Cultural Citizenship in the Age of P2P Networks

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In Ib Bondebjerg and Peter Golding, eds.,
Media Cultures in a Changing Europe (Bristol: Intellect Press, Ltd, 2004): 139-164.

What do *Napster* (and its successors like *KaZaA* and *Gnutella*), collaborative news networks like *Slashdot* and *Kuro5hin*, and open source operating systems like *Linux* have in common? They are all forms of digital culture that are networked in technology, peer-to-peer in organization, and collaborative in principle. Although they may seem to be on the fringes of the digital scene, their impact on existing cultural practices may well turn out to be disproportionate to their apparent position. Indeed, their implications for how we define certain practices, including the practice of citizenship, and how we participate in cultural production are potentially transformative. These systems might be seen as part of a larger participatory turn in culture, where the users generate the content, evident in such diverse activities as fan fiction production, computer gaming, and club culture. Although the notion of 'participatory culture' is not without its complexities, even at its simplest level of meaning, the concept signals a blurring of the boundaries between the categories of production and consumption, and a subversion of established hierarchies of cultural value and authority. Moreover, certain forms of this cultural turn have already challenged the territorial nation state, shifting the frameworks for authority, control, and citizenly responsibility to entities other than the nation. In the case of aforementioned peer-to-peer (P2P) networks, the implications of this shift range from the reconsideration of how we define and interact with certain cultural texts, to how collaborative communities take form and operate, to how we understand our rights and obligations as citizens – whether in the political, economic, or cultural sphere.

On the level of cultural practice, these particular manifestations of P2P networking have already managed to challenge the dominant meanings and practices associated with journalism, software development, some forms of artistic production, and intellectual property. This challenge stems not so much from a critical discursive posture as from the creation of working alternatives, demonstrations of the advantages of networked collaboration that to some extent "speak for themselves". In contrast to the organization of most contemporary cultural industries, these P2P networks thrive in a de-hierarchized, decentralized, and distributed organizational environment, and require collectivity and collaboration as a condition of existence. Whether measured in terms of evolutionary advance, or elegance of use of existing infrastructure, or simple economic advantage, these systems are unparalleled by mainstream practices no matter how massive. The music industry has neither computers large enough nor centralized management systems powerful enough to rival *KaZaA* or *Gnutella*'s distributed systems; nor can Microsoft's proprietary and centralized operating system develop with the same speed or responsiveness as open source alternatives such as Linux. Combined with these networks' remarkable ability to find willing participants (within a period of a little more than two years, *Napster* managed to attract nearly 30 million members and *Audiogalaxy* approximately 52 million members) these challenges to the status quo (and some extraordinarily powerful corporations) are potentially profound. Moreover, they bring with them a particularly interesting set of implications for the larger social processes bound up in the term 'citizenship.' In extreme cases, they are capable of forcing a conflict between the obligations of cultural citizenship and political citizenship. Yet, if we are to grant credence to the work of theorists such as Pierre Levy, these

developments may well point in the direction of a profound reorganization in social consciousness.[1] And it is here that they may have useful implications for the future of citizenship and civic participation.

I will essentially argue that participation in these P2P collaborative communities constitutes a form of cultural citizenship, and that the terms of this citizenship have the potential to run head to head with established forms of political citizenship. Although I will call upon concepts such as citizenship, community and governance, I do so somewhat reluctantly, aware of their divergent and contested meanings across such different fields as political science, sociology, anthropology, and cultural studies. To be clear, my intention is not to make a technological determinist case for P2P systems (more networks do not necessarily imply more democracy), for if anything, these instances demonstrate the importance of social construction. Rather, based on my reading of these recent developments, I want to raise some questions about the relationship between notions of citizenship bound up in network culture and those bound up in more banal forms of citizenship (to echo Michael Billig[2]). And in so doing, I will raise a few questions about the state's current use of the Internet as an instrument in community building and democratic participation.

Media Convergence

The turn towards an enhanced notion of participatory culture has not occurred in a vacuum. One might point to the larger cultural changes in developed Western nations signaled by the appearance in critical discourse of the term "post-modern". A descriptor of the weakened state of traditional hierarchies of cultural authority and a testament to the breakdown of the disciplining logics of long-held belief systems (including the modernist commitment to rationality), this cultural turn suggests a wide-ranging set of causal agencies and implications. And while there might appear to be some resonance between the sorts of de-hierarchization implicit in post-modernity and the blurring of the boundaries between cultural producers and consumers and the rise of networked technologies and modes of connection, in fact the situation is not so simple. The deep history of cultural production (folk culture, for example) points to a tradition of dispersed, grass-roots activity at odds with the top-down cultural flows usually associated with industrial (and before it, imperial) culture. This alternate cultural history is highly relevant in thinking through contemporary cultural practice.[3] But second and just as importantly, the challenges posed by post-modern discourse coexist with a material reality that in crucial sectors is more centralized and powerful than ever before. I refer here to those industries involved in the creation and distribution of representation, the media. For all the talk about post-modern diffusion and abandon, certain aspects of capitalist culture – particularly in the media sector -- have grown more centralized and all encompassing. The term "convergence" covers a multitude of meanings, but three in particular are relevant to this development: the convergence of media ownership and production; the convergence of texts across media forms; and the convergence of media audiences, or better said, the ability of audiences to read texts across media forms.

Since the Second World War, global media industries have been in an ongoing process of convergence and consolidation that has been considered by diverse political economists from Herbert Shiller and Nicholas Garnham to Robert McChesney and Ben Bagdikian.[4] Acquisitions and mergers within particular media sectors have helped to produce a race of giants with ever-greater control over the means of production and distribution within particular media industries. Particularly with the period of deregulation that swept the West in the 1980s, the process not only accelerated but also increasingly

manifested itself in patterns of cross-media ownership and control. The process of deregulation, although different in particular national contexts, seems generally to have been a response to changes in the organization of global capital, as well as to the proliferation of new technologies in the media sector. So, for example, the past two decades have witnessed an increased reliance on television distribution through satellite and cable infrastructures, the concomitant erosion of old territorial broadcast markets, and a demand for significant investment consistent with the logics of increased competition and market expansion. Whether in the commercial setting of the US or the once state-protected environments that characterized most European nations, the combined impact of deregulation, privatization, and threatened subsidy systems has manifest itself in a frantic search for synergy – from co-productions to cross-investment. Certainly the publishing industry, the film and music industries, and some digital industries all have their own structural peculiarities. But the upshot of the past two decades has been a process of convergence within media forms, across media forms, and across national boundaries. Bertelsmann, Sony-Columbia, Time-Warner-CNN-AOL, Disney-ABC, and until recently Vivendi-Universal, have all steadily concentrated their media holdings, dominating the world of content providers to an extent never before seen in human history.

The logics of convergent media ownership have resulted in the production of convergent texts. Economies of production seem best served when a corporation's assets -- texts and characters -- can migrate across the multiple media forms that it owns, simultaneously promoting its other media iterations of the text and maximizing its return on investments. For example, Warner Bros.' acquisition and development of the trademarked Batman character in print, film, musical, televisual, game, and toy and clothing forms, permitted a text with origins in the comic book medium to circulate throughout its various corporate divisions, both enjoying marketing synergy and garnering efficiently-produced profits.[5] As Warner Bros., Disney and other media giants well know, trans-media strategies of this kind work best with clearly defined characters or highly reduced narratives capable of articulation, iteration, and commodification in a variety of forms.[6] But they also redefine the terms of audience textual encounters. Just as some media producers have made creative use of the multiple platforms upon which their texts appear, so too have media publics demonstrated increasing sophistication in their readings of texts across media forms. Fans of particular television programs (*Star Trek*) or popular culture characters (*Spiderman*) or authors (Shakespeare) or literary texts (*Lord of the Rings*) have developed into coherent communities that are built around the cultivation of textual elements, their re-working used as inspiration for the creation of new meanings and a new generation of texts. Moreover, their expertise in reading across textual forms has resulted in their playing an increasingly active role in informing the strategies of the originating media producers.[7] Ideal readers of sort, their tolerances and abilities to shift with texts across media forms suggests *in extremis* the conditions which an average audience should eventually be able to tolerate.

This move towards ever-greater convergence and concentration is being challenged by a discourse of fragmentation and dehierarchization. It is being confronted by technologically-enabled collaborative networks – a development with its own micro-climate, and thus an environmental factor to be dealt with when thinking about digitally-networked manifestations of participatory culture. But even more important is the sharp contrast between two forms of social organization: the ever-more centralized and hierarchized state of media ownership on one hand, and on the other, the rapid spread of internet-based participatory network media applications that are by definition de-centralized and de-hierarchized. The recent extremity

of both developments and the terms of the conflict are striking, and being played out through a dramatic series of legal and extra-legal battles. In this war, corporate centralism has been remarkably effective in allying itself with the interests of the state, while the opposition has made strong use of network technologies and the spirit of collaborative community. The question – to which we will shortly turn – regards the compelling and contradictory demands made of the political/economic citizen and cultural citizen.

Participatory Culture

Notions of dispersed cultural production and blurred boundaries between cultural 'producers' and 'consumers' are not new. Consider the practices associated with "folk" culture: "homespun" narratives and artifacts created, adopted, or reworked by individuals or communities according to their needs. Although industrialization, the processes of social rationalization described by Weber, and an economy based on mass production all formalized the distinctions between producers and consumers, they also provided new opportunities for dispersed cultural production.

The post-war era saw the introduction of photocopy machines and audio and video recorders, enabling the copying, reassembly, and redistribution of existing cultural artifacts, as well as facilitating the production and circulation of new material.[8] The penetration into the consumer market of low-cost video cameras and editing equipment in the decades that followed enabled elaborate productions of music videos, home videos, and public surveillance (the Rodney King video, like the Zapruder film before it), all outside the framework of the media industry. But what marked the emergence of a participatory culture – in contrast to a culture that included a space for creative participation – was the distribution of independently produced content to the wider culture. Public access television stations, programs such as *America's Funniest Home Videos*, and the news media's increased reliance on "amateur" video material were certainly testaments to this change, as was the increasingly porous state of the film and music industries. But the proliferation of digital media technologies offered fundamentally new possibilities for distribution (as well as creation) outside of the institutional frameworks of mainstream media.

The situation has been well summarized by Henry Jenkins: "Patterns of media consumption have been profoundly altered by a succession of new media technologies which enable average citizens to participate in the archiving, annotation, appropriation, transformation, and re-circulation of media content."[9] Countless subcultures and communities have emerged around these practices: fan fiction sites, bloggers, music exchanges, collaborative news networks, and so on. Notable here is the linkage among new technologies and particular social formations, and the resulting production of new cultural practices. Consider the rapid growth of both recorded and performed music based on digital sampling, cutting and mixing. Many hip-hop musicians have dissected existing recorded music, sampling it, quoting it, and transforming it into their own recordings – recordings that are in turn the basis for other participants to subsequently sample, dissect, and construct new meanings. In turn, the "performance" of recorded music that is the domain of "DJ culture" is predicated upon the "live" dissection, manipulation and re-assembly of previously (and usually commercially) recorded music, weaving it into new creative texts.[10]

Much as with the production of folkloric narratives over the past centuries, there are neither fixed texts nor fixed meanings, but rather a loose assemblage of elements that are re-worked by different individuals for their own purposes, yet still shared by others in the community. Digital technologies have

both enabled new forms of production (sampling in particular) and new forms of distribution, bypassing the traditional bottle-necks of centralized, hierarchized culture – such as retail merchandising and radio broadcasting -- and enabling musical expressions to be shared within an organically-defined community of fans and available to anyone with an internet connection. Hebdige characterizes the consequences of this de-hierarchization of creative and interpretive authority in terms of "democratic principle" – a broadly political pronouncement to which I will return later in this paper.[11]

Video and computer games are also exemplary of this participatory turn. Here, the 'product' is a set of rule protocols with audio-visual enhancement that emerges as a text only through participation ("playing"). Gaming requires the active intervention of its users, and most game platforms permit a near infinity of possible scenarios resulting in unique configurations of the 'text' per encounter. Participation gives the game its specific form, even though the game's defining elements are to some extent engineered by its producers. Yet even here players have intervened, playing with the very protocols upon which the game is based, as if gaming on a meta-level. The engines for games such as *Quake* and *Doom* have been dissected by players, their platforms and rule protocols reworked, and whole new gaming and expressive experiences derived from them – all with the blessings of the games' producers who programmed their products using open code.[12] Indeed, the strength of these on-line games is derived in large part from the creative and collaborative communities that they have spawned and from deliberate company policies of blurring the lines between creators and consumers.

Maxis, the company that produces the *Sims*, encourages the grassroots production and trading of 'skins' (new character identities), props, and architectural structures, even though Maxis is in the business of selling its own version of everything but the code. The *Sims' pater familia*, Will Wright, predicts that ultimately two-thirds of *Sims* content will come from consumers themselves.[13] While this may not be great for sales of *Sims* accessories, it is fundamental to building a committed and loyal community of collaborators who share in one another's productivity and whose ultimate investment in the *Sims* game universe – and thus the larger interests of Maxis -- is intensified. Like the very different gaming universes of *Doom* and *Quake*, the *Sims* has generated a massive community of users; but whereas the former games are web based, the *Sims* is a stand-alone game, making the development of an additional on-line community all the more impressive. The point regarding these games' relationship to participatory culture is twofold: first, the very nature of these gaming experiences demands an explicit level of participation within a variable textual universe; second, the nature of that participation often takes the form of community, with players investing considerable time and resources to develop game elements which are in turn made available to all players free of charge (a logic which we will explore shortly).

On line communities, are of course, nothing new. Indeed, on-line massively multi-player games role-playing games such as *Everquest* and *Lineage*, emerged more or less directly from MUDs and MOOs of the 1980s, and bear a relation to the notion of "virtual community" discussed by Howard Rheingold and embodied in the WELL.[14] The range of virtual communities is enormous as a look at the literature or the Internet will affirm, but it is the notion of participation as a *sine qua non* of community structure that I take to be defining in terms of paticipatory culture. Like MUDs and MOOs, massively multiplayer role playing games offer compelling examples of experiences whose attraction as games is in direct proportion to the sense of community participation and acts of collaboration generated by hundreds of thousands (and in the case of *Lineage*, millions) of other players. According to analysts, these on-line community-based games

represent the future of the industry, with mobile telephony and networked television as the gaming platforms of the near future. In a business whose annual revenues rival those of the Hollywood studios, the computer gaming industry's explicit embrace of consumers as co-producers of product and community is proving to be a good business strategy, a brilliant development tool, and an instrument capable of generating remarkable levels of customer loyalty. But at what point does participation in a community and collaboration in the construction of a cultural system go beyond being 'just a game' or even a new strategy for maximizing profits? Might the term 'cultural citizenship' have relevance to certain forms of participatory culture, and if so, which forms are relevant and what might be the implications?

Cultural Citizenship

Whether viewed as an invented tradition, an imagined community, or a highly contested concept facing trans-national economic, political, and ecological pressures from above and internal identity politics from below, national culture is under siege.[15] Gobalization and fragmentation seem only to exacerbate the trend, making it increasingly difficult to see a necessary link between cultural citizenship and our capacity to participate in the reproduction of national culture, whatever it might be.[16] This situation has encouraged some scholars to cut loose the moorings of cultural citizenship from the national culture to which it was once bound. The idea of cultural citizenship is adrift, meaning multiculturalism and identity politics for some, consumerism and taste formations for others; for some it remains analytically bound to the national context, and for others it can only be understood in terms of transnational flows.[17]

With the advent of Internet-based identities and Internet-based communities, focus may have moved further still. The literature suggests any number of ways of thinking about citizenship – flexible, multiple, and conflicting according to the cultural logics of transnationality; or nomadic, where culture serves as the *mise-en-scene* through which popular conceptions of local and national citizenship emerge. The complication even on this basic level of conceptualization emerges in part from the speaking position of the analyst in terms of national specificity, disciplinary distinctions, and intellectual. A basic starting point might be to tease out distinctions among forms of citizenship, differentiating them even if heuristically. Theorists such as Castells, Melucci, Appadarai, and Beck have all discussed political, economic, as well as cultural "flows," "scapes," and "dimensions" of citizenship that help to unravel the complex interworkings of this concept. An ongoing Fifth Framework project entitled "Citizenship and Democratic Legitimacy in the European Union" offers a useful outline of these forms of citizenship (as part of a larger argument which more generally liberates the notion of citizenship from the nation-state). The project

> ...distinguishes between three different conceptions of citizenship, which are reflective of different conceptions of the EU qua polity. The first is economic citizenship, based on rights associated with the four freedoms, where the citizens are seen as producers, consumers, users, and customers and reflects the notion of the EU as a problem-solving entity. The second is social and cultural citizenship, based on a set of common values, aimed at establishing a material basis for societal membership, and reflects the notion of the EU as a value-based community. The third is political citizenship, based on a set of common civil and political rights, with the purpose of empowering the citizens to be 'co-authors' of the law, and reflects the notion of the EU as a rights-based post-national union. [18]

This trifurcation with its loosening of the bonds between political and cultural authority and rights, and between the notion of citizenship and the nation state, strikes me as a useful first step in considering the possibilities of cultural citizenship.[19] Definitions for cultural citizenship abound, and as a starting point, we might consider Renato Rosaldo's work on cultural citizenship and the formation and evolution of Latino communities in Los Angeles, New York City, and San Antonio – work that has been particularly influential in the US. Rosaldo defines the concept as the right to be different (in terms of race, ethnicity, or language) with respect to the norms of the dominant national community, without endangering the right to belong, in the sense of participating in the nation-state's democratic process.[20] Graham Murdoch agrees that contemporary politics are increasingly centered on the politics of identity – forms of belonging, loyalty, and solidarity. But, citing Alberto Melucci, he states that 'the freedom to belong to an identity, to contribute to its definition or to withdraw from belonging in order to create new meaning' is central to a new political order.[21] The right to belong is not threatened, but Murdoch also underscores the right *not* to belong and, moreover, the right to create new meanings, new contexts. Although their frames of reference reflect larger differences between American and European views, both Rosaldo and Murdoch share an activist notion of cultural citizenship. Rosaldo notes that, "since cultural citizenship is about claiming and expanding rights in the community, it goes hand in hand with a micropolitics that seeks cultural citizenship in one's plural communities - neighborhoods, workplaces, churches and activist groups." [22] Social change, institutional reform, and the idea of a cultural community built by and for collectives are central to this vision. Murdoch's less parochial view maintains the option of belonging to the mainstream by emphasizing public goods over commodities, and it also allows for forms of collective cultural autonomy only hinted at by Rosaldo.

The importance of communities of identity, whether autonomous or not, to a definition of cultural citizenship requires a notion of agency, an understanding of how such communities are formed. Nick Stevenson underscores what I take to be a fundamental element in community formation: participation.[23] The precise nature of this participation has been debated, with some seeing it as being akin to strategies of textual reception, [24] and others seeing it as a means of Foucauldian governmentality in which seemingly indirect public processes -- sports, radio, film, and arts policies -- draw members of society into postindustrial state structures.[25] But these two views mirror the standoff between theories of *negotiation* (Fiske, American cultural studies) and *determination* (Althusser, political economy) so familiar from the past twenty years. One can read them as evaluative frames for any participatory act, or one can see in them the minimum required agency for a participatory act (merely observing the passing culture would seem to be enough). I would argue for a more robust sense of participation, akin to the 'claiming and expanding of rights' that can be found in Rosaldo's workplaces, churches, and activist groups. That is to say, cultural citizenship differs from political citizenship in the sense that the latter is acquired as a right of birth, but the former can only be acquired by assertion or action within a particular cultural sphere.

Community, freed from any necessary relationship to the nation-state, and *participation*, in the sense of active, then, are two prerequisites for the enactment of cultural citizenship. The radical potential of cultural citizenship – particularly *vis a vis* the nation state – as a means of expanding rights or creating new meanings has already been suggested. And it is in this context that I want to assert that certain forms of the participatory culture discussed in the previous section in fact constitute sites of cultural citizenship. I refer here particularly to collaborative communities, sites of collective activity that exist thanks only to the

creative contributions, sharing, and active participation of their members. Certain manifestations of fan culture, MOOs, MUDs, and massively multi-player role-playing games, would all be examples of communities made up of cultural citizens. Some of these occur face to face within the confines of the territorial nation-state, and others occur 'virtually,' in technologically facilitated networked communities.

Technologies of Diffusion

The contemporary media scene seems to be heading towards a stand-off between massive content industries organized around hierarchized and centralized principles, and quickly-growing de-centralized and distributed collaborative networks; between the requirements of the political citizen and those of the cultural citizen. These collaborative networks offer a fast and cheap means of exchange, and even though they have conceptual roots in older media forms, they bypass many of difficulties encountered by precedents like circulating libraries and radio relay networks. Moreover, their predication upon user-participation and their cultivation of an active community based upon a notion of mutual exchange and sharing, combine to make a strong case for a notion of cultural citizenship. As a first order of business, we might first ask how might we delineate and define these new peer-to-peer networks? They are of course computer-based, and operate over telephone lines and special cable linkages. But curiously, despite the US Defense Department's initial Cold War vision of ARPANET as a decentralized and therefore effectively bomb-proof network of computing and storage nodes, until the 1990s, most manifestations of the internet were largely centralized. The growth of the web occurred at a moment when systems tended to be based on single web servers running in expensive and centralized collocation facilities.[26] Moreover, the Internet had one basic model of connectivity, the DNS system: machines were assumed to have a fixed IP address, to be on, and to be constantly operating. With the spread of Mosaic around 1994, a new model began to proliferate. Now, computers could be connected to the Internet over a modem with its own IP address. PCs could enter and exit the network frequently and at will, forcing Internet service providers to begin issuing dynamic rather than permanent IP addresses.[27] The situation was complicated by the fact that most PCs had not been designed to be part of the Internet.[28] The introduction of the Pentium chip and upgraded operating systems overcame this limitation, transforming the millions of "toy-like" home and office PCs into a formidable network by the mid-to-late1990s. Net-connected PCs are currently estimated to be capable of hosting something like an aggregate ten billion megahertz of processing power and ten thousand terabytes of storage.[29] This is a scale of magnitude that far exceeds anything available to the centralized media industries, and moreover speaks directly to the elegant logic of network culture.[30]

music file sharing: KaZaA, Gnutella, etc.

Digital music technologies have profoundly changed the way that musical production and distribution are organized. Digital recording and mixing equipment, synthesizers, and sampling technologies, together with CDs, MP3 format, and digital radio as a distribution media, offer new logics of efficiency, fresh creative possibilities, and unforeseen distribution complications. But as important as these changes to the creation and distribution of music have been, digital technologies have also managed to put many of these same devices and capacities into the hands of ordinary consumers. The result has been a dramatic reinforcement of recorded music as a site of participatory activity, bringing to 'garage bands' near professional recording and mixing qualities, and even enabling certain forms of alternative distribution. Home-based musicians

can achieve many of the same technical qualities that have heretofore been the exclusive domain of professionals, in some cases upsetting existing hierarchies and demystifying at least some benchmarks of distinction between professional and amateur.

But digital technologies, particularly of the P2P type discussed in this paper, have done far more. They have radicalized distribution, making massive amounts of recorded music available to anyone with a computer and a modem, and they have done so at next to no cost, requiring neither elaborate digitalization projects nor massive storage facilities. Indeed, P2P applications in the form of music file exchanges such as the ill-fated *Napster* and *Audiogalexy*, together with their more robust siblings *KaZaA*, *Gnutella*, *FreeNet*, *Morpehus*, *Grokster*, and so on, have distributed the labor of sourcing and loading music, as well as of storing and dispersing it. And in the process, they have constructed a community built upon shared tastes, shared labors, and a shared notion of musical culture.

Among *Napster*'s many lessons, several are worth noting in the context of this paper. Although best known for making vast stores of out-of-print recordings as well as the latest commercial releases available for free downloading, *Napster* (and its clones) was used by many fans to learn more about music and expand musical tastes. This was done in part by sampling unknown tracks, but it was also done by screening for particular taste formations and following their lead. If, for example, one repeatedly came across someone who seemed to share musical interests, one could look more closely at full range of that person's musical holdings, engage in chats, and have a reasonably good chance of learning about other music of probable interest. This process of learning from one another was one of the small "rewards" that music file sharing systems offered both to users and providers, and it was one of the signs of community that this network displayed.

Another lesson from *Napster* appeared quite visibly in its final weeks. Once most copyrighted music had been blocked from *Napster*'s lists, one could find hundreds of examples of non-commercially produced music ranging from garages in New Jersey to home studios in Bangalore. Forms of music generally absent from American or European radio play lists or record shops such as Hindi techno or Kurdish hip-hop or perfectly competent rock bands suddenly appeared in force. *Napster* facilitated the global distribution of music regardless of its source, and once the commercial noise was removed from its system, the magnitude (both qualitatively and quantitatively) of these normally suppressed alternatives was revealed. The disciplinary control exercised by the recording, broadcast, and retail industries was broken, and in its place, nothing was too esoteric to stand shoulder-to-shoulder with industry hits.[31]

Perhaps the most important lesson that *Napster* and its clones demonstrated, even if implicitly, had to do with pressing the definition of music. Particularly with regard to popular forms of music, one might legitimately question whether music is the product of a creative industry, a commodity, as argued by the RIAA, to be packaged and promoted through a closed circle of advertising, radio play lists, and retail placements. Or one might ask if is it expression, shared pleasure, and a freely circulating part of culture. Without taking the bait of the RIAA with regard to the assertion that the purchase of music equals the maintenance of musical culture, this fundamental question about the status of music, of culture, and their relation to community, was powerfully put by this P2P network. Although the audio-visual industries are currently embarking in an extraordinarily aggressive campaign to maintain their content cartel through their centralized control of software in the face of the threats posed by P2P networks, they are also in a state of near paralysis with regard to the use of new technologies.[32] Setting aside the curious fact that some

members of the cartel are also hardware producers (Sony for example), it is increasingly clear that the networked file sharing principle is visible in other technological platforms. The link between mobile telephones and MP3 exchanges has already been demonstrated, and scenarios for television selection and downloading technologies such as next-generation *TiVo* and *Replay* as well as gaming systems such as the next-generation *X-Box* all specifically address the user's ability to download program content and exchange it with friends.

The film and television industry's response has been to enforce relatively low resolution digital formats until they can figure out a response, and meanwhile, to join with the music industry to both enforce and extend copyright protection, to engage in software encryption, and to push for legally mandated hardware controls. Yet, as previously mentioned in the case of the gaming community, other industries have seen the benefits of cultivating communities of users. Amazon, for example, has used the internet not only as a medium for book sales, but as a site of exchange of reviews and recommendations, with readers writing and posting critical responses to books, generating ratings, and making recommendations for related reading. Readers effectively speak to one another, and as with file sharing systems, both exchange information and build up a sense of community. These developments, whether Amazon's customer-generated book reviews, or the file sharing practices once central to *Napster* or planned for the future of *TiVo* and the *X-Box*, all speak to a notion of new media that embraces networked communities, shared investment, and bottom-up creation of texts, and as such, constitute a clear 'added value' to more familiar scenarios about the advantages of digitalized production and distribution.

collaborative news networks: Kuro5hin, Slashdot, etc.

For much of the past two decades, the newspaper world has sponsored research and conferences on the future of their industry in a digital age. Digitalization has wide-ranging implications for the processes of production and distribution. It facilitated a redefinition of markets, encouraging the spread of national newspapers such as *USA Today* and *The New York Times*, and encouraging the development of international papers such as *The Financial Times* and the *Wall Street Journal*. It transformed the nature of physical text production and distribution, reducing the need for certain types of employees and encouraging strategic consolidation. And, by the mid 1990s, Internet access effectively rendered public many of the once closed news channels (the so-called wire services – UPI, AP, Reuters, etc.) that newspapers traditionally relied upon for their reports. The industry's concern focused on this last point, and with it the broader question of how to best deal with the on-line environment. Questions proliferated regarding news presentation in a digital environment, strategies for reader loyalty, new business models, and future technological scenarios. And new questions began to be asked of the relationship of the news media to the public sphere. The newspaper, like local television and radio broadcasts, once helped to bind communities together by providing a common corpus of information and opinion. But on-line news services threatened to intensify the fragmentation already evident in the shift from broadcasting to 'narrowcasting' evident in many markets in the 1980s. The threat was twofold. First, readers might use their computers to read newspapers from outside the local or even national market, weakening the consensual function of the press not to mention its financial underpinnings. A recent example of this was the claim that British on-line newspapers such as the *Guardian Unlimited* or the *Independent* have gained millions of American readers in the wake of the 9/11 attacks, readers in search of sources freed from the nationalist agenda that so

dominated the US press. Second, readers might use the capacities of the digital environment to select only those elements of the newspaper of interest to them – an eventuality catered to by some news services which provided the tools for the creation of "the daily me". Although marketed as one of the great advantages of on-line news delivery, the notion of a "customized" newspaper designed for each reader's interests raised concerns about the fate of the common knowledge so essential in the construction of the public sphere and the functioning of democratic governments.

Rather less attention has been directed to the archiving functions possible in many on-line newspaper environments, functions that permit easy consultation with previous news coverage, and which stimulate a developmental and durational notion of public events – and their coverage -- rather than the floating 'present' of most print sources. As well, the ease with which readers can 'clip' and e-mail articles of interest to friends, selecting and re-circulating the news, seems to be an under-appreciated dimension of the digital environment. And, if we are to judge by the actions of on-line newspapers, beyond focusing on "the daily me," relatively few have bothered to investigate and take advantage of the interactive capacities provided by the Internet environment. A recent study of 100 US on-line newspapers indicates that fewer than 20% have forums or chat spaces where readers can express their opinions or exchange views with one another; and fewer than 30% bother to take polls of readers' opinions.[33] Each of these categories recalls the characteristics previously described under the rubric of 'participatory culture.' While the industry as a whole is investing considerable time and energy in thinking through its digital future, the conceptual framework seems decidedly entrenched in the old model of the print medium: a centralized source with a particular vision of the news and a particular house style radiates print as well as digital copies of its views. The reader is free to pick and choose stories of interest, but feedback or the development of a community of readers is not stimulated, nor is a questioning of the assumptions behind the news or journalistic practice.

Slashdot and *Kuro5hin*, the most prominent of a growing number of collaborative news networks, have changed all that. Just as the music file sharing activities of *Napster et al* pushed digitalization's uses well beyond cheaper, easier, and more accessible means of production to the notion of a community, so too does *Slashdot*'s notion of digitalization *vis a vis* the dominant thoughts of the newspaper industry.[34] First, a few words on what these news sources are and how they operate. Founded in a college dormitory room in Holland, Michigan the late 1990s as essentially a blogger site, *Slashdot* (appropriately subtitled, *News for Nerds*) culled together reports on computer technology from a variety of news, corporate, and other sources. The site's novelty *vis a vis* other early blogger sites was that it invited readers to respond to stories and provide their own links, most of which were in turn posted. *Slashdot* quickly attracted attention and evolved into a reader-written and reader-edited news forum, stabilizing at around a million unique reader-participants per month. Although in the case of *Slashdot* there is an editorial staff charged with ultimate control, in fact the bulk of the editorial evaluation is undertaken by "jury" of several hundred readers who are selected each week and asked to rate both news stories and the responses they generate. (*Kuro5hin* offers a more radical example in that it gives direct editorial authority to its community of readers.) Given that hundreds of stories are vying for the top 14 or so "headlines" each day, and that a typical story is capable of generating approximately 1,200 responses (other reports, commentaries, etc.), this rating system is essential in order to give coherence to the mass of available information and opinion. The result is a rich mix of views and sources – some contradictory, some with unexpected connections or insights --regarding

any particular issue, combined with the opinions of critics, participants, supporters, etc. of any given issue. Collaborative news networks have challenged the news industry on several fronts. They provide a seemingly viable model of an interest-based news community, one moreover, that makes use of low-cost distributed resources rather than high-cost centralized resources, and one that is largely de-hierarchized in terms of editorial authority and control, again in contrast to the elaborate hierarchies of most news organizations. The collaborative nature of such enterprises far exceeds the abilities of the individual investigative journalist or even journalistic team to research and prepare a story, both in terms of speed of production and the range of scope and resources (*Slashdot*, for example, although American in orientation, takes full advantage of its global members, giving readers near instant access to the same story from Japanese, German, and Australian vantage points).

These examples point to the remarkable economic and newsgathering advantages of collaborative news networks over traditional news organizations. But even more profound implications are to be found in the social domain. *Slashdot*, *Kuro5hin*, and their clones conceptualize news as community based, as participatory, and as fundamentally social in construction. The community in this case is not necessarily derived from a territorial locality – the domain of the local or national press; and the news generated by this "virtual" community, while serving its own purposes, may even run counter to the interests of the territorially-based public sphere in the sense that undesired reports and views are circulated. Another implication of socially grounded collaborative news networks regards the status of the journalistic endeavor as objective or near objective. Collaborative news networks by their very nature treat news as a complex process of competing views, data, and evaluative frameworks. Objectivist notions of the news are effectively subverted once different sources can be compared, or once the starting or ending point of an event is resituated, or once the documents upon which the news is based are themselves made available for readers. This redefinition of news and journalists goes to the very heart of long held conventions and professional practices. And it offers a new notion of a news community from a localized group fed more or less the same version of the truth, to a deterritorialized community of collaborators, searching for evidence, struggling for understanding, and debating the construction of the truth.

Linux and open source software

Even Microsoft has begun to attend Linux conferences.[35] The epitome of a hierarchized and centralized corporate software developer, concerned with maintaining its market domination and proprietary product, Microsoft has run head-to-head with Linux, an open source (decentralized, de-hierarchized) network-based provider of the same services. Over the past few years, the governments of Mexico and India have backed the shift of many operations to Linux-based (which is in turn Unix-based) systems; and Industrial Light and Magic shifted over to Linux-backed animation programs for the appropriately titled *Attack of the Clones: Star Wars, Episode II* in a corporate climate where McDonalds, Shell, Chevron, Pixar, Dreamworks, Salomon Smith Barney, Morgan Stanley, and Credit Suisse First Boston have all moved significant parts of their technology infrastructure across to Linux recently. Perhaps the most notable Linux convert was Amazon, the world's largest online retailer, which last year told Wall Street that it had cut its technology budget by 24 per cent, or some $US 17 million per quarter, primarily by moving across to "free" software.[36]

There are several reasons for this dramatic change. The profit incentive is clear enough, but so are the implications for start-ups or whole economic regions such as the Third World that would otherwise not be able to afford a full range of traditionally commodified software. But an equally compelling reason has to do with the speed with which Linux-based systems can refine themselves. In this regard, open source code has several advantages. First, its developers are spared the significant expenditures of energy that Microsoft and other developers of proprietary software are forced to invest in order to protect key parts of their systems from prying eyes. In the case of open source, the code is freely available and users are encouraged to explore, experiment with, and improve it. Second, Microsoft *et al*'s proprietary stance encourages centralized and hierarchized product development, selected flows of information, and top down strategies for long term development. Open source systems by contrast are largely horizontal, with users from different contexts and from around the world making refinements and suggestions based upon insights or needs. Much like collaborative news networks, it is difficult for a centralized operation regardless of its financial resources to compete with this global network of expertise. Moreover, open source software is appealing thanks to its (in computing terms anyway) aesthetics and its status as a community-constructed 'living' computational artifact -- an appeal sufficiently altruistic that even engineers with day jobs for competing proprietary developers contribute their time and energy to these community projects. Developments like Linux are also consistent with the logic of a network environment. Computational needs, like the expertise that drives them, are dispersed across thousands of computers. Information is shared, problems are distributed, and massive resources (from human expertise to computing power) are drawn together with very low investment and high yields.

Transgression

As music file sharing networks, collaborative news networks, and open source software developments all demonstrate, a series of fundamental challenges have been mounted to the status quo and even to more recent assumptions regarding digital culture. The very definitions of cultural practices – music, news, software development, and intellectual property -- have been put in question by these participatory networks. And the institutional practices behind them have to some extent been subverted, at least that is the claim of the Recording Industry Association of America (RIAA), the Creative Incentive Coalition (CIC), the Motion Picture Association of America (MPAA), and the World Intellectual Property Organization (WIPO), among others. In every case, these challenges have been powered by distributed PCs, bound together by collaborative networks, and given life by participatory communities of users/creators. A blurring of sorts has taken place, not only between producers and consumers as argued above with regard to participatory culture, but with regard to definitions of cultural practices.[37] Within the context of the territorial nation state, the definitions of things like commercial music and intellectual property are clear; but in the context of the dispersed collaborative communities of *Gnutella* users, these definitions are far from self-evident. The question, then, particularly at a moment of complex appeals to identity, regards the choice of a framework for cultural citizenship. Those practices that take place in the globally networked on-line communities thus far discussed call upon enactments of cultural citizenship that are defined by high levels of participation. But the act of participation also brings with it a good chance of transgression – for the territorial nation state has long been the definer of regulatory power and the

enforcer of legal code[38] -- and a strong measure of challenge to the status quo. Citizenship in the nation state, at least with regard to these issues, seems to be more a matter of obeisance to legal restrictions that define participation somewhat dully in terms of consumption, and that increasingly speak for the interests of concentrated media industries. At issue is the definition of culture, and the question of its status as a commodity and/or as a vital force in human creative communities.

How might we understand or even label the activities of citizens in this participatory culture? The investments of time and resources that members of these various participatory/collaborative communities make have variously been described with terms drawn from the existing economic order. "Generalized Exchange" – best explained through the analogy of helping a stranded motorist not because one expects that person to reciprocate, but in hopes of reciprocation from some other member of the community should help be needed in the future – is one such description.[39] "Gift Economy" is another. Rooted in Marcel Maus's work in the mid 1930s,[40] the relevance of the gift economy to internet interactions has been underscored by Richard Barbrook's suggestion of the historical involvement of scientists and academics with the net's development (we are accustomed to 'give' papers and take our pleasures in shaping discourse and being cited, rather than in making money with our ideas).[41] Others such as Peter Kollock, have coined new terms such as 'digital goods,' transforming the notion of public goods to the virtual environment. One might even fall back on the Latin meaning of the term "community"— to give to one another – as a way to inscribe these developments, and with them, the importance of participation to the enactment of cultural citizenship. As these developments continue to take form, one of our tasks will be to develop new language (representation, after all, is power). Another will be to consider the new deterritorialized regulatory systems that will inevitably emerge. I do not here mean the feeble attempts of AOL or Compuserve to crack down on terrorism or child pornography at the behest of the territorial state, but rather something along the lines suggested by David Johnson and David Post in their historical analogy to the development of the 11th century *lex mercatoria* ... the 'distinct set of rules that developed with the new, rapid boundary crossing trade of the Middle Ages.'[42]

Until these rules emerge, we are left facing a situation where the terms of participation in certain deterritorialized cultural communities run head to head with the terms of participation in territorialized political communities, where the terms of cultural citizenship run counter to the terms of political citizenship. This sort of conflict has been hinted at in the past. Consider the struggle of the Basque in Franco's Spain, where the terms of Basque cultural citizenship were in direct conflict with the terms of Spanish political citizenship. As in so many cases of territorial struggles for cultural rights, the government feared that the next step would be demands for a reformulation of political citizenship, and so chose to suppress cultural citizenship before things got out of hand. Perhaps this legacy, so much a part of every nation's history, informs the way that national governments have reacted to internet-based cultural citizenship. In this sense, the virtual and the deterritorialized pose tangible challenges to the long-term autonomy of the real and territorial. We are little more than five years into these new forms of P2P cultural citizenship, and it is far too early to do more than suggest the nature of the impending conflict.

Effect and Affect

Throughout this paper, I have argued that various instances of networked collaborative communities can be seen as constructions that cultivate, and indeed, depend upon, the practice of cultural citizenship.

Before closing, it may be worthwhile to ask what uses can be made of networked technologies by existing political regimes? To what extent can we talk about network-facilitated political citizenship? Are there similarities of strategy with what we have seen of networked cultural citizenship? A nuanced mapping of various governmental initiatives is beyond the scope of this paper, nevertheless two broad orientations can be distinguished. On one hand, there are initiatives such as UK-Online in the national sphere or ICE.gov (the International Center for Governance) or EDEN (Electronic Democracy European Network) in the trans-national sphere which seek to implement the process of governance either by offering an electronic means of renewing one's driving license or voting, or by offering space and resources to stimulate its promotion. These applications serve the functional ends of the governance process, and might be labeled by the condition they intend: *effect*.[43] On the other hand, there are Internet sites closely allied with national interests that seek to create a virtual national community, a home away from home for the traveler, the migrant worker, or the recent emigrant. Initiatives such as 'virtual Scotland,' 'virtual Argentina,' and so on, might be considered in terms of the feeling they provoke: *affect*.[44] In contrast to the more utilitarian or explicitly functionalist applications of sites of the effective variety, the affective sites seek to create, in Raymond Williams' terms, a structure of feeling – a sense of belonging, belief, and participation no matter how removed from the daily ebb and flow of political events.

Together, these twin strategies of affect and effect serve the interests of the state, facilitating the emotional and informational cohesion so important to identity, and contributing to the more mechanical processes of governance by enhancing speed, access and feedback. But these applications might be likened to the use of the Internet by current newspapers – an enhanced source of information, an efficient means of news processing, and a cheap and effective means of distribution. They are all advances on the status quo, and they all reflect the benefits of digitalization. But they fail to make use of the potential of network culture to construct a collaborative community or to redefine the meaning of "governance" or "citizenship" in ways that, to continue the analogy, *Kuro5hin* and other collaborative news networks have done for the news.

Graham Murdoch offers an interesting argument regarding the challenges posed to citizenship by the 'shared culture of consumption'. He argues that it privileges personal spending over social and political participation, creating shoppers rather than moral communities; and that it equates social difference with variations in choice and style, negating any attempt to conceive of a common good based on negotiation of difference. While it would be too glib to link the emergence of this 'shared culture of consumption' with the decline in electoral activity and political debate evident in several developed nations, it is nevertheless an insight worth considering. Among the four conditions for pursuing 'the unfinished project of citizenship in the era of privatization,' Murdoch argues that cultures 'must ensure that the full range of their services remains equally available to all. They must defend their status as public goods and resist their conversion into commodities.'[45] At a moment of unparalleled convergence in our industries of representation, the importance of the internet-facilitated participatory communities as potential counterweights to cultural monopoly cannot be understated. As the artifacts that constitute culture continue to be trademarked and copyrighted, as news organizations continue their pattern of global mergers, and as our means of processing information risk falling into ever-larger corporate hands, we have evidence of a movement that has embraced these various cultural forms as public goods, and seems committed to making their full range of services 'equally available to all.'

The Latin roots of the term 'community' – of fellowship, of sharing – run counter to our economic logic with the same vigor that they apply to our cultural logic. Unfortunately, the heuristic distinctions that I have deployed for this paper do not apply in the 'real' world; moreover, a long and important tradition of critical thought has explored the inevitable interdependencies of economics and culture. Yet, without seeking to align myself with the utopian euphoria of the 'Californian ideology' of Rheingold, Barlow, Dyson ,et al., the P2P communities discussed in this paper do seem to suggest that something very promising is possible, something that will enable cultural participation outside the framework of commodification.[46] That said, a number of crucial questions remain.

Nevertheless, if we make the link between participatory culture as found in certain P2P communities and cultural citizenship, as this paper does, several things follow.

First, certain cultural practices (particularly those associated with media industries at their historically most concentrated moment of development) are in the process of being redefined from protected commodities back to everyday culture. Second, the growth of P2P participatory networks seem consistent with a number of other structural changes in fields such as genetics, engineering, and energy (as outlined by Pierre Levy[47]) and are likely to have growing impact on how we think about culture. And finally, notions of 'electronic' democracy, citizenship, and governance need to shift from the rather thin models of on-line voting or license applications, to making fuller use of ideas taken from the more robust participatory communities that we can see in the cultural sector. Again, the changes upon which these consequences are based are extremely recent, dating back to transformations in technology that occurred five or so years ago. The challenge is to see what is possible, and to guard against the inevitable attempts to turn these developments back into the tools of the dominant political order. The fact that these developments are deterritorialized and virtual may assist in their survival in the territorial and real world. And the coincidence of an enabling philosophical discourse (post modernity) may add resonance and depth to what is unfolding (or at least it might confuse the enemy!).

[1] Pierre Lévy, *Collective Intelligence: Mankind's Emerging World in Cyberspace* (Cambridge: Perseus Books, 1997)

[2] Michael Billig, Banal Nationalism (London: Sage, 1995)

[3] Among others, see E. P. Thompson, *The Making of the English Working Class* (Harmondsworth: Penguin, 1968) and Raymond Williams, *Culture and Society 1780-1950* (New York: Columbia, 1960)

[4] Among other texts, see Herbert Schiller, "Not Yet the Post-Imperialist Era," in *Critical Studies in Mass Communication* 8 (1991): 13-28; Nicholas Garnham, "Contribution to a Political Economy of Mass-Communication" in Richard Collins, et al., eds., *Media, Culture and Society: A Critical Reader* (London: Sage, 1986): 9-32; Robert McChesney, Rich Media, Poor Democracy: Communications Politics in Dubious Times (New York: The New Press, 1999); and Ben H. Bagdikian, *The Media Monopoly* (Boston: The Beacon Press, 1997)

[5] Eileen Meehan, "'Holy Commodity Fetish, Batman!' The Political Economy of a Commercial Intertext," in Roberta Pearson and William Uricchio, eds., *The Many Lives of the Batman: Critical Approaches to a Superhero and His Media* (New York: Routledge, 1991): 47-65; see also, Janet Wasko et al, eds., *Dazzled by Disney? The Global Disney Audiences Project* (London: Leicester University Press, 2001)

[6] This helps to explain the increased tendency to rely on the trademark protection of characters rather than simply relying on copyright, since the former potentially affords an eternity of protection and covers the character as it migrates across media forms.

[7] Among others, see Henry Jenkins, *Textual Poachers: Television Fans and Participatory Culture* (New York: Routledge, 1992) and Will Brooker, *Using the Force: Creativity, Community and Star Wars Fans* (New York: Continuum, 2002)

[8] This was evident, for example, in the photocopy art movement of the 1970s and unofficial office cultures evident in the proliferation of 'amateur' cartoons by office water coolers. See David Liss, Photocopy Art: Who Were the Pioneers?" *Artfocus*: 56, December 1995 (rpt: http://www.artfocus.com/copyart.htm)

[9] Henry Jenkins, "Interactive Audiences?" in Dan Harries, ed. *The New Media Book* (London: British Film Institute, 2003): 157-170

[10] Ulf Poschardt, *DJ Culture* (Quartet Books, Ltd., 1998)

[11] Dick Hebdige, *Cut and Mix* (New York: Routledge, 1987)

[12] Quake was the first in id Software's successful series, following up on the success of Doom. Played from a first-person perspective, the game's 3D engine was revolutionary and licensed for countless other games. The game was written in a code that allowed users to make extensive modifications, and basically ignited the creation of an entire online community. The first version of Quake was released publicly on February 24, 1996, in the form of a program called "qtest". It was described as a technology demo, limited in maps, monsters, and other gameplay elements, but the game's multiplayer support caused Quake servers to spring up everywhere overnight. The first official shareware version of Quake was released on June 24, 1996.

[13] Jenkins, "Interactive Audiences?"

[14] Howard Rheingold, *The Virtual Community: Homesteading on the Electronic Frontier*, Revised Edition (Cambridge: MIT, 2000)

[15] Hobsbawm and Ranger, Anderson, Appadurai, et al. see also Maurice Roche, "Citizenship, Popular Culture, and Europe," in Nick Stevenson, ed., *Culture and Citizenship* (London: Sage, 2001): 74-98

[16] Nick Stevenson, "Culture and Citizenship: An Introduction,:" in Stevenson: 1-10 (7)

[17] Gerard Delanty, Two Conceptions of Cultural Citizenship: A Review of Recent Literature on Culture and Citizenship: A Review Essay," in *The Global Review of Ethnopolitics* 1:3 (2002): 60-66. Delanty sees two broad tendencies in the scholarly literature that align with sociological and political science orientations. "In order to distinguish the two approaches, I term the sociological idea of cultural citizenship 'cosmopolitan citizenship'. This is because it concerns issues that extend beyond the accommodation of minorities and problems of cultural diversity within national societies. In general, as already argued, the concerns of cultural citizenship as expressed in political theory are confined to the established state, which is generally taken to be Canada or the United States.... The version of cultural citizenship I call 'cosmopolitan citizenship' refers to a different dimension of culture than that of political theory, namely the wider cognitive dimension of culture."

[18] According to the project prospectus, "*Citizenship and Democratic Legitimacy in the European Union* – CIDEL-- will focus on the prospects for a citizens' Europe through analyzing what kind of order is emerging in Europe. Our particular concern is to take stock of the EU as a rights-based post-national union, based on a full-fledged political citizenship. ... the project asks the questions: Is the EU becoming a mere problem-solving entity based on economic citizenship; is it moving towards a value-based community premised on social and cultural citizenship, or is it moving towards a rights-based post-national union, based on a full-fledged political citizenship? The hypothesis of this project is that the latter option is the most viable."

[19] Juan Delgado-Moreira compares the concept of cultural citizenship, based on an anthropological study of Latino communities in the United States (along the lines of Rosaldo), with the proposal of European

identity made by the European Union Administration. See Juan Delgado-Moreira, "Cultural Citizenship and the Creation of European Identity," in *Electronic Journal of Sociology* (1997).

[20] Renato Rosaldo, "Cultural Citizenship in San Jose, California," in *PoLAR*, 17:2 (1994):57-63./ 61

[21] Graham Murdoch, "Rights and Representations: public discourse and cultural citizenship," in Jostein Gripsrud, *Television and Common Knowledge* (London: Routledge, 1999): 9; Alberto Melucci, *Nomads of the Present: Social Movements and Individual Needs in Contemporary Society* (London: Hutchinson Radius, 1989); see also his "Social Movements and the Democratization of Everyday Life," in John Keane, ed., *Civil Society and the State: New European Perspectives* (London: Verso, 1988)

[22] Juan Delgado-Moreira

[23] Stevenson, 7

[24] Stephanie Hemelryk Donald, "History, Entertainment, Education and jiaoyü : A Western Australian perspective on Australian children's media and some Chinese alternatives," in *The International Journal of Cultural Studies* 4:3 (2001): 279-299

[25] Toby Miller, *Technologies of Truth: Cultural Citizenship and the Popular Media* (Minneapolis: University of Minnesota Press, 1998)

[26] Nelson Minar, Distributed Systems Typologies: Part One
http://www.openP2P.com/pub/a/P2P/2001/12/14topologies_one.html

[27] Clay Shirky, "What Is P2P and What Isn't?" http://www.openP2P.com/pub/a/P2P/11/24/shirky1-whatisP2P.html

[28] Ibid.

[29] Ibid. Shirky's estimate is based on 100 million of the net's 300 million PCs, each with a 100 Mhz chip and a 100Mb drive.

[30] While one might technically consider telephones a form of P2P networking, the term is more generally reserved for the computer-based systems that emerged from this environment less than a decade ago and served as the underpinning for a series of radical developments. How, then, might we know it when we stumble across it? Shirkey has provided the following tip:

> If you're looking for a litmus test for P2P, this is it: 1) Does it treat variable connectivity and temporary network addresses as the norm, and 2) does it give the nodes at the edges of the network significant autonomy? If the answer to both of those questions is yes, the application is P2P. If the answer to either question is no, it's not P2P.   Another way to examine this distinction is to think about ownership. It is less about "Can the nodes speak to one another?" and more about "Who owns the hardware that the service runs on?" The huge preponderance of the hardware that makes Yahoo work is owned by Yahoo and managed in Santa Clara. The huge preponderance of the hardware that makes Napster work is owned by Napster users and managed on tens of millions of individual desktops. P2P is a way of   decentralizing not just features, but costs and administration as well. (Clay Shirky, "What Is P2P and What Isn't?")

Such a definition underscores the dispersed and collaborative nature of P2P networks, as well as distinguishing them from associations with centralization and hierarchization. Thus, centralized hardware ownership vs distributed hardware ownership is a crucial test, as is the notion of a permanent IP address vs a dynamic IP address. Although, as we shall see, certain P2P applications are currently under attack by a coalition of government and media industry forces in terms of an array of hot issues such as intellectual property protection, and anti-child pornography and anti-terrorism campaigns, one of the more insidious (although perhaps inadvertent) routes to undermining these networks regards the dynamic IP address. There is now a move back to permanent IP addresses marketed to owners of multiple communication devices (computers, palm tops, telephones) as well as to global travelers: many machines, many locations, one address. Such a move has obvious advantages, but it also demolishes one of the key enabling characteristics of current P2P applications. Needless to say, permanent addresses have a strong attraction to the highly concentrated media industry (known somewhat more critically as the "content cartel"), and the issue is quietly emerging as one of its two preferred strategies for the hardware industry (the other being hard-wired encryption devices).

[31] On the disciplining of listening through genres, see Simon Frith, *Performing Rites: On the Value of Popular Music* (Cambridge: Harvard University Press, 1996); on the implications of networked distribution to availability and costs, see Scott McCloud's "I Can't Stop Thinking,"
http://www.scottmccloud.com/comics/icst/index.html

[32] And they are in an equal state of paralysis with regard to new business models. Historical precedent – the introduction of the audio and video recorder to the consumer market, for example – suggests that new distribution technologies, if appropriately exploited, may have the capacity to greatly expand market share and profits, and thus renders the content industry's paralysis as nothing short of strange.

[33] Tanjev Schultz, "Interactive Opinions in Online Journalism: A Content Analysis of 100 Online US Newspapers," in Journal of Computer Mediated Communication 5:1 (1999) http://www.ascusc.org/jcmc/vol5/issue1/schultz.html

[34] Anita J. Chan provides an excellent overview of this evelopment and its implications. See her "Collaborative News Networks," (MSc Thesis, Comparative Media Studies, MIT, 2002) http://web.mit.edu/anita1/www/thesis/Index.html.

[35] New York Times, August 10 2002

[36] John Davidson, "Free Spirited Linux is Still Open for Business," *Financial Review*, 20 February 2002 http://afr.com/specialreports/report1/2002/02/20/FFXL7UF5TXC.html

[37] This blurring even extends into the realm of networked culture. As evidenced by Amazon's reliance on open source software and its stimulation of a community of reader-reviewers, the traditional business community has not been slow to explore the possibilities of P2P applications. The adaptation process has sometimes missed the larger point – as Bertelsmann's reworking of *Napster* suggests. Yet the development of viral marketing strategies testifies to the increasingly insightful use of participatory (but not necessarily P2P) networks in the interests of traditional business ends. Word of BMW's on-line films, featuring the work of directors such as Ang Lee, Guy Ritchie, and John Frankenheimer, and starring an automobile, is sent from person to person rather than being promoted by BMW itself. YaYa's viral campaign is based on the circulation of on-line computer games, elegantly compressed to work smoothly even on 56K modems. The games require certain choices – the selection of Nike sportswear or certain features on a GM car – at which point the player can engage in a skiing competition or car race, in turn sending the results to friends, and thus spreading the advertisement or marketing query on to an ever-larger circle of friends. Such developments demonstrate, as if such demonstration were needed, that networked technology has no inherent radicalizing or even transgressive qualities.

[38] Joel Reidenberg, "Governing Networks and Rule-Making in Cyberspace," in Brian Kahin and Charles Nesson, eds., *Borders in Cyberspace: Information Policy and Global Information Infrastructure* (Cambridge: MIT Press, 1999): 85

[39] Toshio Yamagishi and Karen Cook, "Generalized Exchange and Social Dilemmas, "Social Psychology Quarterly 56:4 (1993): 235-248. On the relative merits of terms such as 'generalized exchange' and 'gift economy' see Peter Kollock, "The Economies of Online Cooperation: gifts and public goods in cyberspace," in Marc D. Smith and Peter Kollock, Communities in Cyberspace (London: Routledge, 1999): 220-239.

[40] Marcel Maus, The Gift (London: Routledge and Keegan Paul, 1969/1935); James Carrier, "Gifts, Commodities, and Social Relations: A Maussian View of Exchange," *Sociological Forum* 6:1 YEAR 119-136; Duran Bell, "Modes of Exchange: Gift and Commodity," *Journal of Socio-Economics* 20:2 (1991):155-167

[41] Richard Barbrook, "The High Tech Gift Economy," in *FirstMonday* www.firstmonday.dk/issue3_12/barbrook/   In his review of Pierre Levy's *Collective Intelligence*, Barbrook restates his thesis of the scientific/academic ethos behind the internet gift economy, positioning it as a critique of Levy's notion of collective intelligence: "By ignoring the world of work, Levy crucially cannot explain why the net was developed as a hi-tech gift economy in the first place. Invented by scientists, tis technology was originally designed to facilitate a specific way of working. In their specialist fields, the direct application of markets hampers research. Instead of trading with each other, scientists "give" articles to journals and "present" papers at conferences. Now these people are no more moral than anyone else. In their professions, the gift economy is adopted because it is a more effective way of working. When the net expanded beyond its founders, its new users have unconsciously adopted this scientific behavior. Although commercial interests are using the net, many others have discovered the benefits of working within the hi-tech gift economy. Rather than forming a 'collective intelligence,'"cyberspace is facilitating new types of collective labor."

[42] David Johnson and David Post, "The Rise of Law on the Global Network," in Kahin and Nesson, 644, 646-7.

[43] The sense of functionality implied here is quite broad, and could include the persuasive use of the Internet in the sense of political advertising or even lobbying. My point is not to offer a refined definition of various functionalities, but rather to point to directions or tendencies in the use of the internet in the political (and particularly governance) sphere.

[44] See Pablo Boczkowski, "Mutual Shaping of Users and Technologies in a National Virtual Community," in *Journal of Communications* (Spring 1999): 86-108; and Daniel Miller and Don Slater, *The Internet: An Ethnographic Approach* (New York: New York University Press, 2000); and David Elkins, "Globalization, Telecommunication, and Virtual Ethnic Communities," *International Political Science Review: RISP.* 18:2 (1997): 139-153

[45] Murdoch, 15

[46] There is a growing body of research emerging from different disciplines that deals with aspects of these issues. See for example, "Developments in the Law – The Law of Cyberspace II – Communities Virtual and Real: Social and Political Dynamics of Law in Cyberspace," *Harvard Law Review* 112:7 (1999) 1586-1610; D. Holmes, "Virtual Identity: communities of broadcast, communities of interactivity," *Communications Abstracts* 21:5 (1998); Anita Blanchard and Tom Horn, "Virtual Communities and Social Capital," in *Social Science Computer Review* 16:3 (1998): 293-308
[47] Levy, 39-55.