, R. (1999). *Rich media, poor democracy: Communication politics in dubious times*. Urbana and Chicago: University of Illinois Press.

Nara, Y., & Iseda, T. (2004). Ethics on the Internet: A comparative study of Japan, the United States, and Singapore, in A. Feenberg & D. Barney (Eds.), *Community in the digital age*. Lanham: Rowman and Littlefield.

Noble, D. (consulted Nov. 11, 2006). The truth about the information highway, Available at http://www.arise.org.za/english/pdf/Employment.PDF.

Pinch, T. J., & Bijker, W. E. (1987). The social construction of facts and artefacts, in W. E. Bijker & H. T. Pinch, (Eds.), *The social construction of technological systems*. Cambridge, Mass.: MIT Press.

Slouka, M. (1995). *War of the worlds: Cyberspace and the high-tech assault on reality*. New York: Basic Books.

Willinsky, J. (2006). *The access principle: The case for open access to research and scholarship*. Cambridge, MA: MIT Press.