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The meaning of network culture

Whereas in postmodernism, being was left in a free-floating fabric of emotional intensities, in contemporary culture the existence of the self is affirmed through the network. Kazys Varnelis discusses what this means for the democratic public sphere.

Not all at once but rather slowly, in fits and starts, a new societal condition is emerging: network culture. As digital computing matures and meshes with increasingly mobile networking technology, society is also changing, undergoing a cultural shift. Just as modernism and postmodernism served as crucial heuristic devices in their day, studying network culture as a historical phenomenon allows us to better understand broader sociocultural trends and structures, to give duration and temporality to our own, ahistorical time.

If more subtle than the much-talked about economic collapse of fall 2008, this shift in society is real and far more radical, underscoring even the logic of that collapse. 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. The global economic crisis only demonstrated our faith in the network and its dangers. Over the last two decades, markets and regulators had increasingly placed their faith in the efficient market hypothesis, which posited that investors were fundamentally rational and, fed information by highly efficient data networks, would always make the right decision. The failure came when key parts of the network — the investors, regulators, and the finance industry — failed to think through the consequences of their actions and placed their trust in each other.

The collapse of the markets seems to have been sudden, but it was actually a long-term process, beginning with bad decisions made longer before the collapse. Most of the changes in network culture are subtle and only appear radical in retrospect. Take our relationship with the press. One morning you noted with interest that your daily newspaper had established a website. Another day you decided to stop buying the paper and just read it online. Then you started reading it on a mobile Internet platform, or began listening to a podcast of your favourite column while riding a train. Perhaps you dispensed with official news entirely, preferring a collection of blogs and amateur content. Eventually the paper may well be distributed only on the net, directly incorporating user comments and feedback. Or take the way cell phones have changed our lives. When you first bought a mobile phone, were you aware of how profoundly it would alter your life? Soon, however, you found yourself abandoning the tedium of scheduling dinner plans with friends in advance, instead coordinating with them en route to a particular neighbourhood. Or if

your friends or family moved away to university or a new career, you found that through a social networking site like Facebook and through the every-present telematic links of the mobile phone, you did not lose touch with them.

If it is difficult to realize the radical impact of the contemporary, this is in part due to the hype about the near-future impact of computing on society in the 1990s. The failure of the near-future to be realized immediately, due to the limits of the technology of the day, made us jaded. The dot.com crash only reinforced that sense. But slowly, technology advanced and society changed, finding new uses for it, in turn spurring more change. Network culture crept up on us. Its impact on us today is radical and undeniable.

Network culture extends the information age of digital computing.¹ But it is also markedly unlike the PC-centred time that culminated in the 1990s. Indeed, in many ways we are more distant from the era of PC-centred computing than it was from the time of centralized, mainframe-based computation. To understand this shift, we can usefully employ Charlie Gere's insightful discussion of computation in *Digital Culture*. In Gere's analysis, the digital is a socioeconomic phenomenon as much as a technology. Digital culture, he observes, is fundamentally based on a process of abstraction that reduces complex wholes into more elementary units. Tracing this process of abstraction to the invention of the typewriter, Gere identifies digitization as a key process of capitalism. By separating the physical nature of commodities from their representations, digitization enables capital to circulate more freely and rapidly. In this ability to turn everything into quantifiable, interchangeable data, digital culture is universalizing. Gere cites the universal Turing machine — a hypothetical computer first described by Alan Turing in 1936, capable of being configured to do any task — as the model for not only the digital computer but also for that universalizing aspect of digital culture.²

But today connection is more important than division. In contrast to digital culture, in network culture information is less the product of discrete processing units than of the networked relations between them, of links between people, between machines, and between machines and people.

Perhaps the best way to illuminate the difference between digital culture and network culture is to contrast their physical sites. The digital era is marked by 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. The desktop machine is increasingly relegated to high-end applications such as graphic rendering and cinema-quality video editing, or is employed for specific, location-bound functions (at reception desks, to contain secure data, as point-of-sale terminals, in school labs, and so on) while the portable notebook or laptop has taken over as the most popular computing platform. Unlike the desktop, the laptop can be used anywhere: in the office, at school, in bed, in a hotel, in a café, the train or plane. Not only are networks an order of magnitude faster than they were in the dial-up days of the PC, but Wi-Fi makes them easily accessible in many locations. Smart phones such as the Blackberry, Google G1, and the iPhone complement the laptop, bringing connectivity and processing power to places that even laptops cannot easily inhabit, such as streets, subways or automobiles. But such ultra-portable devices are also increasingly competing with the computer, taking over functions that were once in the universal device's purview.³ What unites these machines is their mobility and their interconnectivity, making

them ubiquitous companions in our lives and key interfaces to global telecommunications networks. In a prosaic sense, the Turing machine is already a reality, but it takes the form not of one machine, but of many. With minor exceptions, the laptop, smart phone, cable TV set top box, game console, wireless router, iPod, iPhone, and Mars rover are the same device, becoming specific only in their interfaces, 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, voice, text chat, and any other conceivable networking task efficiently.

Increasingly, the immaterial production of information and its distribution through the network is the dominant organizational principle for the global economy. To be clear, we are far from the world of immaterial production. We manufacture physical things, even if increasingly that manufacturing happens in the developing world. Moreover, the ease of obtaining goods manufactured far away is due to the physical network of global logistics. Sending production offshore — itself a consequence of new network flows — may put it out of sight, but doesn't reduce its impact on the Earth's ecosystem. And, beyond global warming, even in the developed world there are consequences: Silicon Valley contains more EPA (US Environmental Protection Agency) Superfund sites than any other county in the nation.⁴ But as Saskia Sassen and Manuel Castells have concluded, regardless of our continued dependency on the physical, the production of information and the transmission of that information on networks is the key organizing factor in the world economy today. Although other ages have had their networks, ours is the first modern age in which the network is the dominant organizational paradigm, supplanting centralized hierarchies.⁵ The ensuing condition, as 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 behaviour, in which networks have become a prime tool for 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.⁶

As we might expect, the network goes even further, extending deeply into the domain of culture. In the same way that network culture builds on digital culture, it builds on 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. For Jameson, postmodernism was not merely a stylistic movement but rather a broad cultural determinant stemming from a fundamental shift to the socioeconomic phase of history that economist Ernest Mandel called "late capitalism". Both Mandel and Jameson concluded that society had been thoroughly colonized by capital under late capitalism and any remaining pre-capitalist forms of life had been absorbed.⁷ 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, provided 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.⁸

If digital culture flourished during late capitalism, then it should not be surprising that Jameson observed that in that period, everything became interchangeable, quantified and exchangeable. With the gold standard done away with, capital would be valued purely for its own sake, no longer a stand-in for something else, but pure value. The result was the disappearance of any exterior to capital and with it the elimination of any place from which to critique or observe capital. As a consequence, postmodern culture lost any existential ground or deeper meaning. 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.

As capital colonized art under late capitalism, Jameson suggested, even art lost its capacity to be a form of resistance. The result was cross-contamination, as art became not just an industry but an investment market, and artists, fascinated by the market, began to freely intermingle high and low. With the art market calling for easy reproducibility and marketing, and with authenticity no longer a viable place of resistance, some 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, foregrounding its fragmentary and incomplete nature.

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

Modernism's obsession 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 premodern past and the more historically distant periods of modernism itself (e.g. Art Nouveau, Russian revolutionary art, Expressionism, Dada).

Today, network culture succeeds postmodernism. It does so in a more subtle way. No new "ism" has emerged: that would lay claim to the familiar territory of manifestos, symposia, museum exhibits, and so on. Instead, network culture is a more emergent phenomenon.

Evidence that we have moved beyond postmodernism can be found in economic cycles. If late capitalism is still the economic regime of our day, it would be the longest lasting of all the Kondratieff cycles. Assuming the Kondratieff cycles are accurate, Jameson's theorization would come in a downswing on the cycle that began after World War II. Indeed, given the protracted economic downturn of post-Fordist restructuring during the 1970s and 1980s, this seems entirely reasonable. A critical break took 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. In turn, the commercialization of the Internet during the early 1990s set the stage for massive investment in the crucial new technology necessary for the new, fresh cycle. New Kondratieff cycles are marked by spectacular booms and bust — the delirious dot-com boom and the subsequent real estate boom are hence 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.

Even if we abandon Kondratieff cycles as overly determinist, no cultural movement since the turn of the twentieth century has lasted more than twenty–five years. It would require special dispensation to argue that we are still in the same moment as Jameson when he first formulated his thesis.

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 globe into spheres of influence has been superseded by "Empire", a diffuse power emanating not from any one place but, rather, from the network itself. Empire's economy is immaterial, but its power stems not only from the economic force of capital, it is also constructed by juridical means. As nation–states fade away under globalization, to ensure mobility and flexibility of capital across borders, Empire turns to transnational governing bodies such as the United Nations to establish a universal global order. In doing so, however, Empire re–inscribes existing hierarchies and, as the wars in the Middle East show, must resort to violence. Hardt and Negri identify networked publics, which they call the multitude, as a counterforce. For them, the multitude is a swarm intelligence, able to work within Empire to demand the rights of global workers. The networking of individuals worldwide gives them new links and new tools with which to challenge the system, but whether networked publics can come together to make decisions democratically is still unclear.⁹

If Empire is a political theory, my goal here is to sketch out a cultural theory of this networked age. Although postmodernism anticipated many of the key innovations of network culture, our time is distinctly different.¹⁰ 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, replacing the populist *projection* of the audience's desires onto art with 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 absentmindedly uses remix as its dominant process. A generation after photographer Sherri Levine reappropriated earlier photographs by Walker Evans, dragging images from the Internet into Photoshop 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.¹¹

Art critic Nicholas Bourriaud states that this lack of regard for originality is precisely what makes art based on what he calls postproduction appropriate to network culture. Works like Levine's still relied on notions of authorship and originality for the source of their meaning. More recently, Bourriaud explains, artists like Pierre Huyghe, Douglas Gordon, or Rirkrit Tiravanija no longer question originality but rather instinctively understand artworks as objects constituted within networks, their meaning given by their position in relation to others and their use.¹² Bourriaud observes that, like DJs or programmers, these artists "don't really 'create' anymore, they reorganize".¹³

The elements that artists choose to remix, however, tend to be contemporary.¹⁴ The nostalgia culture so endemic to postmodernism has been undone and a world in the throes of modernization is long gone. Unable to periodize, network culture disregards both modern and premodern equally, as well as the

interest in allegory.¹⁵ As T. J. Clark describes it, modernism is our antiquity, the unintelligible ruins of a vanished civilization. For Clark, like Jameson, modernism was rendered anachronistic once the process of modernization was complete.

Instead of nostalgia and allegory, network culture delivers remix, 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 micropublics — while poaching its as-found contents from the world.¹⁶ Correspondingly, reality increasingly dominates forms of cultural production: reality television shows are common, film documentaries such as *Supersize Me*, *An Inconvenient Truth*, and *Fahrenheit 911* proliferate, popular sites Web such as eBaum's World or YouTube are filled with videos that claim to be true. In *The Office*, the sitcom is reconfigured into a pseudo-documentary. When fiction is deployed on Internet video sites, it poses as reality for viral marketing methods (e.g. Lonelygirl15 or Little Loca). The vision William Gibson had in *Pattern Recognition* of an exquisite movie released cut-by-cut on the Internet is replaced by low-quality clips of snarky teenagers in front of webcams or low-quality clips of actors playing snarky teenagers in front of webcams.¹⁷

Video games are the dominant form of fiction today. By 2004 they generated more revenue than Hollywood made in box-office receipts. If the novel simulated the internal voice of the subject, video games produce a new sort of fiction and affirm the networked self through a virtual reality in which the player can shape his or her own story. In MMORPGs such as World of Warcraft — which earns some \$1 billion a year in subscription fees, compared that with the \$600 million earned by Hollywood's most successful product, *Titanic* — the ability to play with thousands of other individuals in immense landscapes thoroughly blurs the boundaries of reality and fiction and the boundaries of player and avatar.¹⁸

To be clear, the tactics of remix and the rapt fascination with reality are not just found in GarageBand and YouTube, 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 (like Andreas Gursky), and some of the most interesting work can be found in research endeavours that could easily take place in Silicon Valley rather than in the gallery (like locative media), by (sometimes carefully faked) studies of the real (like the Museum of Jurassic Technology, the Center for Land Use Interpretation, Andrea Fraser, Christoph Büchel, etc.). Other works, such as Ólafur Elfásson's 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. Rem Koolhaas, arguably the world's foremost practitioner, 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 by increasing encounters with the Other. In postmodernism, Jameson explains, these pressures couple with a final unmooring of the self from any ground as well as the undoing of any coherent temporal sequence, forcing the subject to schizophrenically fragment.

With network culture, these shards of the subject take flight, disappearing into the network itself. Less an autonomous individual and more of a construct of the relations it has with others, the contemporary subject is constituted within the network. This is a development of the condition that Castells observes 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 defence of the subject, in its personality and in its culture, against the logic of apparatuses and markets, that replaces the idea of class struggle."¹⁹

But the defence of the subject has dwindled in the time since Castells and Touraine formulated their critique. Instead, it is Gilles Deleuze's "Postscript on Societies of Control" that seems more appropriate to network culture. Here Deleuze suggests that the contemporary self is constituted not so much by any notion of identity, but rather of "dividuals".²⁰ Instead of whole individuals, we are made up of multiple micro-publics, inhabiting simultaneously overlapping telecocoon, sharing telepresence with intimates with whom we are in near-constant contact, classified into one of the sixty-four 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 product 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. 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 is.²¹ 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, in practice many blogs consist of material poached from other blogs coupled with pointers to others in the same network — for example *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 the user's public face turns into a pure collection of links. Engaging in telepresence by sending SMS messages to friends or calling family on a mobile phone has the same effect: the networked subject is constituted by networks both far and near, large and small. Like the artist, the networked self is an aggregator of information flows, a collection of links to others, a switching machine.

Along with this change in the self comes a new attitude toward privacy. Many blogs reconfigure the personal and the public, as individuals reveal details that had previously been considered private. The idea of locks on diaries today seems almost preposterous as individuals, particularly teenagers, discuss their most intimate — and illicit — details online.²² Meanwhile, advances in

computation and networking have made it possible to store data on individuals to a greater degree than ever imaginable. As debit cards and other technologies replace cash, our actions, be they online or out on the town, leave behind a trail of information. Corporations routinely track what websites individuals visit at work. In the wake of 9/11, governments have taken to recording more and more communications traffic, even when that recording is of questionable legality. As tracking increases, advances in data mining mean that those wishing to find information can do so more easily than ever before.

But if this degree of surveillance conjures images of George Orwell's *1984*, there has been relatively little protest. That Watergate undid Nixon seems impossible in retrospect. To some degree this is the case of what security researcher Ross Anderson calls "boiling the frog" (a frog in a pot of water doesn't notice when the temperature of the water is raised incrementally, and it boils to death).²³ Nevertheless, it also underscores the degree to which privacy is no longer important in this culture. As the subject is increasingly less sure of where the self begins and ends, the question of what should be private and what not fades.

In network culture, then, the waning of the subject that began under postmodernism grows ever greater. But whereas in 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 favour 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*, where words are defined by other words, significance endlessly deferred in a ceaseless play of language.²⁴ The division between the self and the net that Castells observed a decade ago is undone.

Nor are the networks that make up the contemporary self merely networks of people. On the contrary, they are also networks between people and things. In Bruno Latour's analysis, things are not merely objects that do our bidding but are key actors in the network. As things get smarter and smarter, they are ever more likely to make up larger parts of our "selves". An iPod is nothing less than a portable generator of affect with which we paint our environment, 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.²⁵

It is in this context that networked publics form.²⁶ Apart from the loss of the self, of all the changes that network culture brings us, the reconfiguration of the public sphere is likely to be the most significant, a distinction that makes our moment altogether unlike any other in three centuries. After the Enlightenment, 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 theatre for bourgeois citizens to play their 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 entity. 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. In that respect, the public sphere served in the same capacity as media: at the same time as the emergence of the newspaper, the gallery, the novel, modern theatre, music, and so on, the public produced voices of criticism. Even if the equation of public

space and public sphere was a problematic, 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 observed, the twentieth century was witness to a long, sustained decline in the public sphere. In Habermas' analysis, this came about due to the contamination of the public sphere by private matters, most crucially its colonization by capital and the consequent transformation of the media from a space of discourse to a commodified realm. As media concentrated in huge conglomerates more interested in the marketing of consensus than in a theatre of deliberation, and with little use for genuinely divergent positions, mass media sought consensus in the middle ground, the political apparatus that Arthur Schlesinger called "the vital centre".²⁷ 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.²⁸

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 theatre of consumption under high security and total surveillance.²⁹ In postmodernism, the condition seemed virtually 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 counter-publics composed of subaltern peoples (in the developed world this would have been non-whites, 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.³⁰ Toward the end of postmodernism in the early 1990s, even identity politics became colonized, understood by marketers as another lifestyle choice among many.³¹ But if this was the last capitulation of the old publics as an uncommodified realm for discourse, it was also the birth of networked publics.

Today, we inhabit multiple overlapping networks, some composed of those very near and dear to us, others at varying degrees of remove. The former are private and personal, extensions of intimate space that are incapable of forming into networked publics. Interest communities, forums, newsgroups, blogs, on the other hand, are sites for individuals who are generally not on intimate terms to encounter others, sometimes with the goal of making acquaintance, sometimes on a deliberately anonymous and ephemeral level. These networked publics are not mere consumers. On the contrary, today's political commentary and cultural criticism are as much generated 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 idealized 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".³² 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.³³ Baran's diagram has been taken up as a foundation myth for the Internet, but not only was Baran's network never the basis for the

Internet's topology, it bears little resemblance to the way networked publics are organized. Benkler points 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, 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 can be heard globally with relatively little expense.³⁴

Still, there are very real threats to the networked public sphere, and Benkler, like many other theorists, warns of them.³⁵ In terms of infrastructure, the decentralized structure of the Internet allows governments, like the Chinese, to censor information they deem inappropriate for public consumption and the United States's National Security Agency (NSA) to monitor private Internet traffic. So far, networked publics have found ways of routing around such damage, providing ways of getting around China's censorship and exposing the NSA's infamous room at the AT&T switching station in San Francisco.³⁶

But a centralization that emerged from within networked publics would also be a danger. Manuel de Landa observes that networks do not remain stable but, rather, go through different states as they evolve.³⁷ 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 notes that diversity plus freedom of choice results in a power-law distribution. Thus, a small number of A-list bloggers attracts 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.³⁸ Moreover, even if such sites, together with Google, MyTube, Netflix, iTunes, and other search engines, successfully redirect us to the long tail, together they form an A-list of the big aggregators. For now most of these are catholic in what content they include, but it is entirely possible this may change.

The long tail may prove to be a problem for another reason, what Robert Putnam calls "cyberbalkanization".³⁹ Given the vast number of possible clusters one can associate with, it becomes easy to find a comfortable niche with people just like oneself, among other individuals whose views merely reinforce one's own. If the Internet is hardly responsible for this condition, it still can exacerbate it, 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 (Really Simple Syndication) readers, Nicholas Negroponte's vision of the "Daily Me", a personalized newspaper freshly constructed for us every morning and tailored to our interests, is a reality. Even big media, under pressures of post-Fordist flexible consumption, has 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 connections, 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 are 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 per cent of servers) and the Apache Web server (run by 68 per cent of all websites), non-market production increasingly challenges the idea that production must inevitably be based on capital. Produced by thousands of programmers who band together to create software that is freely distributed and easily modifiable, non-market products are increasingly viable as competitors to highly capitalized products by large corporations.⁴⁰

Similarly, 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, 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. But such peer-to-peer production also 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 if the burgeoning fan culture is critical, or if it only re-inscribes, 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. 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 exploitation.

By no means are network culture and the network economy limited to the developed world. Network culture envelops the entire world. If imperialist capitalism used the developing world for its resources and manual labour, and late capitalism exported manufacturing, networked capital exports intellectual labour 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.⁴¹ 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's inhabitants, such devices are likely to be the first means by which they will encounter the Internet.⁴² History suggests that as different societies pass through similar levels of economic development at different times, unique cultural conditions emerge (Britain, the first country to industrialize, developed the Arts and Crafts movement, and some fifty years later Germans responded to industrialization with the Deutscher Werkbund). The developing world's reshaping of the Internet through the mobile phone will almost certainly be utterly unlike what we have experienced.

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's 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.⁴³ 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. This position, which Richard Barbrook and Andy Cameron have dubbed the "Californian Ideology", suggests that technology is inherently emancipatory, that the network is both a space of self-realization and a natural road to a greater democratic government.⁴⁴ In 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, is commonplace, if perhaps treated with a little more scepticism since the collapse of the dot-com boom.⁴⁵ 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, we note new threats emerging as well. Sensing that their day is done and that the means of production are in public 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. Another danger comes from telecoms, some of which dearly miss the monopoly status once enjoyed by the former AT&T. They hope to find salvation by controlling the means of distribution, profiting from giving privilege to certain network streams over others. Meanwhile RFIDs and the ever-growing digital trail of information that we leave behind suggest that in the near future our every action could be tracked, not just by the government but by anyone able to pay for that information as well.

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 to be seen. 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 are in. Can we produce positive change, preserving what is good about network culture and changing what is bad — or are we doomed to dissipate into the network?

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

³ Hiroko Tabuchi, "PCs Being Pushed Aside in Japan", *Yahoo! News*, November 4, 2007, http://www.newsvine.com/_news/2007/11/04/1072065-pcs-being-pushed-aside-in-japan.

⁴ Jim Fisher, "Poison Valley (Part 1): Is Worker's Health The Price We Pay for High-Tech Progress?" *salon.com*, July 30, 2001, <http://archive.salon.com/tech/feature/2001/07/30/almaden1/>; Fisher, "Poison Valley (Part 2):

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- ¹⁰ On the anticipation of postmodernism by modernism, see Jameson, "Postmodernism," 56; Hal Foster, *The Return of the Real* (Cambridge, MA: MIT Press, 1996).
- ¹¹ See Rosalind Krauss, *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, MA: MIT Press, 1985).
- ¹² Bourriaud, *Postproduction* (New York: Lukas & Sternberg, 2002).
- ¹³ Bourriaud, "Public Relations," interview by Bennett Simpson, *ArtForum*, (April 2001), 47.
- ¹⁴ By this I mean they tend to be done recently but can be taken from as far back as the early 1960s, when it had become clear that modernization, in its first phase at least, was complete and the idea of "the contemporary" began to emerge. Among the first cultural institutions to recognize this, the Museum of Contemporary Art, was founded in Chicago in 1967. On "the contemporary," see, for a start, Arthur Danto, *After the End of Art: Contemporary Art and the Pale of History* (Washington DC: National Gallery of Art, 1997), 10–11.
- ¹⁵ 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, *Beyond Recognition: Representation, Power, and Culture* (Berkeley: University of California Press, 1992), 52–87. On periodization and network culture see Kazys Varnelis, "Network Culture and Periodization", http://varnelis.net/blog/kazys/network_culture_and_periodization.
- ¹⁶ On the end of the distinctions between high and low, see John Seabrook, *Nobrow: The Culture of Marketing and the Marketing of Culture* (New York: Alfred A. Knopf, 2000).
- ¹⁷ Gibson, *Pattern Recognition* (New York: Putnam, 2003).
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Published 2010–01–14

Original in English

Contribution by Kulturos barai

First published in Kulturos barai

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