

Globalization, Technopolitics and Revolution

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The coincidence of the changing of circumstances and of human activity can be conceived and rationally understood only as revolutionizing practice.

-- Karl Marx

A community will evolve only when a people control their own communication.

-- Frantz Fanon

As the third millennium unfolds, one of the most dramatic technological and economic revolutions in history is advancing a set of processes that are changing everything from the ways that people work to the ways that they communicate with each other and spend their leisure time. The technological revolution centres on computer, information, communication and multimedia technologies. These are key aspects of the production of a new economy, described as postindustrial, post-Fordist and postmodern, accompanied by a networked society and cyberspace, and the juggernaut of globalization. There are, of course, furious debates about how to describe the Great Transformation of the contemporary epoch, whether it is positive and negative, and what are the political prospects for democratization and radical social transformation.[1]

In this paper, I will engage some issues involving globalization, technological revolution and the alleged rise of a new economy, networked society and cyberspace in relationship to the problematic of revolution and the prospects for a radical democratic or socialist transformation of society. Globalization and the rise of a new computer and information technology-based economy and society is interpreted in both popular and academic literature as a revolution in which new technologies are transforming every mode of life from how individuals do research to how people communicate and interact socially. There is some truth in this notion, but it is also true that the technological revolution perpetuates the interests of the dominant economic and political powers, intensifies divisions between haves and have nots, and is a defining feature of a new and improved form of global technocapitalism.

Yet even as I argue that there are novelties and discontinuities in the current configuration of economic, political, social and cultural constellations that constitute the contemporary moment, there are also continuities with the previous forms of modern society to be noted. In particular, the new economy exhibits crucial features of the old capitalism such as the driving forces of capital accumulation, competition, commodification, exploitation and the business cycle. From this perspective, globalization and technological revolution are best theorized as forms of the global restructuring of capitalism in which technological development and a turbulent socio-economic transformation are intrinsically interconnected.

As to whether globalization renders revolution in the classical Marxian tradition obsolete, I would argue that much significant political struggle today, especially resistance to globalization,

is mediated by technopolitics. The use of computer and information technology is becoming a normalized aspect of politics, just as the broadcasting media were some decades ago. Deploying computer-mediated technology for technopolitics, however, opens new terrains of political struggle for voices and groups excluded from the mainstream media and thus increases potential for resistance and intervention by oppositional groups. Hence, if revolution is to have a future in the contemporary era it must incorporate technopolitics as part of its strategy, conceiving of technopolitics, however, as an arm of struggle and not an end in and of itself.

Consequently, in this paper, I focus on the ways that an oppositional politics can use new technologies to intervene within the global restructuring of capitalism to promote democratic and anti-capitalist social movements aiming at radical structural transformation. I would argue that globalization and technological revolution are in some ways inevitable -- barring an apocalyptic collapse of the global economy -- but the forms that they take are not. That is, I think that the trends toward a more global economy and culture, a networked society, and the continued flow of commodities, images, cultural forms, technology and people across the globe will continue apace, as will intense technological revolution. Both take the form of what Schumpeter called creative destruction_ and guarantee that the next decades will be highly turbulent, contested and full of struggle and conflict. But the forms that globalization and technological revolution will take are neither fixed nor determined. Hence, I would argue that it is perfectly reasonable to oppose corporate capitalist globalization and its market model of society, its neoliberal laissez-faire ideology and its putting profit, competition and market logic before all other aspects of life. I will accordingly focus on the ways that technopolitics can and are being used for anti-capitalist contestation, while noting the limitations of this conception.

Technopolitics and oppositional political movements

Significant political struggles today against globalization are mediated by technopolitics, that is the use of new technologies such as computers and the internet to advance political goals. To some extent, politics in the modern era have always been mediated by technology, with the printing press, photography, film, radio and television playing crucial roles in politics and all realms of social life, as McLuhan, Innis, Mumford and others have long argued and documented. In representative democracies participation is mediated by technology, as the disastrous failure of voting machines and the voting-counting process in the US 2000 presidential election dramatized (see Kellner forthcoming).

What is new about computer and information technology mediated politics is that information can be instantly communicated to large numbers of individuals throughout the world who are connected via computer networks. The internet is also potentially interactive, allowing discussion, debate and on-line and archived discussion. The internet is increasingly multimedia in scope, allowing the dissemination of images, sounds, video and other cultural forms. Moreover, the use of computer technology and networks is becoming a normalized aspect of politics, just as the broadcasting media were some decades ago. The use of computer-mediated technology for technopolitics, however, opens new terrains of political struggle for voices and groups excluded from the mainstream media and thus increases potential for intervention by oppositional groups, potentially expanding the scope of democratization.

Given the extent to which capital and its logic of commodification have colonized ever more areas of everyday life in recent years, it is somewhat astonishing that cyberspace is by and large decommodified for large numbers of people -- at least in the overdeveloped countries like the United States. On the other hand, using computers, transforming information into data-packets that can be sent through networks, and hooking oneself up to computer networks oneself, involves a form of commodified activity, inserting the user in networks and technology that are at the forefront of the information revolution and global restructuring of capital. Thus the internet is highly ambiguous from the perspective of commodification, as from other perspectives.

Nonetheless, in many areas of the globe, government and educational institutions, and some businesses, provide free internet access and in some cases free computers, or at least workplace access. With flat-rate monthly phone bills (which do not exist, however, in much of the world), one can have access to a cornucopia of information and entertainment on the internet for free, one of the few decommodified spaces in the ultracommodified world of technocapitalism.[2] So far, the (Einformation superhighway_ is a freeway, although powerful interests would like to make it a toll road. Indeed, commercial interests are quickly converting it into a giant mall, thus commercializing the internet and transforming it into a megaconsumer spectacle (see Schiller 1999).

Obviously, much of the world does not even have telephone service, much less computers, and there are vast discrepancies in terms of who has access to computers and who participates in the technological revolution and cyberdemocracy today. As a result, there have been passionate debates over the extent and nature of the digital divide between the information haves and have-nots. Critics of new technologies and cyberspace repeat incessantly that it is by and large young, white, middle- or upper-class males who are the dominant players in the cyberspaces of the present. While this is true, statistics and surveys indicate that many more women, people of colour, seniors and individuals from marginalized groups are becoming increasingly active.[3] In addition, computers may become part of the standard household consumer package in the overdeveloped world, although studies are emerging that indicate that large numbers of individuals claim that they have no intention of purchasing computers and using the internet. Yet in the light of the importance of computers for work, social life, entertainment and education, no doubt growing amounts of people will continue to go on-line. Further, there are plans afoot to wire the entire world with satellites that would make the internet and new communication technologies accessible to people who do not now even have a telephone, TV or even electricity, and wireless, interactive technologies are touted as the next stage of networked communication.[4]

However widespread and common computers and new technologies become, it is clear that they are of essential importance already for labour, politics, education and social life, and that people who want to participate in the public and cultural life of the future will need to have computer access and literacy. Although there is a real threat that the computerization of society will intensify the current inequalities in relations of class, race and gender power, there is also the possibility that a democratized and computerized public sphere might provide opportunities to overcome these injustices. Cyberdemocracy and the internet should be seen therefore as a contested terrain. Radical democratic activists should look to its possibilities for resistance and the advancement of political education, action and organization, while engaging in struggles over

the digital divide. Dominant corporate and state powers, as well as conservative and rightist groups, have been making sustained use of new technologies to advance their agendas. If forces struggling for democratization and social justice want to become players in the cultural and political battles of the future, they must devise ways to use new technologies to advance a radical democratic and ecological agenda and the interests of the oppressed.

There are by now copious examples of how the internet and cyberdemocracy have been used within oppositional political movements. A large number of insurgent intellectuals are already making use of new technologies and public spheres in their political projects. The peasants and guerrilla armies who formed the Zapatista movement in Chiapas, Mexico, beginning in January 1994 used computer databases, guerrilla radio and other forms of media to circulate their ideas and to promote their cause. Every manifesto, text and bulletin produced by the Zapatista Army of National Liberation who occupied land in the southern Mexican state of Chiapas was immediately circulated through the world via computer networks.[5]

In January 1995, when the Mexican government attacked the Zapatistas, the latter used computer networks to inform and mobilize individuals and groups throughout the world to support them in their battle against repressive government action. There were many demonstrations in support of the rebels throughout the world. Prominent journalists, human rights observers and delegations traveled to Chiapas to demonstrate solidarity and to report on the uprising. The Mexican and US governments were bombarded with messages calling for negotiations rather than repression. The Mexican government was forced to back down and halt their repression of the insurgents. While carrying out various forms of subjugation, they continued to sporadically negotiate, and as of this writing in late 2001, the new Mexican President Vicente Fox has agreed to continue negotiations.[6]

Seeing the progressive potential of advanced communication technologies in revolutionary struggle, Frantz Fanon (1967) described the central role of the radio in the Algerian revolution, and Lenin stressed the importance of film in spreading communist ideology after the Bolshevik revolution. Audiotapes were used to advance the insurrection in Iran and to disseminate alternative information by political movements throughout the world (see Downing 1984 and 2000). The Tiananmen Square democracy movement in China and various groups struggling against the remnants of Stalinism in the former communist bloc used computer bulletin boards and networks, as well as a variety of forms of communications, to promote their movements. Anti-NAFTA groups made extensive use of the new communications technology (see Brenner 1994 and Fredericks 1994). Such multinational networking and distribution of information failed to stop NAFTA, but created alliances useful for the politics of the future. As Nick Dyer-Witthof notes:

The anti-NAFTA coalitions, while mobilizing a depth of opposition entirely unexpected by capital, failed in their immediate objectives. But the transcontinental dialogues which emerged checked -- though by no means eliminated -- the chauvinist element in North American opposition to free trade. The movement created a powerful pedagogical crucible for cross-sectoral and cross-border organizing. And it opened pathways for future connections, including electronic ones, which were later effectively mobilized by the Zapatista

uprising and in continuing initiatives against maquiladora exploitation (1999: 156).

Thus, using new technologies to link information and practice and to advance oppositional politics is neither extraneous to political battles nor merely utopian. Even if immediate gains are not won, often the information circulated or the alliances formed can have material effects. There are, moreover, striking examples of how internet-centred organizing campaigns effectively worked against the institutions and corporations of capitalist globalization. Successful struggles against the Multilateral Agreement on Investment (MAI) in 1995-1998 involved websites and e-mail campaigns against the US-supported effort to develop binding rules on how states treat foreign investors and list-serves linking the groups struggling against the Agreement. Obviously, the internet alone did not defeat this initiative for capitalist globalization, but it enabled the non-government organizations fighting against it to circulate information, share resources and link their struggles (see Smith and Smythe 2000).

There have been many campaigns against the excesses of capitalist global corporations such as Nike and McDonald's. Hackers attacked Nike's site in June 2000 and substituted a 'Global justice' message for Nike's corporate hype. Many anti-Nike web-sites and list-serves have emerged, helping groups struggling against Nike's labour practices circulate information and organize movements against Nike, which have forced them to modify their labour practices.[7]

A British group that created an anti-McDonald's website against the junk food corporation and then distributed the information through digital and print media has also received significant attention. This site was developed by supporters of two British activists, Helen Steel and Dave Morris, who were sued by McDonald's for distributing leaflets denouncing the corporation's low wages, advertising practices, involvement in deforestation, cruel treatment of animals and patronage of an unhealthy diet. The activists counterattacked and with help from supporters, organized a McLibel campaign, assembled a McSpotlight website with a tremendous amount of information criticizing the corporation, mobilizing experts to testify and confirm their criticisms. The three-year civil trial, Britain's longest ever, ended ambiguously on June 19, 1997, with the judge defending some of McDonald's claims against the activists, while substantiating some of the activists' criticisms (Vidal 1997: 299-315). The case created unprecedented bad publicity for McDonald's which was disseminated throughout the world via internet websites, mailing lists and discussion groups. The McLibel/McSpotlight group claims that their website was accessed over 15 million times and was visited over two million times in the month of the verdict alone (Vidal 1997: 326). The *Guardian* reported that the site 'claimed to be the most comprehensive source of information on a multinational corporation ever assembled' and was part of one of the more successful anticorporate campaigns (22 February 1996; www.mcspotlight.org).

Anti-Nike, McDonalds and other websites critical of global capitalist corporations have disseminated a tremendous amount of information. Many labour organizations are also beginning to make use of the new technologies. The Clean Clothes Campaign, a movement started by Dutch women in 1990 in support of Filipino garment workers, has supported strikes throughout the world, exposing exploitative working conditions (see www.cleanclothes.org/1/index.html). In

1997, activists involved in Korean workers strikes and the Merseyside dock strike in England used websites to promote international solidarity (for the latter see www.gn.apc.org/labournet/docks/). Jesse Drew (1998) has extensively interviewed representatives of major US labour organizations to see how they were making use of new communication technologies and how these instruments helped them with their struggles; many of his union activists indicated how useful email, faxes, websites and the internet have been to their struggles and, in particular, indicated how such technopolitics helped organize demonstrations or strikes in favour of striking English or Australian dockworkers, as when US longshoremen organized strikes to boycott ships carrying material loaded by scab workers. Technopolitics thus helps labour create global alliances in order to combat increasingly transnational corporations.[8]

On the whole, labour organizations, such as the North South Dignity of Labor group, note that computer networks are useful for organizing and distributing information, but cannot replace print media, which are more accessible to many of their members, face-to-face meetings and traditional forms of political action. Thus, the challenge is to articulate one's communications politics with actual movements and struggles so that cyberpolitics is an arm of real battles rather than their replacement or substitute. The most efficacious internet projects have indeed intersected with activist movements encompassing campaigns to free political prisoners, boycotts of corporate projects, and various labour and even revolutionary struggles, as noted above.

The global movement against capitalist globalization

One of the more instructive examples of the use of the internet to foster global struggles against the excesses of corporate capitalism occurred in the protests in Seattle and throughout the world against the World Trade Organization (WTO) meeting in December 1999, and the subsequent emergence of a worldwide anti-globalization movement in 2000-2001. Behind these actions was a global protest movement using the internet to organize resistance to the institutions of capitalist globalization, while championing democratization. In the build-up to the 1999 Seattle demonstrations, many websites generated anti-WTO material and numerous mailing lists used the internet to distribute critical material and to organize the protest. The result was the mobilization of caravans from throughout the United States to take protestors to Seattle, as well as contingents of activists throughout the world. Many of the protestors had never met and were recruited through the internet. For the first time ever, labour, environmentalist, feminist, anticapitalist, animal rights, anarchist and other groups organized to protest aspects of globalization and to form new alliances and solidarities for future struggles. In addition, demonstrations took place throughout the world, and a proliferation of anti-WTO material against the extremely secret group spread throughout the internet.[9]

Furthermore, the internet provided critical coverage of the event, documentation of the various groups' protests, and debate over the WTO and globalization. Whereas the mainstream media presented the protests as 'anti-trade', featured the incidents of anarchist violence against property, and minimized police brutality against demonstrators, the internet provided pictures, eyewitness accounts and reports of police viciousness and the generally peaceful and nonviolent nature of the protests. While the mainstream media framed the Seattle anti-WTO activities negatively and privileged suspect spokespeople like Patrick Buchanan as critics of globalization, the internet provided multiple representations of the demonstrations, advanced reflective

discussion of the WTO and globalization, and presented a diversity of critical perspectives.

The Seattle protests had some immediate consequences. The day after the demonstrators made good on their promise to shut down the WTO negotiations, Bill Clinton gave a speech endorsing the concept of labour rights enforceable by trade sanctions, thus effectively making impossible any agreement during the Seattle meetings. In addition, at the World Economic Forum in Davos a month later there was much discussion of how concessions were necessary on labour and the environment if consensus over globalization and free trade were to be possible. Importantly, the issues of overcoming divisions between the information-rich and the information-poor, and improving the lot of the disenfranchised and oppressed, bringing these groups the benefits of globalization, were also seriously discussed at the meeting and in the media.

More important, many activists were energized by the new alliances, solidarities and militancy, and continued to cultivate an anti-globalization movement. The Seattle demonstrations were followed by April 2000 struggles in Washington, D.C., to protest the World Bank and IMF, and later in the year against capitalist globalization in Prague and Melbourne; in April 2001, an extremely large and militant protest erupted against the Free Trade Area of the Americas summit in Quebec City. It was apparent that a new worldwide movement was in the making capable of uniting diverse opponents of capitalist globalization throughout the world. The anticorporate globalization movement favoured globalization from below, which would protect the environment, labour rights, national cultures, democratization and other goods from the ravages of an uncontrolled capitalist globalization (see Falk 1999 and Brecher, Costello and Smith 2000).

The movement against capitalist globalization used the internet to organize mass demonstrations and to disseminate information to the world concerning the policies of the institutions of capitalist globalization. The events made clear that the protestors were not against globalization per se, but were against neoliberal globalization, opposing specific policies and institutions that produce intensified exploitation of labour, environmental devastation, growing divisions among social classes and the undermining of democracy. The emerging anti-globalization from above movements are locating these problems in the context of opposition to a restructuring of a neoliberal market capitalism on a worldwide basis for maximum profit with zero accountability. The anti-capitalist movements, by contrast, have made clear the need for democratization, regulation, rules and globalization in the interests of people and not profit.

The new movements against globalization from above have thus placed the issues of global justice, democracy and the environment squarely in the centre of the political concerns of our time. Hence, whereas the mainstream media had failed to vigorously debate or even report on globalization until the recent past, and rarely, if ever, critically discussed the activities of the WTO, World Bank and IMF, there is now a widely circulating critical discourse and controversy regarding these institutions. Stung by criticisms, representatives of the World Bank, in particular, are pledging reform. Pressures are mounting concerning proper and improper roles for the major global institutions, highlighting their limitations and deficiencies, and the need for reforms like debt relief for overburdened developing countries to solve some of their fiscal and social problems.

Hence, to capital's globalization from above, cyberactivists have been attempting to carry out

globalization from below, developing networks of solidarity and propagating oppositional ideas and movements throughout the planet. To the capitalist international of transnational corporated globalization, a Fifth International, to use Waterman's phrase (1992), of computer-mediated activism is emerging that is qualitatively different from the party-based socialist and communist Internationals. Such networking links labour, feminist, ecological, peace and other anticapitalist groups, providing the basis for a new politics of alliance and solidarity to overcome the limitations of postmodern identity politics (see Dyer-Witheford 1999 and Burbach 2001).

Technopolitics: a contested terrain

A key to developing a robust technopolitics is articulation, the mediation of technopolitics with real problems and struggles, rather than self-contained reflections on the internal politics of the internet.[10] The Zapatista movement in Chiapas is addressing problems of survival and transforming social, cultural, political and economic conditions, using new technologies as an instrument of political struggle. Likewise, the campaigns against major capitalist corporations and the institutions of capitalist globalization are attempting to advance progressive political agendas and to engage key issues of the day.

The examples in this study suggest how technopolitics make possible a refiguring of politics, a refocusing of politics on everyday life and using the tools and techniques of new computer and communication technology to expand the field and domain of politics. In this conjuncture, the ideas of Guy Debord and the Situationist International are especially relevant with their stress on the construction of situations, the use of technology, media of communication and cultural forms to promote a revolution of everyday life, and to increase the realm of freedom, community and empowerment.[11] To some extent, the new technologies *are* revolutionary, they *do* constitute a revolution of everyday life, but it is often a revolution that promotes and disseminates the capitalist consumer society and involves new modes of fetishism, enslavement and domination, as yet but dimly perceived and undertheorized.

Clearly, right-wing and reactionary forces can and have used the internet to promote their political agendas as well. In a short time, one can easily access an exotic witch's brew of websites maintained by the Ku Klux Klan and myriad neo-Nazi assemblages, including the Aryan Nation and various militia groups. internet discussion lists also disperse these views and right-wing extremists are aggressively active on many computer forums, as well as radio programmes and stations, public access television programmes, fax campaigns, video and even rock music productions. These organizations are hardly harmless, having carried out terrorism of various sorts extending from church burnings to the bombings of public buildings. Adopting quasi-Leninist discourse and tactics for ultraright causes, these groups have been successful in recruiting working-class members devastated by the developments of global capitalism which has resulted in widespread unemployment for traditional forms of industrial, agricultural and unskilled labour. Moreover, extremist websites have influenced alienated middle-class youth as well (a 1999 HBO documentary on *Hate on the Internet* provides a disturbing number of examples of how extremist websites influenced disaffected youth to commit hate crimes).

A recent twist in the saga of technopolitics, in fact, seems to be that allegedly terrorist groups are now increasingly using the internet and websites to promote their causes. An article in the *Los Angeles Times* (8 February 2001) reports that groups like Hamas use their website to post reports of acts of terror against Israel, rather than calling newspapers or broadcasting outlets. A wide range of groups labeled as terrorist reportedly use e-mail, list-serves and websites to further their struggles, causes including Hezbollah and Hamas, the Maoist group Shining Path in Peru and a variety of other groups throughout Asia and elsewhere. The Tamil Tigers, for instance, a liberation movement in Sri Lanka, offers position papers, daily news and free e-mail service. According to the *Times*, experts are still unclear whether the ability to communicate online worldwide is prompting an increase or a decrease in terrorist acts.

Different political groups are in fact engaging in cyberwar as adjuncts of their political battles. Israeli hackers have repeatedly attacked the websites of Hezbollah, while pro-Palestine hackers have reportedly placed militant demands and slogans on the websites of Israel's army, foreign ministry and parliament. Likewise, Pakistani and Indian computer hackers have waged similar cyberbattles against opposing forces' websites in the bloody struggle over Kashmir, while rebel forces in the Philippines taunt government troops with cell phone calls and messages and attack government websites.

Some concluding remarks

The internet is thus a contested terrain, used by the left, right and centre to advance their own agendas and interests. The political battles of the future may well be fought in the streets, factories, parliaments and other sites of past conflicts, but all political struggle is now mediated by media, computer and information technologies and increasingly will be so. Those interested in the politics and culture of the future should therefore be clear on the important role of the new public spheres and act accordingly.

Active citizens thus need to acquire new forms of technological literacy to intervene in the new public spheres of the media and information society. In addition to traditional literacy skills centred upon reading, writing and speaking, engaged citizens and public intellectuals need to learn to use the new technologies to engage the public and participate in democratic discussion and debate.[12] Computer and digital technologies thus expand the field and capacities of the intellectual as well as the possibilities for political intervention. During the Age of Big Media, critical-oppositional intellectuals were by and large marginalized, unable to gain access to the major sites of mass communication. With the decentralization of the internet, however, new possibilities for public intellectuals exist to reach broad audiences. It is therefore the responsibility of the active citizen to creatively work with these new technologies, as well as to critically analyze the diverse developments of the cyberculture. This requires dialectical thinking that discriminates between the benefits and the costs, the upsides and downsides, of new technologies and devising ways that the technological revolution can be used to promote positive values like education, democracy, enlightenment and ecology. Active citizens thus face new challenges, and the future of democracy depends in part on whether new technologies will be used for domination or democratization, and whether each individual will sit on the sidelines or participate in the development of new democratic public spheres.

I have not discussed the ways that technopolitics could be used to struggle not only against capitalism, but for socialism. I would argue that socialist ideas are still relevant to the politics of the contemporary era and that in particular Karl Marx's ideas, far from being obsolete, are still essential in developing critical theories of globalization, technology and capitalism in the current conjuncture (see Kellner 1995). It could be that only a socialist politics could overcome the digital divide, making accessible to all the benefits of the technological revolution. A socialist government could provide wireless communications in underdeveloped societies making possible access to the internet and use of new communications and information technology even to societies that are not yet wired, or whose telephone systems extend only to the privileged. Interestingly, societies like Korea, Japan and the Philippines make more extensive use of wireless communications than the US, with wireless messaging systems and internet access made use of by the working classes as forms of popular communication.

This study has suggested that in the era of globalization and the internet political struggles are at once local and global, that there are continuities and discontinuities with struggles and movements of the past, and that we can therefore continue to draw on the most progressive ideas of the modern tradition while also developing new concepts of politics and new strategies for social transformation. A revolution of the future needs to articulate models and ideals of a post-capitalist economy, a radical democratic polity, an egalitarian and socially just multicultural society, and diverse, free and open culture. Ideals of the past can and no doubt will enter into revolutionary thought of the future, but new ideals, values and forms of everyday life will no doubt emerge. The future of revolution is thus open and requires new theory and practice as well as appropriation of the best progressive heritages of the past.

Notes

[1] This study and the concepts of globalization and technological revolution developed here are grounded in the studies of Best and Kellner, forthcoming. By *Ærevolution_*, I am assuming a concept of fundamental economic, political, social and cultural transformation, such as was developed in the works of Herbert Marcuse. See Kellner 1984 and the six volumes of Marcuse's collected and largely unpublished papers that I am publishing with Routledge.

[2] In most parts of the world, individuals must pay telephone companies for each unit of time on the internet, giving rise to movements everywhere for an affordable flat-rate for monthly Internet access; for discussion of the access movement in England, promises from the telecommunications companies to provide a flat-rate in the immediate future, and speculation that access still might not be affordable for many, see the dossier in the technology section of the *Times* of London (12 December 1999).

[3] In August 1999, a widely-publicized US Department of Commerce report contended that the *Ædigital divide_* between the information haves and have-nots was growing; by November, there were critiques that the survey data was severely out of date and that more reliable statistics indicated that the divide was lessening, that more women, people of color, and seniors were connected to the internet, and that more than half of the United States was connected by late 1999. In 2000, several surveys indicated that the digital divide was mainly structured by class and education, and not by race. One should, however, be suspicious of statistics concerning

internet access and use, as powerful interests are involved who manipulate figures for their own purposes. Yet there is no doubt that a 'digital divide' exists and various politicians, groups and corporations are exploiting this problem for their own interests.

[4] On the growth of wireless, see the discussion in Best and Kellner forthcoming. It was announced in April 1997 that Boeing Aircraft had joined Bill Gates in investing in a satellite communications company, Teledesic, which planned to send up 288 small low-orbit satellites to cover most of the Americas and then the world by 2002. This project could give up to 20 million people satellite internet access at a given moment; see *USA Today*, 30 April 1997. In May 1998, Motorola joined the 'internet in the Sky' Project, scrapping its own \$12.9 billion plan to build a satellite network capable of delivering high speed data communications anywhere on the planet and instead joined the Teledesic project, pushing aside Boeing to become Teledesic's prime contractor (*New York Times* 22 May 1998). An 'Internet-in-the-Sky' would make possible access to new technologies for groups and regions that do not even have telephones, thus expanding the potential for democratic and progressive uses of new technologies. On the other hand, there are reports that the corporations proposing such projects are not pursuing them and thus, once again, state intervention may be necessary to develop progressive technologies that will serve all.

[5] On the Zapatistas, see Cleaver 1994, the documents collected in *Zapatistas 1994*, Castells 1997, Harvey 1998, and Burbach 2001.

[6] There was, however, an assassination of Zapatista supporters by local death squads in early 1998 -- which once again triggered significant internet-generated pressures on the Mexican government to prosecute the perpetrators. Likewise, there has been ongoing government repression and sporadic violence, although, so far, the kind of massive repression of the movement favoured by many in the Mexican military and political establishment has been avoided. I should also mention here the incredibly conflicting interpretations of the Zapatista movement by its supporters and detractors, and the problem that it has been given iconic significance with all the attendant mythologization in the contemporary era. For my purposes, it represents a strong example of how new technologies can be used as an arm of political struggle and how computer-mediated technologies can help generate global support networks and circulate information of revolutionary struggles and movements.

[7] For an overview of Nike, see Goldman 1998. For a dossier of material assembled on Nike's labor practices and campaigns against them, see the highly impressive website constructed by David M. Boje (cbae.mnsu.edu/~davidboje/nike/nikemain.html).

[8] For an overview of the use of electronic communication technology by labor, see the studies by Moody 1988, Waterman 1990, 1992, Brecher and Costello 1994, Dyer-Witthoford 1999 and Drew 1999. Labor projects using the new technologies include the US based LaborNet, the European Geonet, the Canadian LaborL, the South African WorkNet, the Asia Labour Monitor Resource Centre, *Mujer a Mujer* -- representing Latina women's groups, and the Third World Network, while PeaceNet in the United States is devoted to a variety of progressive peace and justice issues.

[9] As a 1 December 1999 abcnews.com story titled "Networked Protests" put it:

disparate groups from the Direct Action Network to the AFL-CIO to various environmental and human rights groups have organized rallies and protests online, allowing for a global reach that would have been unthinkable just five years ago.

As early as March, activists were hitting the news groups and list-serves -- strings of e-mail messages people use as a kind of long-term chat -- to organize protests and rallies.

In addition, while the organizers demanded that the protesters agree not to engage in violent action, there was one web site that urged WTO protesters to help tie up the WTO's web servers, and another group produced an anti-WTO website that replicated the look of the official site (see RTMark's website, <http://gatt.org/>; the same group had produced a replica of George W. Bush's site with satirical and critical material, winning the wrath of the Bush campaign). For compelling accounts of the anti-WTO demonstrations in Seattle and an acute analysis of the issues involved, see the documents collected in Danaher and Burbach 2000 and Cockburn, St. Clair and Sekula 2000. See Smith and Smythe 2001 for detailed analysis of the use of the internet in the anti-WTO demonstrations; they located 4089 websites with material specific to the Seattle WTO meetings and selected 513 to examine and classify.

[10] See, for example, Mark Poster's "Cyberdemocracy: internet and the public sphere" (1995) which focuses primarily on the politics of social relations within cybercommunication (www.hnet.uci.edu/mposter/writings/democ.html). This topic, expounded upon in countless internet discussion lists and publications, is interesting in its own right, but occludes the key issue of how internet communication can be articulated with the "real world".

[11] On the importance of the ideas of Debord and the Situationist International to make sense of the present conjuncture see Best and Kellner 1997, chapter 3, and on the new forms of the interactive consumer society, see Best and Kellner 2001.

[12] For further examples of how the internet is being used in the US in a variety of social movements, see Kellner 1998; on some of the ways that citizens are participating in cyberpolitics in the US, see Hill and Hughes 1998. For the new forms of multiliteracy needed to use the new technologies for education, communication, and politics, see Kellner 1998 and 2000.

References

Best, S. and D. Kellner (1997) *The Postmodern Turn*, New York and London: Guilford Press and Routledge.

_____ (2001) *The Postmodern Adventure*, New York and London: Guilford Press and Routledge.

Brecher, J. and T. Costello (1994) *Global Village or Global Pillage: Economic Reconstruction from Bottom Up*, Boston: South End Press.

Brecher, J., T. Costello and B. Smith (2000) *Globalization From Below*, Boston: South End Press.

Brenner, J. (1994) 'Internationalist labor communication by computer network: the United States, Mexico and Nafta_', unpublished paper.

Burbach, R. (2001) *Globalization and Postmodern Politics: From Zapatistas to High-Tech Robber Barons*, London: Pluto Press.

Castells, M. (1997) *The Power of Identity*, Oxford: Blackwell.

Cleaver, H. (1994) 'The Chiapas uprising_', *Studies in Political Economy* 44: 141-57.

Cockburn, A., J. St. Clair and A. Sekula (2000) *Five Days that Shook the World*, London: Verso.

Danaher, K. and R. Burbach (2000) *Globalize This!* Monroe: Common Courage Press.

Drew, J. (1998) 'Global communications in the post-industrial age: a study of the communications strategies of U.S. labor organizations_', Ph.D. dissertation, Graduate School, University of Texas.

Downing, J. (2000) [1984] *Radical Media*, Boston: South End Press, second edition, London: Sage Press.

Dyer-Witheford, N. (1999) *Cyber-Marx: Cycles and Circuits of Struggle in High-Technology Capitalism*, Urbana and Chicago: University of Illinois Press.

Falk, R. (1999) *Predatory Globalization*, London and Cambridge: Blackwell.

Fanon, F. (1967) *For a Dying Colonialism*, New York: Grove Press.

Fredericks, H. (1994) 'North American NGO networking against NAFTA: the use of computer communications in cross-border coalition building_', XVIIth International Congress of the Latin American Studies Association.

Goldman, TBA_

Harvey, N. (1998) *The Chiapas Rebellion and the Struggle for Land and Democracy*, Durham and London: Duke University Press.

Hill, K. A. and J. E. Hughes (1998) *Cyberpolitics. Citizen Activism in the Age of the Internet*, Lanham: Rowman and Littlefield.

Kellner, D. (1995) 'Intellectuals and new technologies_', *Media, Culture & Society* 17: 427-48.

_____. (1997) 'Intellectuals, the new public spheres, and technopolitics', *New Political Science* 41-42 (Fall): 169-88.

_____. (1998) 'Multiple literacies and critical pedagogy in a multicultural society', *Educational Theory* 48 (1): 103-22.

_____. (2000) 'New technologies/new literacies: reconstructing education for the new millennium', *Teaching Education* 11 (3): 245-65.

Poster, M. (1995) 'Cyberdemocracy: internet and the public sphere', www.hnet.uci.edu/mposter/writings/democ.html.

Schiller, D. (1999) *Digital Capitalism*, Cambridge: MIT Press.

Smith, P. J. and E. Smythe (2000) 'Globalization, citizenship and technology: the MAI meets the internet', International Studies Association, Los Angeles (March).

_____. (2001) 'Sleepless in Seattle: challenging the WTO in a globalizing world', International Studies Association, Chicago (February).

Waterman, P. (1990) 'Communicating labor internationalism: a review of relevant literature and resources', *Communications: European Journal of Communications* 15 (1/2): 85-103.

_____. (1992) 'International labour communication by computer: the fifth international?', Working Paper Series 129, The Hague: Institute of Social Studies.

Zapatistas Collective (1994) *Zapatistas: Document of the New Mexican Revolution*, New York: Autonomedia.