The Rise of Network Culture

Conclusion to [Networked Publics](), forthcoming 2007.

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[http://varnelis.net/the_rise_of_network_culture]()

Taken together, the essays in this book point to the development of a new societal condition spurred by the maturing of the Internet and mobile telephony. In this conclusion, I will reflect on that state, which I will call "[network culture,]()" as a broadly historical phenomenon. Defined by the very issues that these essays raise—the simultaneous superimposition of real and virtual space, the new participatory media, concerns about the virtues of mobilization versus deliberation in the networked public sphere and emerging debates over the nature of access—network culture can also reveal broader societal structures just as modernism and postmodernism did in their day.

If subtle, this shift in society is real and radical. During the space of a decade, the network has become the dominant cultural logic. Our economy, public sphere, culture, even our subjectivity are mutating rapidly and show little evidence of slowing down the pace of their evolution. When we buy our first cell phone we are unaware of how profoundly it will alter our lives. Soon, we find that shopping lists are hardly necessary when it is possible to call home from the store. Similarly, dinner plans with friends seem overly formal when they can be made by phone at the last minute, on the way to a particular neighborhood. When telepresence makes constant touch possible, moving out-of-state no longer means saying goodbye to close friends and family. One morning we note with interest that our favorite newspaper has established a Web site, another day we decide to stop buying the paper and just read the site, then we realize that we are spending as much time reading blogs as we are reading the paper. Or perhaps, as happened to me once, we visit a friend's [web page]() only to learn that he has passed away suddenly. Individually, such everyday narratives of how technology reshapes our everyday lives are minor. Collectively, they are deeply transformative.

Network culture is not merely an extension of the old "information age."[1] On the contrary, it is markedly unlike the digital model of computation that prevailed in the 1980s and 1990s. In *Digital Culture,* his incisive historical survey of the first computational era and the developments that led up to it, Charlie Gere describes the digital as a socioeconomic phenomenon instead of merely as a technology. The digital, he observes, is fundamentally a process of abstraction, reducing complex wholes into more elementary units. Tracing these processes of abstraction to the invention of the typewriter, Gere identifies digitization as a key process of capitalism. By removing the physical aspect of commodities from their representations, digitization enables capital to circulate much more freely and rapidly. Thus, Gere suggests, the universal Turing machine|a hypothetical computer first described by Alan Turing in 1936, capable of being configured to do any task|is a model for not only the digital computer but also for the universalizing ambitions of digital culture.[2] But the digital culture that Gere describes is rapidly being supplanted by network culture.

Today, networked connection replaces abstraction. Information is less the product of discrete processing units than the outcome of the networked relations between them, links between people, between machines, and between machines and people. Contrasting the physical sites in which the digital and the network operate illuminates the difference between the two. The site for the former is the desktop microcomputer, displaying information through a heavy CRT monitor, connected to the network via dial-up modem or perhaps through a high latency first generation broadband connection. In our own day, there is no such dominant site. To be sure, the Wi-Fi enabled laptop is now the most popular computing platform, but the mobile phone, *Keitai,* and smart phone compete with and complement it. What unites these machines is their mobility and interconnectivity, making them more ubiquitous companions in our lives, key interfaces to global telecommunicational networks. In a prosaic sense, the Turing machine is already a reality. A supercomputer, smart phone, laptop, iPod, wireless router, xBox game platform, Mars rover, video surveillance camera, television set-top box, and automobile computer are essentially the same device, running—or capable of running—operating systems derived from UNIX such as Linux or VxWorks and becoming specific only in terms of scale and their mechanisms for input and output, for sensing and acting upon the world. Instead, the new technological grail for industry is a universal, converged network, capable of distributing audio, video, Internet transmissions, voice, text chat and any other conceivable networking task.

Increasingly, the immaterial production of information and its distribution through the network dominate the global economy. To be sure, we certainly still make physical things and that making still has consequences. Far from being free of pollution, Silicon Valley contains more EPA superfund sites than any other county in the nation.[3] Nevertheless, regardless of our continued dependency on the physical, the production of

information dominates economies today, even at the cost of obscuring the global environmental consequences of material production.

Although other ages have been networked, ours is the first modern age in which the network is the dominant organizational paradigm, supplanting centralized hierarchies.[4] The ensuing condition, as Manuel Castells suggests in *The Rise of the Network Society*, is the product of a series of changes: the change in capital in which transnational corporations turn to networks for flexibility and global management, production, and trade; the change in individual behavior, in which networks have become a prime tool individuals seeking freedom and communication with others who share their interests, desires, and hopes; and the change in technology, in which people worldwide have rapidly adopted digital technology and new forms of telecommunication in everyday life.[5]

But the network goes even further, extending deeply into social and cultural conditions. As network culture supercedes digital culture, it also supercedes the culture of postmodernism outlined by Fredric Jameson in his seminal essay "Postmodernism, or the Cultural Logic of Late Capitalism," first written in 1983 and later elaborated upon in a book of the same title. Postmodernism, as Jameson explains, was not merely a stylistic movement but rather a broad cultural condition stemming from a fundamental change in the mode of production, the phase of history that economist Ernest Mandel called "late capitalism." Both Mandel and Jameson argued that in this era society had been thoroughly colonized by capital, any remaining pre-capitalist forms of life absorbed.[6]

Mandel situated late capitalism within a historical model of long wave Kondratieff cycles. These economic cycles, comprised of twenty-five years of growth followed by twenty-five years of stagnation provide a compelling model of economic history following a certain rhythm: fifty years of Industrial Revolution and handcrafted steam engines culminating in the political crises of 1848, fifty years of machined steam engines lasting until the 1890s, electric and internal combustion engines underwriting the great modern moment that culminated in World War II and the birth of electronics marking the late capitalism of the postwar era.[7]

Jameson observed that under late capitalism, everything was interchangeable, quantified and exchangeable for money or other items. After the most distant reaches of the globe and most archaic work practices were reshaped by investment and the market as well as the thorough capitalization of art, culture, and everyday life, Jameson observed a new condition of postmodernism. In his analysis, the thorough capitalization of art, culture, and everyday life led to a new condition in which any separation between interior and exterior, even in the subject itself, disappeared and, with it, the end of any place from which to critique or observe. Late capitalism, Jameson concluded, would produce postmodernism, a cultural logic dominated by the schizophrenic play of the depthless, empty sign.

Under late capitalism, Jameson suggested, even art lost its capacity to be a form of resistance. Postmodernism, undid all meaning and any existential ground outside of capital. Depth, and with it emotion, vanished, to be replaced by surface effects and intensities. In this condition, even alienation was no longer possible. The subject became schizophrenic, lost in the hyperspace of late capital.

No longer a place of resistance, art—under postmodernism—was colonized by capital. The result was a cross-contamination as investors began to see art as something to capitalize while artists, fascinated by the market, began to freely intermingle high and low. So too, with authenticity bankrupt as a position and capital calling for the easy reproducibility and marketing of art, artists began to play with simulation and reproduction. Others, finding themselves unable to reflect directly on the condition of late capital but still wanting to comment upon it, turned to allegory, which foregrounded its own fragmentary, incomplete state instead.

Under postmodernism, history lost its meaning and purpose, both in popular culture and in academia. In the former, history was instead recapitulated as nostalgia, thoroughly exchangeable and made popular in the obsession with antiques as well as in retro films such as *Chinatown, American Graffiti, Grease,* or *Animal House*. In academia, a spatialized theory replaced historical means of explanation as a means of analysis.

Modernism's concern with its place in history was inverted by postmodernism, which, as Jameson points out, was marked by a waning of historicity, a general historical amnesia. But if postmodernism undid its ties to history to an even greater extent than modernism, it still grounded itself in history, both in name—which referred to its historical succession of the prior movement—and in its delight in poaching from both the pre-modern past and the more historically distant periods of modernism itself (e.g. the Art Nouveau, Russian revolutionary art, Expressionism, Dada, and so on).

Today, network culture succeeds postmodernism. It does so in a more subtle way. It does not figure itself as

an "ism" that would lay claim to the familiar territory of manifestos, symposia, definitive museum exhibits and so on, but rather servers as a more emergent phenomenon. That we should have moved away from postmodernism should be no surprise. To insist that late capitalism is still the economic regime of our day would be to suggest that it be the longest lasting of all such cycles. Instead, I see a critical break taking place in 1989 with the fall of the Soviet Union and the integration of China into the world market instantiating the ("new") world order of globalization while the commercialization of the Internet set the stage for massive investment in the crucial new technology necessary for the new, fresh cycle. The delirious dot.com boom and the more docile, seemingly more sustainable upswing of "Web 2.0" become legible as the first and second booms of a Kondratieff cycle on the upswing. It is this second upswing, then, in which network culture can be observed as a distinct phenomenon that concerns me in this essay.

The closest thing we have to a synthetic understanding of this era is the political theory laid out in Michael Hardt and Antonio Negri's *Empire*. In their analysis, the old world order based on the imperialist division of the world into spheres of influence has been superceded by Empire, a diffuse power emanating not from any one place, but rather from the network itself. This power, however, stems not only from the economic force of capital, but also must be constructed by juridical means. To ensure the mobility and flexibility of capital across borders, Empire uses transnational governing bodies such as the United Nations to call for a universal global order. In doing so, however, Empire reinscribes existing hierarchies and, as the wars in the Gulf show, has to resort to violence. Hardt and Negri identify networked publics, which they call "the multitude" as a counter-force. For them, the multitude is a swarm intelligence, able to work within Empire to demand the rights of global workers. As we have described throughout this book, this networking of individuals worldwide gives them new links and new tools with which to challenge the system, but as the chapter on politics suggests, whether or not networked publics can come together to make decisions democratically is still unclear.[8]

Empire is a political theory, but it lacks a broader cultural theory. But although postmodernism anticipated many of the key innovations of network culture, our time is distinctly different.[9] In the case of art and architecture, Jameson suggests, a widespread reaction to the elitism of the modern movement and the new closeness between capital and culture led to the rise of aesthetic populism. Network culture exacerbates this condition as well, dismissing the populist *projection* of the audience's desires onto art for the *production* of art by the audience and the blurring of boundaries between media and public. If appropriation was a key aspect of postmodernism, network culture almost absent-mindedly uses remix as its dominant form. A generation after photographer Sherri Levine re-appropriated earlier photographs by Walker Evans, dragging images from the Internet into PowerPoint is an everyday occurrence and it is hard to remember how radical Levine's work was in its redefinition of the Enlightenment notions of the author and originality.[10] As Lev Manovich writes, "If a traditional twentieth century model of cultural communication described movement of information in one direction from a source to a receiver, now the reception point is just a temporary station on information's path."[11]

The nostalgia culture so endemic to postmodernism has been undone, our experience of a world still in the throes of modernization long gone. Unable to periodize, network culture disregards both modern and pre-modern equally and with it too, the interest in allegory as well.[12] Instead of nostalgia and allegory network culture delivers remix and reality, shuffling together the diverse elements of present-day culture, blithely conflating high and low—if such terms can even be drawn anymore in the Long Tail of networked micro-publics—while poaching its "as found" aesthetics from the world. Network television is dominated by reality shows, film by documentaries such as *Supersize Me, An Inconvenient Truth* and *Fahrenheit 911.* On the Internet, popular sites such as eBaum's World or YouTube broadcast videos that claim to be true, such as scenes of people doing incredibly stupid or dangerous things, and video blogs. When fiction is deployed on Internet video sites, it is either comic parody or impersonation for viral marketing methods (e. g. Lonelygirl15 or littleloca). If there is a dominant form of fiction today, it is video games, which by 2004 generated more than Hollywood's box-office receipts in revenues, but video games provide a new sort of fiction, a virtual reality in which the player can shape his or her own story through a process that is less original and more a matter of a remixing a set of existing plotlines and elements. In massively multiplayer online role playing games such as World of Warcraft—which earns some $1 billion a year in subscription fees, a vast sum compared to the $600 million that Hollywood's most successful product, Titanic ever earned—the ability to play with vast numbers of other individuals in immense landscapes thoroughly blurs the boundaries of reality and fiction.[13]

To be clear, the tactics of remix and the rapt fascination with reality aren't just found in GarageBand and YouTube mash-ups, they form an emerging logic in the museum and the academy as well. Art itself, long the

bastion of expression, is now dominated by straightforward photography while some of the most interesting cultural work can be found in research endeavors that could easily take place in Silicon Valley rather than in the gallery (Locative Media), by (sometimes carefully faked) studies of the real (the Museum of Jurassic Technology, the Center for Land Use Interpretation, Andrea Fraser, Christoph Buchel, etc.). Other works, such as ambient forms or Andrea Zittel's environments, clothing, restaurants, and High Desert Test Sites suggest another strategy of new realism in which art becomes a background to life. Similarly, architecture has abandoned utopian projections, nostalgic laments, and critical practice alike for a fascination with the world. Arguably the world's foremost practitioner, Rem Koolhaas, produces book after book matter-of-factly announcing his fascination with Shopping, the Pearl River Delta, or Lagos, Nigeria.

What of the subject in networked culture? Under modernism, for the most part, the subject is autonomous, or at least subscribes to a fantasy of autonomy, even if experiencing pressures and deformations from the simultaneity generated by that era's technologies of communication and increasing encounters with the Other. In postmodernism, these pressures couple with a final unmooring of the self from any ground as well as the undoing of any coherent temporal sequence to force the subject to schizophrenically fragment. With network culture, these shards of the subject take flight, disappearing into the network itself. This is a development of the condition that Castells describes in *The Rise of the Network Society* when he concludes that contemporary society is driven by a fundamental division between the self and the net. To support his argument, Castells turns to Alain Touraine: "in a post-industrial society, in which cultural services have replaced material goods at the core of its production, *it is the defense of the subject, in its personality and in its culture, against the logic of apparatuses and markets, that replaces the idea of class struggle.*"[14] But as Deleuze presciently described in his "Postscript on Societies of Control," today the self is not so much constituted by any notion of identity but rather is reduced to "dividuals."[15] Instead of whole individuals, we are constituted in multiple micro-publics, inhabitants of simultaneously overlapping telecocoons, sharing telepresence with intimates in whom we are in near-constant touch, members of the 64 clustered demographics units described by the Claritas corporation's PRIZM system.

In network theory, a node's relationship to other networks is more important than its own uniqueness. Similarly, today we situate ourselves less as individuals and more as the interstices of multiple networks composed of both humans and things. This is easily demonstrated through some everyday examples. First, take the way the youth of today affirm their identities. Instead of tagging buildings with expressive names, teens create pages on social networking sites such as MySpace and Facebook. On these pages they list their interests as a set of hyperlinked keywords directing the reader to others with similar interests. Frequently, page creators use algorithms to express (and thereby create) their identities, for example through a Web page that, in return for responses to a set of questions, suggests what chick-flick character the respondent most corresponds to.[16] At the most reductive, these algorithms take the form of simple questionnaires to be filled out and posted wholesale on one's page. Beyond making such links, posting comments about others and soliciting such comments can become an obsessive activity. Affirming one's own identity today means affirming the identity of others in a relentless potlatch. Blogs operate similarly. If they appear to be the public expression of an individual voice, private diaries exposed, in practice most blogs consist of material poached from other blogs coupled with pointers to others in one's network, e.g. trackbacks (notifications that a blogger has posted comments about a blog post on another blogger's blog) or blogrolls (the long lists of blogs that frequently border blog pages). With social bookmarking services such as del.icio.us or the social music platform last.fm, even the commentary that accompanies blog posts can disappear and one's public face turns into a pure collection of links. Engaging in telepresence by sending SMS messages to one's friends or calling family on a cell phone has the same effect: the networked subject is constituted by networks both far and near, large and small. Art—so long a bastion of identity and expression—changes in response to this condition. Rather than producing work that somehow channels their innermost being, artists, musicians, videographers and DJs act like switching machines, remixing sources and putting them out to the Internet for yet more remixing. Much like the contemporary media outlet, both the self and the artist of today is an aggregator of information flows, a collection of links to others.

Under network culture, then, the waning of the subject that began under postmodernism proves ever greater. But whereas under postmodernism, being was left in a free-floating fabric of emotional intensities, today it is found in the net. The Cartesian, "I think therefore I am," dissolves in favor of an affirmation of existence through the network itself, a phantom "individuality" that escapes into the network much as meaning escapes into the Derridean network of *différance*, words defined by other words, significance endlessly deferred in a ceaseless play of language.[17] The division between the self and the Net that Castells observed a decade ago is undone.

The networks that make up the contemporary self also include things. In Bruno Latour's analysis, things are key actors in the network, not merely objects that do our bidding. As things get smarter and smarter, they are ever more likely to take up larger parts of our "selves." An iPod is nothing less than a portable generator of affect with which we paint our environment sonically, creating a soundtrack to life. A Blackberry or telephone constantly receiving text messages encourages its owner to submit to a constantly distracted state, a condition much lamented by many.[18]

It is in this context that networked publics form. Of all the changes that network culture brings us, this is likely to be the most significant, a distinction that makes our moment altogether unlike any other in three centuries. Beginning with the Enlightenment era, the public came to be understood as a realm of politics, media and culture, a site of display and debate open to every citizen while, in turn, the private was broadly understood as a realm of freedom, inwardness, and individuality. The public sphere was the space in which bourgeois culture and politics played out, a theater for the bourgeois citizen to play his role in shaping and legitimating society. In its origin as a body that the king would appear to, the public is by nature a responsive, reflexive, and thereby a responsible and empowered body. Founded on the sovereign's need for approval during the contentious later years of the aristocracy (an approval that eventually was withdrawn), the public sphere served as a check on the State, a key force in civil society. In that respect, the public sphere served in the same capacity as media: at the same time that the newspaper, the gallery, the novel, the modern theater, music, and so on emerged, the public produced voices of criticism. And even if the equation of public space and public sphere would be a tricky one, by understanding media as a space (or conversely space as a medium), it was nevertheless possible to draw a rough link between the two.

As many theorists have observed, the twentieth century was witness to a long, sustained decline in the public sphere. In Habermas's analysis, this came about due to the contamination of the public sphere by private matters, most crucially its colonization by capital and the consequent flight of the media from a space of discourse to a commodified realm. During the twentieth century, media concentrated in huge conglomerates that were more interested in the marketing of consensus than in a theater of deliberation with little use for genuinely divergent positions. Instead mass media sought consensus in the middle ground, the political apparatus that Arthur Schlesinger called "The Vital Center."[19] The model of the public became one-way, the culture industry and the political machine expecting approval or, at most, dissent within a carefully circumscribed set of choices.[20] The public is an audience, by nature reactive, consumers of culture and politics, at home not in the one-way, space in front of the TV where response remains private or, at best, filtered through the Nielsen rating system, but rather in a public venue such as the theater, gallery, public square, café, salon, or periodical, a space in which the private individuals comprising the audience can make their voices heard in a dialogue. Public space was not left unmolested. On the contrary, it was privatized, thoroughly colonized by capital, less a place of display for the citizen and more a theater of consumption under high security and total surveillance.[21] Under postmodernism the condition seemed total, the public privatized, reduced to opinion surveys and demographics. If there was hope for the public sphere, it came in the form of identity politics, the increasing voices of counterpublics composed of subaltern peoples (in the developed world this would have been nonwhites, gays, feminists, youth, and so on), existing in tension with the dominant public. But if counterpublics could define and press their cases in their own spheres, for the broader public they were marginalized and marginalizing entities, defined by their position of exclusion.[22] Towards the end of postmodernism in the early 1990s, even identity politics became colonized, understood by marketers as another lifestyle choice among many.[23] But if this was the last capitulation of the old publics as an uncommodified realm for discourse, it was also the birth of the networked publics.

Today, we inhabit multiple overlapping networks, some composed of those very near and dear to us, others at varying degrees of physical remove. The former of these networks are private and personal, extensions of intimate space, incapable of forming into networked publics. Instead, interest communities, forums, newsgroups, blogs, and so on are the sites for individuals who are generally not on intimate terms to encounter others in public. As we have described throughout the book, these networked publics are not mere audiences of consumers. On the contrary, today political commentary, propaganda, cultural criticism are generated as much from below as from above. From the deposal of Trent Lott to Rathergate, networked publics have drawn attention to issues that traditional media outlets missed or were reluctant to tackle.

The ideal model for networked publics, is as, Yochai Benkler suggests, that of a "distributed architecture with multidirectional connections among all nodes in the networked information environment." This vision of the network, commonly held as a political ideal for networked publics and sometimes misunderstood as the actual structure on which the Internet is based is taken from RAND researcher Paul Baran's famous model of the distributed network. Where centralized networks are dominated by one node to which all others are

connected and decentralized networks are dominated by a few key nodes in a hub and spoke network, under the distributed model, each node is equal to all others.[24] Baran's diagram has been taken by taken up as a foundation myth for the Internet, but not only was Baran's network never the basis for the Internet's topology (moreover it was merely a communication system, designed to ensure survival of top-down command in the post-apocalyptic battlefield), it bears little resemblance to the way networked publics are organized. Benkler concedes this, pointing out that the distributed model is merely ideal and if we seek a networked public sphere with "everyone a pamphleteer," we will be disappointed. Networked publics are by no means purely democratic spaces in which every voice can be heard. That would be cacophony. But, Benkler continues, if we compare our current condition to the mass media of the 1990s and earlier as a baseline instead, we can observe real changes. Barriers for entry into the public sphere *have* been greatly reduced. It *is* possible for an individual or group of individuals to put out a message that could be heard globally with relatively little expense.[25]

There are very real threats to the networked public sphere and Benkler, like many other theorists, warns of them.[26] In terms of infrastructure, the structure of the Internet is decentralized, not distributed, which is why China can censor information it deems inappropriate for public consumption or, for that matter, why the United States' National Security Agency can monitor private Internet traffic. So far, networked publics have found ways of routing around such damage, providing ways of getting around China' censorship and exposing the NSA' infamous room at the AT&T switching station in San Francisco.[27]

But centralization that would emerge from within networked publics is also a danger. Manuel de Landa points out that networks do not remain stable, but rather go through different states as they evolve.[28] Decentralized and distributed models give rise to centralized models and vice versa as they grow. The emergence of networked publics just as mass media seemed dominant is a case in point. In his work on blog readership, Clay Shirky observes that diversity plus freedom of choice results in a power-law distribution. Thus, a small number of well-known bloggers attract the majority of the readers. If tag-oriented search engines like Technorati or del.icio.us attempt to steer readers into the Long Tail of readership, they also reinforce the A-list by making evident the number of inbound links to any particular site.[29] Moreover, even if, such sites, together with Google, MyTube, Netflix, and iTunes and other search engines successfully redirect networked publics to the Long Tail, another disconcerting outcome is even harder to overcome, an A-list of big aggregators such as, both for blogs and for all sites.

The Long Tail may prove to be a problem for another reason, what Robert Putnam calls "cyberbalkanization."[30] Given the vast number of possible clusters one can associate with, it becomes possible, ultimately, to find a comfortable niche with people just like oneself, among other individuals whose views merely reinforce one' own. If the Internet is hardly responsible for this condition, it can exacerbate it while giving us the illusion that we are connecting with others. Through portals like news.google.com or my.yahoo.com and, even more so, through RSS readers, Nicholas Negroponte' vision of a personalized newspaper freshly constructed for us every morning, tailored to our interests, is a reality. Even big media, under pressures of post-Fordist flexible consumption, has itself fragmented into a myriad of channels. But this desire for relevance is dangerous. It is entirely possible to essentially fabricate the outside world, reducing it to a projection of oneself. Rather than fostering deliberation, blogs can simply reinforce opinions between like-minded individuals. Conservatives talk to conservatives while liberals talk to liberals. Lacking a common platform for deliberation, they reinforce existing differences. Moreover, new divisions occur. Humans are able to maintain only a finite number of relationships and as we connect with others at a distance who are more like us, we are likely to disconnect with others in our community who less like us. Filters too can lead to grotesque misrepresentations of the world, as in the case of happynews.com ("Real News. Compelling Stories. Always Positive.").

Another salient aspect of network culture is the massive growth of non-market production. Led by free, open source software such as the Linux operating system (run by 25% of servers) and the Apache web server (run by 68% of all web sites), non-market production increasingly challenges the idea that production must inevitably be based on capital. Crafted by thousands of programmers who band together to create software that is freely distributed and easily modifiable, non-market products are viable as competitors to highly capitalized products by large corporations. Similarly, as our chapter on the topic points out, cultural products are increasingly being made by amateurs pursuing such production for networked audiences. Sometimes producers intend such works to short-circuit traditional culture markets, speeding their entry into the marketplace or getting past barriers of entry. At other times, such as in the vast Wikipedia project, however, producers take on projects to attain social status or simply for the love of it. Often these producers believe in the importance of the free circulation of knowledge outside of the market, giving away the rights to free

reproduction through licensing such as Creative Commons and making their work freely accessible on the Internet. Non-market production offers a model of non-alienated production very different from capitalism, but it too, faces challenges. Chief among these is new legislation by existing media conglomerates aiming to extend the scope of their copyright and prevent the creation of derivative work. Even if advocates of the free circulation of cultural goods are successful in challenging big media, it is still unclear whether the burgeoning fan culture can be truly critical or, if it only reinscribes, to a degree that Guy Debord could not have envisioned, the colonization of everyday life by capital, with debates about resistance replaced by debates about how to remix objects of consumption. Moreover, the dominance of big aggregators such as YouTube, iTunes, Amazon, or Google suggests that if old big media outlets are on the wane, new giants are on the ascendancy. For now most of these are catholic in what content they include, but it is entirely possible this may change. Furthermore, the possibility of consumers not only consuming media but producing it for the (new) media outlets suggests the possibility of new, hitherto unanticipated forms of spectacular exploitation.

By no means are network culture and the network economy limited to the developed world. If in this book, we have largely looked at the most developed parts of the world, that is the consequence of our own individual biases, upbringings, and fields of study. Network culture envelops the entire world. On the other hand, if imperialist capitalism used the developing world for its resources and hand labor and late capitalism exported manufacturing, networked capital now also exports intellectual labor and services.

But outsourcing is only a start. The mobile phone has revolutionized communication in the developing world, often leapfrogging existing structures. Due to the absence of any state apparatus that might regulate its phone system, Somalia, for example, has the most competitive communication market in Africa.[31] Nor is innovation in the developing world likely to cease. The developed world has only lukewarmly adopted mobile phones as platforms for connecting to the Internet but for the majority of the world' inhabitants living in the developed world, such devices are likely to be the first means by which they will encounter the Internet.[32] History suggests that as different societies pass through similar levels of economic development at different times, unique cultural conditions emerge (e.g. the first country to industrialize, Britain, developed the Arts and Crafts while some fifty years later Germans responded with the Deutscher Werkbund). The non-English speaking developing world' reshaping of the Internet through the mobile phone will almost certainly be utterly unlike what we have experienced here.
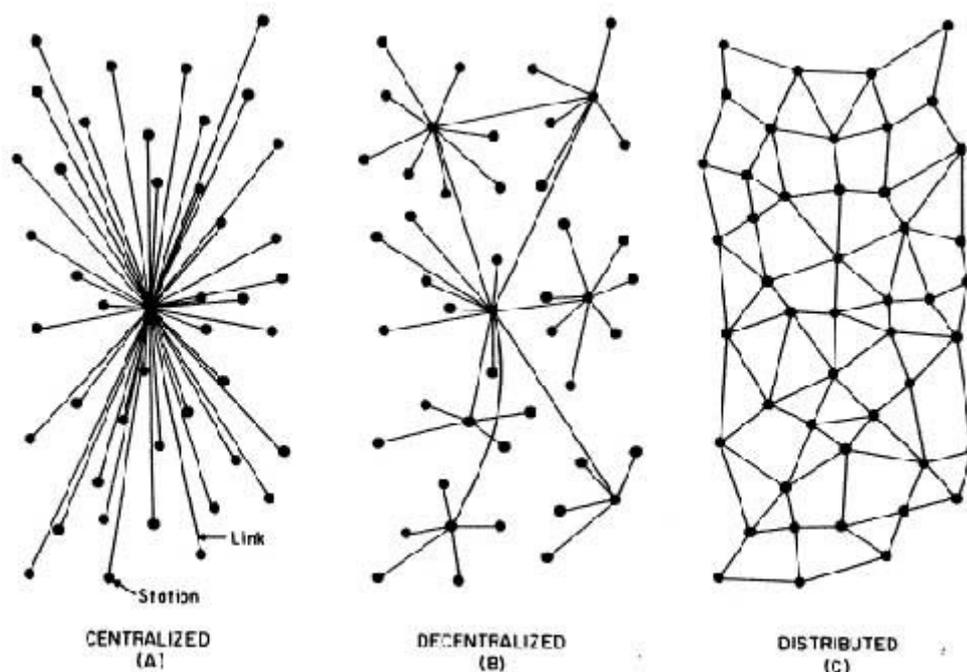

FIG. I — Centralized, Decentralized and Distributed Networks

All too often, discussions of contemporary society are depicted in the rosiest of terms. Sometimes this relentless optimism is a product of fatigue with outmoded models of criticism, sometimes this is just industry propaganda. But to be sure, network culture is not without its flaws. Many of these are nothing new, mere

extrapolations of earlier conditions. As with modernism and postmodernism before it, network culture is the superstructural effect of a new wave of capital expansion around the globe and with it comes the usual rise in military conflict. Today' new wars are network wars, with networked soldiers and unmanned search-and-destroy flying drones fighting networked guerillas in what Castells once dubbed the "black holes of marginality," spaces left outside the dominant network but increasingly organized by networks of their own. Closer to home, as Deleuze points out, the subtler, modulated forms of control in network culture mask themselves, above all in the idea that resistance is outmoded, that "Californian ideology" that depicts the network as the next site for a global Jefferson democracy, a libertarian space of freedom and equality.[33] Under network culture, the idea that the corporation has a soul, which Deleuze declared "the most terrifying news in the world," and that the primary route by which individuals can achieve self-realization is through work, are commonplaces, if perhaps treated with a little more skepticism since the collapse of the dot-com boom.[34] Moreover, as we explore the Long Tail, we are tracked and traced relentlessly, and as we are monitored, Deleuze concludes, we wind up internalizing that process, so as to better monitor ourselves.

If we have largely looked toward the Utopian, positive moment in network culture in our essays, we note new threats emerging as well. Sensing that their day is done and that the means of production are in our hands, many large media outlets are fighting to extend their power through legislation, especially through radical modifications of the copyright law to prolong its length and expand its scope. Moreover, if the Long Tail promises the end of big media outlets, it also threatens to install a new regime of big aggregators instead. For now, Google' motto is "Don't be evil," but given the corporation' recent compromise with China, allowing the government to censor its search engine results, precisely what is evil and what is not may be murkier than we might hope.[35] Another danger comes from telecoms, some of which dearly miss the monopoly status once enjoyed by AT&T and hope to find salvation by controlling the means of distribution, profiting from privileging certain network streams over others. Meanwhile RFIDs and the ever-growing trail of information that we leave behind digitally suggest that in the near-future our every action will be trackable not just by the government, but by anyone able to pay for that information as well. All the while, whether network culture plants the seeds of greater democratic participation and deliberation or whether it will only be used to mobilize already like-minded individuals remains an open question. The question we face at the dawn of network culture is whether we, the inhabitants of our networked publics, can reach across our micro-clustered worlds to coalesce into a force capable of understanding the condition we in and produce positive change, preserving what is good about network culture and changing what is bad, or whether we are doomed only to dissipate into the network.

[1]. Although there is much to recommend Carlota Perez, *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages* (Northampton, MA: E. Elgar, 2002), she fails to make a distinction between network society and the information age. Similarly, Tiziana Terranova, *Network Culture: Politics for the Information Age* (London: Pluto Press, 2004) identifies network culture but doesn't draw a distinction between it and the information age.

[2]. Charlie Gere, *Digital Culture* (London: Reaktion Books, 2002), 11.

[3]. Jim Fisher, "Poison Valley. (Part 1) Is Worker' Health The Price We Pay for High-Tech Progress? " and "Poison Valley (Part 2) What New Cocktails of Toxic Chemicals are Brewing In The High Tech Industry' "Clean Rooms"? And Will We Ever Know What Harm They Are Causing?" salon.com (July 30, 2001), / and (July 31, 2001) .

[4]. Saskia Sassen, *The Global City: New York, London, Tokyo*, second edition (Princeton: Princeton University Press, 2001), Manuel Castells, *The Rise of the Network Society*, second edition (New York: Blackwell Publishers, 2000), Michael Hardt and Antonio Negri, *Empire* (Durham: Duke University Press, 2000) and Manuel Castells, *The Internet Galaxy: Reflections on the Internet, Business, and Society* (Oxford: Oxford University Press, 2001).

[5]. Manuel Castells, *The Internet Galaxy*, 2.

[6]. Fredric Jameson, "Postmodernism, or the Cultural Logic of Late Capitalism." *New Left Review*, 146 (1984): 53-92, later republished in expanded form as Fredric Jameson, *Postmodernism, or, the Cultural Logic of Capitalism*. (Durham: Duke University Press, 1991).

[7]. Ernest Mandel, *Late Capitalism* (Verso: London, 1978).

[8]. Michael Hardt and Antonio Negri, *Empire* (Cambridge, MA: Harvard University Press, 2000).

[9]. Similarly, modernism anticipated postmodernism. On that phenomenon, see Jameson, "Postmodernism,"

56 and also Hal Foster, *The Return of the Real* (Cambridge, MA: MIT Press, 1996).

[10]. See Rosalind Krauss, *The Originality of the Avant Garde and Other Modernist Myths* (Cambridge, MA: MIT Press, 1985).

[11]. Lev Manovich, "Remix and Remixability," posted to nettime mailing list, November 16, 2005,

[12]. On nostalgia in postmodernism, see Jameson, "Postmodernism," 67. On allegory see Craig Owens, "The Allegorical Impulse: Toward a Theory of Postmodernism," parts 1 and 2 in Owens, *Beyond Recognition: Representation, Power, and Culture*. (Berkeley: University of California Press, 1992), 52-87. On periodization and network culture see my blog post "Network Culture and Periodization."

[13]. Ronald Grover and Cliff Edwards with Ian Rowley "Game Wars," *Business Week* (Feb 28, 2005), 60.

[14]. Castells, 22.

[15]. Gilles Deleuze, "Postscript on Control Societies ," *Negotiations: 1972-1990*, (New York: Columbia University Press, 1990), 177-182.

[16]. pink63, Quiz: What Character From a Chick Flick Are You?

[17]. cf. Jacques Derrida, *Writing and Difference* (Chicago: University of Chicago Press, 1978).

[18]. Patricia Pearson, "Are BlackBerry Users the New Smokers?" *USATODAY.com OPINION,* (December 12, 2006),

The way things act upon humans is nothing new, for example, the armor of the automobile allows normally meek spirits to engage road rage while, in a much more historically distant example, the invention of the book undid the need for highly developed memories, bringing to an end the culture of orality. See Walter J. Ong, *Orality and Literacy: The Technologizing of the Word*, New Accents (London: Routledge, 1991).

[19]. Arthur Schlesinger Jr., *The Vital Center: The Politics of Freedom* (Boston: Houghton Mifflin Company for The Riverside Press, Cambridge, 1949), Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment*, trans. John Cummings (New York: Continuum, 1991; first published in English translation, Herder and Herder, 1972, originally published in German as Dialektik der Aufklärung, Amsterdam: Querido, 1944).

[20]. On marketing during the 1960s, see for example, Thomas Frank, *The Conquest of Cool. Business Culture, Counterculture, and the Rise of Hip Consumerism,* (Chicago: University of Chicago Press, 1997).

[21]. The classic work here is Richard Sennett, *The Fall of Public Man* (New York: Alfred A. Knopf, 1976).

[22]. On counterpublics see Oskar Negt and Alexander Kluge, *Public Sphere and Experience. Toward an Analysis of the Bourgeois and Proletarian Public Sphere*, trans. Jamie Owen Daniel Peter Labanyi, and Assenka Oksiloff (Minneapolis: University of Minnesota Press, 1993).

[23]. See for example, Steven Kates, *Twenty Million New Customers: Understanding Gay Men's Consumer Behavior*, (Binghamton, NY: Haworth Press, 1998).

[24]. Paul Baran, On Distributed Communications, (technical report, RAND Corporation, 1964), Vol. 1, . For a discussion of Baran' model and the Internet see my "The Centripetal City: Telecommunications, the Internet, and the Shaping of the Modern Urban Environment," *Cabinet Magazine 17,* Spring 2004/2005 and Janet Abbate, *Inventing the Internet*, Inside Technology (Cambridge, MA: MIT Press, 1999).

[25]. Yochai Benkler,*The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006).

[26]. For example, Richard Rogers, *Information Politics on the Web* (Cambridge, MA: MIT Press, 2004).

[27]. See "Boing Boing' Guide to Defeating Censorship," and Ryan Singel, "Whistle-Blower Outs NSA Spy Room ," *Wired.com,*

[28]. Manuel De Landa, *A Thousand Years of Nonlinear History*, Swerve Editions (New York: Zone Books, 1997).

[29]. Clay Shirky, "Power Laws, Weblogs, and Inequality ," e-mail to Networks, Economics, and Culture mailing list, February 8, 2003.

[30]. Robert Putnam, "The Other Pin Drops," *Inc.* (May 16, 2000), 79, . Carl R. Sunstein, "Democracy and

Filtering," *Communications Of The ACM*, 47, no 12 (December 2004): 57-59.

[31]. "Somalia Calling," *The Economist*, December 2, 2005 January 6, 2006, 95.

[32]. Michael Minges. "Mobile Internet for Developing Countries." Proceedings of Internet Society Conference, Stockholm, Sweden, 3-5 June 2001,

[33]. Richard Barbrook and Andy Cameron, "The Californian Ideology."

[34]. Gilles Deleuze, "Postscript on Control Societies," 181.

[35]. Josh McHugh, "Google Vs. Evil," *Wired* 11.01 (January 2003).