Shockwaves in the New World Order of Information and Communication

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Introduction

In 1980 UNESCO published the McBride[1] Report (1980), the result of a large-scale international survey of the latest developments in communications and media. The McBride Report put into sharp and detailed focus the relationship between communications media and power and showed that unequal access to communications media had repercussions for the economic and political development of nations, peoples, and individuals. The report's authors argued that Western rhetoric about the free flow of information only concealed "the advantages of those who have greater communication resources" (McBride 1980, 141). The report emphasized the importance of communications for popular emancipation and concluded that a truly free flow would have to be two-way (McBride 1980, 142). It used the phrase "new world order of information and communication" for the first time. The Reagan administration was so annoyed by the McBride Commission's findings that it became one of a number of reasons for the United States' withdrawal from UNESCO in 1984.[2] During the more than thirty years that have passed since, the sphere of information and communication has grown spectacularly, boosted through the Internet and mobile and wireless communications. Access to media has become much more widespread and made it much easier for individuals and groups to be not only consumers but also producers of information. In the 1970s this idea of access and empowerment was formulated into a theory of emancipatory media production by Hans Magnus Enzensberger (1970) in "Constituents of a Theory of the Media." Enzensberger echoed the central tenet of what is commonly referred to as Bertolt Brecht's radio theory: that every receiver should also become a transmitter. In the 1930s, Brecht's theory was complemented by Walter Benjamin's 1934 demand, formulated in "The Author as Producer" (2002), that every author should work toward enabling others to become authors themselves.

This line of thought, from Brecht via Walter Benjamin to Enzensberger, is introduced here as the "emancipatory media paradigm." Recent events such as the so-called Arab Spring, revolutions in North Africa and the Middle East where the Web and social media helped galvanize support for democratic uprisings, once again appear to confirm a democratizing capability of the media. It seems that the emancipatory media paradigm has been fully realized, at least on a technical level, on the Internet, and through the many mobile and wireless gadgets at our disposal. In Enzensberger's time, the idea of two-way participatory media was linked with the socialist utopia of a free and equal society. That part of the equation, however, is continuously pushed back into a forever non-discernible future. The rise of the media since the 1970s has coincided with the implementation of a globalized neoliberal economy. While we have a nuanced media ecology in place that appears to leave out no one and nothing, the political economy has in some aspects returned to the free market fundamentalism of the 19th century. A discussion of political digital art has to account for the paradox that what was once considered revolutionary—full two-way synchronous communication between individuals and groups—has now technically been realized, yet been emptied of its political promise.

This chapter seeks to identify characteristics of political digital art practices, characteristics that change over time along with advances in technology and developments in the political economy. The task thus is to understand the motive forces and concrete modalities of change in order to better assess how artists tried to unlock the emancipatory potential of media. Taking a kind of curatorial approach, the text gives a selective account of radical art practices motivated by political themes and acting in concert with social movements to create shockwaves in the new world order of information and communication.

Artist-activists have a history of addressing issues of communication justice by directly intervening in and interacting with media production (Downing 1984). They have gone well beyond a traditional understanding of media as news media and early on realized that the form of media itself was political. In most cases their interventions were not just aimed at inserting a different message into existing channels, but speculatively created new forms and formats of media. This aspect of formal innovation and the role of aesthetics in political struggles qualify the events and media forms presented here as artworks. Yet the status of those works as art is far from clearly defined. Many of the projects have no easily definable author, nor are their spatial and temporal boundaries self-evident, for instance when a "work" constitutes a political campaign unfolding over months and years and uses online and offline media. Many of the projects and events discussed in the following do not simply convey a message but try to enable marginalized people and groups to develop and spread their own message. They are creating transcultural[3] encounters and forming new, often temporary public spheres. This process by definition involves many people and thereby also falls into the category of participatory art or social art practice as outlined in Claire Bishop's book on participatory art (Bishop 2012).

The following narrative starts with TV art projects from the 1980s and 1990s, and the "camcorder revolution" declared at the first Next Five Minutes (N5M) conference in Amsterdam in 1993 and then explores the notion of "tactical media" in connection with the rise of the Internet. It also outlines how the influence of neoliberalism contributed to forming the so-called anti-globalization movement and new social subjects who made innovative use of the Net and created new forms of virtual protest

to make their voices heard. Although some of the highlights of that phase, such as June 18 (j18) or the protests against the WTO (World Trade Organization) in Seattle, seem to have nothing to do with art on a surface level, activist-artists were often involved in them by galvanizing new cultural techniques and linking protest on- and offline with a transcultural aesthetics of difference. This vibrant protest culture celebrated the arrival of a new social subject—transcultural global civil society—and new patterns of solidarity between people in poor and rich countries. Through the creative use of symbolic power they produced an "image" that allowed them to gain access to public and corporate media. After an early peak of those practices around the turn of the millennium with the launch of Indymedia and the development and refinement of forms of media hacking techniques, forms of hactivism and transcultural network protest continue to be viral today.

Over the last ten or fifteen years an additional emphasis of activism shifted toward an engagement with the notion of the commons and a fight against extensions of copyright and related intellectual property rights. The rediscovery of the commons ushered in another paradigm for political digital art, emphasizing learning rather than just protest, as well as collaborations outside the form of the state and the market in order to build a growing liberated sphere of legally shared common goods. The rediscovery of the commons via the digital and a now generalized notion of the commons as a new economic and political paradigm constitutes the current state of the art, whose relation with digital art will be discussed in the final sub-chapter.

It may be argued that this narrative mixes pre-digital art, such as the television art experiments and radio art of the 1980s and 1990s, with later forms that are specific to digital and networked art. In my view those earlier experiments created the foundations for a political or socially engaged practice in digital art. The definition of digital art here is not based on an ontology and phenomenology of the digital—whatever that might be, a new binary-ism between 0 and 1?—but rather on social forms that involve electronic and digital communication technologies. Those social forms and modalities of working—such as different types of collaboration—are more important and longer lasting than specific pieces of hard- and software.[4]

The period covered by this article spans the transition from broadcast media as the dominant model to two-way, participatory networked media. During the same time frame another transformation occurred, the one from so-called Keynesian Fordism (Aglietta 1979) to the neoliberal information economy (Harvey 2005). An important premise of this chapter's arguments is the structural relationships between systems of production and media systems, and the key term to consider here is that of a "political economy."

The Need for a New Political Economy of Communications

In the 1970s the French communications scientist Armand Mattelart went to Chile to support the Allende government by developing an adequate communication science. Supported by Canadians Dallas Smythe, Dan Schiller, and Vincent Mosco, and American Herbert Schiller, the foundations of a political economy of communications were created (Mosco 2008, 46). Mosco defines political economy as "the study of social relations, particularly the power relations that mutually constitute the production, distribution, and consumption of resources" (Mosco 2009, 2).

This school elaborated a critique that traces the impact of ownership structures on media content and the influence of regulatory structures on the media landscape as a whole. It explains why, despite an absence of overt censorship, Western media often appear to speak with one voice and why many people, regions, and worldviews are not adequately represented in supposedly free liberal media. There is a need for the reinvention of the political economy of communications, especially since those experiments in communications science were stopped short by General Pinochet's brutal coup in 1973,[5] and received relatively little support in subsequent decades (Mosco 2008).

The postwar structure of industrial mass production was dependent on creating an adequate media system. The media needed to grow exponentially to become mass production's organizing instrument for the circulation of money, information, commodities, and goods. Enzensberger still framed the media as "consciousness industries," implying a separation between the Marxist concepts of base and superstructure, as well as the primacy of the media's function in shaping people's minds, a notion influenced by the concept of the culture industry outlined by Horkheimer and Adorno (2006). However, as French philosopher Jean Baudrillard[6] argues, the media are not just a superstructural entity, but essentially also forces of production.

In *For a Critique of the Political Economy of the Sign*, Baudrillard (1981) repudiated the cornerstones of Enzensberger's emancipatory and participatory media utopia. Both Baudrillard and Enzensberger adopted Marshall McLuhan's statement that "the medium is the message," but criticized his lack of political and historical inquiry. Both authors also used the Marxist terminology of exchange value and use value to make their arguments. As Marx explains, following Adam Smith, the commodity form is characterized by its miraculous double identity as exchange value and use value.[7] Since exchange value always trumps use value in capitalist societies, the labor that goes into the production of objects is concealed (Marx 1976). The essence of Marx's critique of commodity fetishism—later extended into a theory of reification (Lukács 1971; Lefebvre 2009)—is that what used to be relations between people became relations mediated by things.

The groundbreaking move of Baudrillard's theory was to extend the critique of the commodity form to the sign. By making the sign the subject of a political economy, he circumvented the dichotomy between base and superstructure. The sign, while it is also imbued with immaterial meaning, belongs to a large-scale communications infrastructure—newspapers, TV stations, networks—the world of things. Media were not just shaping the consciousness of citizens/consumers, they also were the place inhabited by a generalized system of signs.[8] And just as there is a hierarchical relation between exchange value and use value, Baudrillard argues that there is a similar one between signifier and signified. The signifier is what is in circulation and it is that which signifies. It takes on an independent "sign value" which functions as the dominant side of the equation, just as the exchange value trumps use value in capitalistic societies. To put it bluntly, the image is more important than reality.

This system of signs formulated by Baudrillard becomes completely unassailable by critique—this is where McLuhan and Baudrillard converge in dodging further analysis—because any speech act cannot touch the fundamental structural form on which the system is built. As Baudrillard had shown in his earlier book, *The System of Objects* (Baudrillard 1996), any generalized system of exchange becomes self-sufficient.

In this schema, the separation between consumers and producers mirrors that between transmitters and receivers. Both systems are ruled by the "code" that reproduces their foundational separations: that between signifier and signified, and between exchange value and use value. The strength of Baudrillard's theory, but also the impediment that makes it difficult and hard to read, is that his argument relies on another discursive layer of what he calls symbolic exchange. According to the anthropologists Marcel Mauss (1967) and Claude Lévi-Strauss (Levin 1981), and the economic theory of Georges Bataille (1988), economic exchange always incorporates other, "differential logics"—forms of symbolic exchange where surface acts are related to fundamental issues of human life such as sexuality, death, and social power. In Bataille's economic framework in particular, "the universe is not a *thing*" (Bataille 1988). That enables Baudrillard to formulate a critique of the sign regarding its relation with social order, as a "theory of a social logic." The logic of signification narrows down, and limits (Baudrillard 1981, 68); the transmitter–receiver scheme of information theory—Claude Shannon's *The Mathematical Theory of Communication* (Shannon and Weaver 1949)—as an extremely narrowing, limiting concept of communications does not allow for playfulness, mutuality, and other qualities of symbolic exchange, where the subject–object relations are dissolved.

The conclusion of Baudrillard's theory is that this scheme is one of systemic non-communication; that, as long as the chain transmitter–message–receiver—understood by analogy with the chain encoder–sign–decoder—is not broken down, the media cannot be liberated. Any usage of the media that reproduces the old model of communication would recreate a heteronomic system of significations, even if the media were to be seized by the left. This negative outlook on any possibility of alternative media usage might come as a surprise, but is a decisive feature of Baudrillard's critique.

Baudrillard personally participated in the uprising of May 1968 and seems to have taken away from it a positive view of micro-media, of the spontaneous overflow of a critical intellect in posters and graffiti. Enzensberger, on the other hand, vehemently criticized the student protesters for seizing not the radio station but the Odeon, seat of traditional high culture (Enzensberger 1970, 67). The revolt of 1968 instigated the production of a new social imaginary that saw political power growing from below rather than through top-down strategies (Katsiaficas 1987). Part of this imaginary was the switch to emancipatory and participatory media practices. The Situationist International (SI) had provided the ideological framework for the critique of "the society of the spectacle," developed by its leader Guy Debord in his 1967 book of the same name (Debord 1983). The "spectacle" was not just a metaphor for electronic media, but described social relationships in the postwar era where "the passive consumption of radio and television programmes was the most dramatic manifestation of the workers' loss of control over all aspects of their lives" (Barbrook 1995, 92–93).

Enzensberger, however, in accord with Henri Lefebvre, saw the spectacle as a utopian promise of consumption as transgression (Enzensberger 1970, 73). He demanded that emancipatory practice should be a collective process, not an effort of individualized people. While, in principle, everybody could become a media producer, the history of using amateur media such as Super 8 film, cassette recorders, and photography showed that people, left to their own devices, would only reproduce stereotypes (Enzensberger 1970, 71).

This virtual conversation between Enzensberger and Baudrillard, held from 1970 to 1972, comes at the start of a period where developments in media appear to confirm either one or the other theorist. After 1968 a number of converging factors, such as political support by social democratic governments and the availability of ever better and cheaper communication technologies, set in place a dialectics that led to the rise of the emancipatory and participatory media paradigm. During the 1970s publicly supported emancipatory media projects sought to include people as makers of video/TV—for instance, the project *Workers Making Television* (Auer, Hueber, and Kronberger 1980). This tendency, however, lost momentum in the 1980s. During the era of Ronald Reagan and Margaret Thatcher the economy was reorganized according to neoliberal criteria, and under conditions of an accelerating digital and media revolution. New video formats, the first affordable computers as creative tools, sampling, and many other innovations brought down the entry costs to creative production. The development of production forces created the condition for an overcoming of backward social relations, but that potential was kept at bay by the changing political economy. Postmodern theoretical discourses and a focus on cultural politics kept intellectuals from adequately raising more directly political questions, such as the decline of labor movements in the West (Harvey 1989) as a "new international division of labor" was created (Froebel, Heinrichs, and Kreye 1980). In that context, the practices of "counter media" production needed an overhaul. Just attacking monopolies that were seen as broadcasting a distorted truth was not enough in a world of liberalization of the media. Although the political and media environment of the 1980s lent plausibility to Baudrillard's ideas, artists found new and innovative ways of intervening in the media, as the following chapter will describe.

"The Last Free Media of the West"

Paper Tiger TV

In 1980, over the course of six weeks, live on cable TV, in front of a studio setting featuring a painted subway car, the communication theorist Herbert Schiller explained how the *New York Times* "serves as the steering mechanism of the ruling class" (Halleck 2002, 115). The format proved so popular that a group around community media activist and artist DeeDee Halleck decided to have different guests analyze different media each week. This set-up gave Paper Tiger TV, a weekly New York City cable program that is still produced today, its name. Many well-known artists and theorists passed through the "school of applied media critique" that is Paper Tiger TV (Larsen 1995, 75), among them Shu Lea Cheang, theorist Manuel De Landa, artist Nancy Buchanan, as well as "several hundred media activists, many of them beginning as undergraduates" (Larsen 1995, 75).

Paper Tiger TV's importance did not derive only from its longevity but from its specific mode of production. DeeDee Halleck has always taken care "to represent collectivity" through the practice of Paper Tiger TV (Larsen 1995, 74). The program deliberately presented itself as non-professional and non-challenging, an environment where not the product but community values in the production process counted most. At the same time, the content of Schiller's critique was the sharp-tongued masterpiece of a leading protagonist of the political economy of communications.

As proponents of this line of critique have pointed out, even supposedly objective and neutral news pieces are heavily biased, and, despite the absence of any overt form of censorship, Western media often appear to speak with one voice, framing world events in a certain way.

Paper Tiger TV's achievement has been to deconstruct the hegemonic influence of mass collective representations (Larsen 1995, 74) through a "deceptively casual mode of production," thereby "signifying that any of us could take the power of production in our own hands" (Larsen 1995, 73). A cornerstone of its methodology was what the Brazilian educational activist and writer Paolo Freire called the process of becoming conscious: "conscientization." In his famous book *Pedagogy of the Oppressed* (Freire 1972), Freire explains that such a pedagogy must be forged *with*, not *for* the oppressed (Freire 1972, 25). Through dialogue, people improve their capacity to reflect on what Freire calls "situationality," "critical thinking through which men discover each other to be in a situation," which allows them to "emerge from their submersion and acquire the ability to intervene in reality" (Freire 1972, 81). For Freire, the capacity to intervene is strongly linked with education, which, in the northeast of Brazil, meant literacy campaigns. For Halleck and other community media activists, the concept of literacy is expanded to include media literacy (Cope, Kalantzis and New London Group 2000). At Paper Tiger TV, the critical demystification of media went hand in hand with becoming a media producer oneself.

In 1986, Deep Dish Television (Halleck 2002, 164), an initiative to use satellites for distribution of public access programs made by social activists, emerged out of Paper Tiger TV. It had its finest hour during the first Gulf War, when people all over the United States gathered in cinemas for public viewings of tapes produced by media activists, the only footage arriving in the US that had not been produced by embedded journalists under army control.

Rabotnik Radio and TV

In the Western Europe of the 1980s, projects similar to Paper Tiger TV were often linked to squats or formerly squatted cultural centers. In Italy these are called Centri Sociali (social centers), which signifies that they are not just squats but experiments in collective ways of living, with self-managed kindergartens, schools, galleries, workshops, and pirate radio (Bazzichelli 2009, 62–66). As Japanese media art curator Yukiko Shikata, who at the time lived in Europe, recalls,

> autonomous communications, unfettered by state propaganda or ideology proved a means of creating a public sphere. […] By the 1980s in Western Europe, most notably in Holland and England, pirate television, free radio, squatting and "zines" all were tools of political resistance, and generated a media culture of their own. (Shikata 2005, 110–111)

In Amsterdam radio stations that had started as pirate stations, closely aligned with the squatter movement, continued after that movement had gone into decline. The biggest station, Radio 100, as well as Radio Patapoe and Radio Vrije Keyser, hosted slots with program makers who had their own distinctive style, such as the group DFM (deformation) or Fluxus artist Willem De Ridder. Rather than simply remixing

sound artifacts, DFM relied on complex strategies that appropriated the medium of radio and gave it a new meaning through often rather violent methods, such as turning the transmitter on and off. De Ridder invited listeners to late-night wanderings through his mind, in stories that he spontaneously improvised live on air. In different ways these program makers' practices left behind all social norms and rules for the use of media and constituted a "Sovereign Media," as Geert Lovink argues in "Theory of Mixing" (Lovink 1992). These radio projects broke through Baudrillard's hierarchies of signifier–signified and transmitter–receiver by playing with the elementary forms of the medium.

In 1980 a large number of pirate TV stations, one of them run by art and film students, mushroomed in Amsterdam. Originally started under another name, they finally called themselves Rabotnik TV. Rabotnik TV drew inspiration from punk's DIY spirit and applied it to the medium of television. Although Rabotnik TV at first did not think of themselves in categories such as counter-information or critique of the media mainstream, they came to see themselves as "dissidents of the ether" after they were forced off the air by the authorities. For a brief period they enjoyed the privilege of making programs free from any interference from above, without any rules imposed by anyone but themselves. In retrospect, long-time Rabotnik member Menno Grootveld raised the question whether they had been "the last free medium of the West" (Grootveld 2012). That statement implied that other Western electronic media were not free. In its ideological struggle with communism the West had argued that it at least had free media, but the "dissidents of the ether" showed that this was far from true.

Although most media makers were not directly part of the squatter movement, its existence and history provided an important context for Amsterdam-based media dissidents. The core idea behind many of their projects was a striving for autonomy as artistic media producers. This meant that they did not just want to create a program for a specific slot but to develop their own vision of how a sovereign medium might operate free from the constraints of taste and the narrative strategies of ordinary television. In the case of Rabotnik TV this goal manifested itself in the camerawork, in particular, which was very direct, with all editing done in-camera except for some computer-generated titles or music. While Rabotnik TV refrained from excessive mixing or video effects, presenting events in as pure and direct a way as possible, they did use Amiga scrolling texts with a very distinct typographical style. Although offering no direct interactivity, the unplugged, uncommented style challenged viewers to become engaged and to fill in the gaps, to start thinking and speculating about the images and sounds, empowering them to overcome the unquestioning acceptance of everything presented on TV.

Ponton/Van Gogh TV

In Germany, the group Ponton/Van Gogh TV[9] emerged from the performance art group Minus Delta t, who had become internationally famous for transporting a large stone to Bangkok on a truck. In the 1980s and 1990s Ponton/Van Gogh TV carried out several large-scale participatory radio and TV projects, the highlight of which was *Piazza Virtuale* (1992), consisting of 100 days of television at Documenta 9 in Kassel. Their projects were always based on a similar organizational logic, sending a call to a

network of friends, co-producers, and activists who contributed as voluntary culture producers for free accommodation and food. The projects sometimes became "material battles" (Arns 2007) that consumed large numbers of people and equipment in orgies of communication.

Ponton was aimed at involving the audience in a direct way, engaging viewers emotionally and intellectually through a mix of methodologies, ranging from studio hosts acting erratically to the use of de-familiarization techniques. Their goal was to unsettle people's viewing habits and thereby activate them to become co-creators of the program. This activist approach was also taken by camerawork, the video mixer, and the people who operated banks of Amiga and Atari computers. At the 1992 Documenta In Kassel, digital live streams received from so-called *Piazza Virtuale*, virtual squares, were mixed together into a live television signal with other sources such as a chat channel, telephone call-ins, and live cameras, creating a stream that was broadcast all night long on the satellite and cable channel 3Sat—sometimes hypnotizing, sometimes sense-deafeningly boring.

The television and radio art projects of this period raised the question of the totality of the medium: they did not just make a program for an existing channel, but experimented with the form of the medium itself. Ponton's projects, in particular, were forerunners of and training grounds for an Internet ethics of collective and collaborative work. Ponton TV's aesthetic negated the norms of public TV by creating an excess of symbolic exchange[10] on all levels, breaking norms and manipulating studio guests to go beyond their own psychological limits. Their works connected dozens of activists with thousands of participants who strove to abolish the screen as an entity that structurally separates societies into groups of consumers and producers. This approach no doubt was technologically innovative and dissipated the notion of authorship by transferring it to decentered networks.

Today, work in the spirit and style of the television art groups of the 1980s continues to be produced. In Italy there has been a movement of activist TV groups who literally brought the medium to the streets, using low-powered TV transmitters for small areas—the *Telestreet* movement. One of the most active groups in this area is Candida TV who refer to themselves as "a nomadic swarm that advances as grasshoppers of sense" (Candida TV 2003, 156). Since 2005 Swiss-born media activist Adnan Hadzi has developed Deptford TV (http://www.deptford.tv/) in Deptford, south London. Working in an area that was rapidly transformed by gentrification, he asked himself whether the Web could be used by documentary filmmakers to share and collaboratively edit footage online (Hadziselimovic 2012). In Nairobi, a group of Serbian, Austrian, and Kenyan artists[11] has initiated Slum TV (http://www.slum-tv.org), a self-sustaining media lab in Mathare, a slum of 500,000 people in the Kenyan capital (Cippitelli 2008; Nikolic et al. 2008). These projects continue to demonstrate that emancipatory media practice with television formats is feasible and rewarding.

It seems that the notion of television itself has changed. While activists of the 1970s and 1980s believed that the left had to take over television in order to educate the masses, the new emancipatory imaginary of media had no such centralized point of intervention any more. Their focus switched to molecular media, a term inspired by Félix Guattari's notion of the "molecular revolution" (Guattari 1984). Micro-media and narrowcasting projects such as Slum TV, Candida TV, and Deptford TV show that the "medium" is not an abstraction but is embedded in social groups. The most

important step in successfully implementing these projects is the building of capacity among program makers who use the process as a way of forming a critical understanding of their own relation with the environment and the reality projected by official TV. The key point here is the actual practice taking place between co-producers and viewers, and not a transmission of messages. The self-empowerment of the producers, together with that of audiences, shapes "communities of practice" in a collective learning process (Lave and Wenger 1991). Their small size allows those projects to avoid reification, thereby breaking through the transmitter–receiver schema Baudrillard had criticized (as discussed above).

The New New World Order

After the fall of the Berlin Wall in 1989, George H.W. Bush announced a "New World Order," a unipolar world in which the USA would be the leader. The point was forcefully demonstrated by the first Gulf War in 1990/1991, which saw the emergence of CNN as a global medium and the introduction of the "bomb's eye view"—obtained by a camera built into a so-called smart bomb approaching its target—on TV. The emergence of global 24/7 news together with the bomb's eye view marked the closing of a blanket of complete fiction over reality, the final agony of the real,[12] as the new media arrangement made the distinction between the fictional and real structurally impossible. Military simulation of the theater of warfare played along with the ideological representation of a perfect, victimless war on the screens in order to render fruitless any question about the reality of that approaching cruise missile—that much Baudrillard (1995) and his colleague Paul Virilio agreed upon (1994, 69). This myth of the perfect war conspired with another myth, that of the end of history, so that any political media activism theoretically seemed futile.

Tactical Media

In this new new world order where power appeared to consolidate itself on a new layer of satellite and fiber-optically mediated information, the first of four Next Five Minutes (N5M) conferences was held in Amsterdam in January 1993. In the historical context of the "media revolutions" in Eastern Europe—one regime after another in the Soviet Union zone of influence appearing to crumble live on television between 1989 and 1991—the organizers of N5M pronounced the "camcorder revolution." In the run-up to N5M I, a group of scholars conducted a survey that tried to gather information about activist TV and documentary video projects on a fairly global level, and published it in the *N5M Zapbook* (Amsterdam Cultural Studies et al. 1992). It contained a wide range of examples of various types of camcorder activism, from video artist Paul Garrin's recordings of himself getting beaten up during the Tompkins Square riots in New York City in the summer of 1988, to media activists in Eastern Europe and the global South (Boyle 1992). All those stories added up to the powerful narrative that camcorders were revolutionary tools, and that, given the right conditions, community media projects could even blow away fossilized political structures. The term that was introduced to cover those practices was "tactical media" (Raijmakers 1992).

Bas Raijmakers explained that the term "tactical" was borrowed from Michel de Certeau's differentiation between strategic and tactical (de Certeau 1984). Whereas strategy was the domain of large institutions such as public broadcasters, the independent groups who came together at N5M did not have the luxury of dominating the field. Their media use was short-term, tactical, flexible; they were "lurking, ready to move into the cracks that appeared in strategic TV" (Raijmakers 1992).

At the second N5M conference in 1996, a new urgency was expressed by the title of a panel organized by Geert Lovink, the "Desire to be Wired." Between 1993 and 1996 the Net had been opened up for public usage and the "digital revolution," as San Francisco-based *Wired* magazine had called it, was fully under way. On that panel, political scientist and historian Richard Barbrook presented a paper he had co-authored with the designer Andy Cameron, "The Californian Ideology," in which the authors deconstructed the "bizarre fusion of the cultural bohemianism of San Francisco with the hi-tech industries of Silicon Valley" (Barbrook and Cameron 1996). The public perception of computers had somehow managed to change to something cool and associated with creative values. The former center of hippie culture San Francisco became a hotbed of high-tech entrepreneurship, politically embracing libertarianism. Those were, of course, the days of the New Economy, when everybody thought that exponential growth rates would be the norm forever and that the economy would become "weightless" (Kelly 1995).

This unlikely alliance might as well have been called Dutch Ideology. Throughout the 1990s Amsterdam became an ever more stylish and sanitized environment designed to meet the requirements of the digital creative class (Florida 2002). In the early 1990s the highly influential De Digitale Stad (DDS) had been founded to create a digital public sphere. By 2000 that spirit had given way to the new designer impetus, as activists Geert Lovink and Patrice Riemens described it (Lovink and Riemens 2000).

Despite these transformations of the world outside the conference venues of N5M, De Balie, and Paradiso, "hacktivism," the blend of hacking and activism, took center stage at the third N5M in 1999. In retrospect, the turn of the millennium was a first high point of web-based activism. It was the culmination of the new global civil society's appropriation of the Web, as will be shown in the following. But this high point almost also became its near end.

In 1999 artist-activist Joanne Richardson, one of the more critical voices at the time, pointed out that "tactical" video activism focused too much on violent street battles, an aesthetics of radical chic rather than the "why?" and "what for?" Richardson also elaborated on the problematic spin given to the term "tactical media," which was quite incompatible with the original meaning intended by de Certeau (Richardson 2003). It was no coincidence that the *Old Boys Network*, a cyber-feminist network, held its second conference as a gesture toward N5M around the same time. While N5M had started from a global survey, it had increasingly become a mostly European, white male event.

The organizers recognized this deficiency and, in preparation for N5M IV in 2003, sent a call to international mailing lists, asking for tactical media labs to be set up in a decentralized way outside of Europe (Garcia 2004). This call found a response in Brazil, where a tactical media lab was established that will be discussed in more detail later in this text. The fourth N5M conference appears to have gained the reputation of being a bit of a swan song, although certainly a success in terms of audience

numbers. The notion of tactical media, although still expanding on one level, lost some of its initial traction on another, possibly because politics changed quite dramatically in the new millennium. A more repressive climate had already shown itself at the G8 meeting in Genoa in 2001, when protester Carlo Giuliani was shot dead by police. After 9/11 and the Bush government's militaristic response, the dynamic links between popular alter-globalization movements and digital cultural protests were weakened. During the decade in between, however, the changing notion of tactical media belonged to an irreverent new paradigm of transcultural network protest, hacktivism, electronic disturbance, citizen journalism, and media hacking.

Transcultural Network Protest

During the 1990s neoliberalism came to dominate the political economy. Economists such as Friedrich Hayek and Milton Friedman had preached the neoliberal gospel even during the high times of Keynesianism. They had argued that free, unregulated markets were the best way of allocating resources and that any form of redistribution from the rich to the poor in the form of welfare state measures was equal to socialism. The crisis of Keynesian Fordism in the 1970s brought them back from the intellectual wilderness. After 1989, and especially after the success of the Internet-based New Economy in the 1990s, neoliberal policies were adopted widely by nations in the US sphere of influence, which was now nearly all of them. This implied, to a degree varying from country to country, the dismantling of the welfare state, the scaling back of workers' rights, and the exploitation of global income inequalities through new technologies. Increased automation in the West and the redistribution of production to low-wage countries were directly dependent on media technologies. The use of high tech to create global supply chains and computerized electronic markets in so-called "global cities" (Sassen 2001) weakened organized labor in the rich nations, while the new workers in the global South had no chance of obtaining the same level of income and rights. The results were felt most strongly by those at the bottom, such as indigenous peoples in the South, and precarious workers, women, and migrants in the North and South.

Mounting pressure fermented resistance and new social subjects made themselves heard. Avant-garde digital artists and hackers aligned themselves with the alter-globalization movement to create new forms of transcultural network protest. The term "alter-globalization" signifies a rejection of capitalist globalization, but not of thinking on a global scale (Burbach 2001). In different terminology, the sum of all social movements may also be understood as the "multitudes" (Virno 2004; Virno and Hardt 2006). All those terms are simply new connotations of what used to be called the working class. But this working class had become culturally and geographically fragmented so that organizing working-class resistance turned out to be very difficult. Neoliberalism and globalization reshuffled the class structure and created new classes of the disenfranchised. Some nations, however, became "emergent economies," which implied a rising standard of living, a development used as an argument for capitalist globalization by neoliberal ideologists. The so-called Asian financial crisis of 1997, which in fact was a global financial crisis of the emerging economies, should have been sufficient warning that not all was well with the global information society. While the power structures that linked corporate media, business, and politics

hardened into a new form of global hegemony, the Net still was not "overcoded" (Holmes 2009) by commercial interest and could be seized by subaltern and minoritarian groups.

This situation was recognized, more or less simultaneously, by the Rand Corporation—the think-tank for the military that had originally thought out the topology of the Net—and the left-wing artist collective Critical Art Ensemble (CAE). In 1993 Rand researchers Arquilla and Ronfeldt (1993) predicted that "Cyberwar was coming," and further elaborated on the idea in a 1996 book called *The Advent of Netwar* (Arquilla and Ronfeldt 1996). They argued that an age of asymmetrical warfare, in which the Net gave small groups an advantage, was imminent. In 1993 the artist collective CAE published *The Electronic Disturbance* and analyzed the ways in which the "revolution in technology" had created a "new geography of power relations in the first world" (CAE 1993). CAE believed that "the core of political and cultural resistance must assert itself in this electronic space […] Nomadic power must be resisted in cyberspace rather than in physical space" (CAE 1993, 25).

Digital Zapatismo

These ideas were put to the test almost immediately after they had been published. On January 1, 1994, "the day of implementation of the North America Free Trade Agreement (NAFTA)," an "army of indigenous people entered in San Cristobal and other cities of Chiapas, wearing ski masks, carrying guns, and proclaiming revolutionary laws from the balcony of the city council" (De Angelis 1998). As the world woke up in the new year, the previously unknown indigenous army "Ejército Zapatista de Liberación Nacional" (Zapatista's Army of National Liberation—EZLN) had already made its mark (De Angelis 1998). The link between EZLN and NAFTA was that the indigenous people could not use the forests and other commons as before because of large-scale logging and mining operations.

Two days later, on January 3, 1994, Subcomandante Marcos—the figurehead of the movement—was online (Garrido and Halavais 2003). Marcos became an unlikely early hero of the Net as his "dispatches from the Lacandona jungle" reached a global audience. EZLN was able to publish political communiqués with the help of Mexican and international NGOs who enabled them to send out messages worldwide without having to pass through nodes where the Mexican government could apply censorship (Budka and Trupp 2009). Those dispatches did not address the Mexican government directly but spoke to the Mexican and global civil society. The Zapatistas skillfully applied what Paul Gilroy had called "strategic universalism" (Gilroy 2001). They not only addressed the issues that affected them as a consequence of NAFTA's neoliberal policies and the Mexican government's actions, but did so by extending their solidarity to suppressed minorities everywhere: "the indigenous, youth, women, homosexuals, lesbians, people of color, immigrants, workers" (Garrido and Halavais 2003, 7).

The new politics as represented by the EZLN revived the left by providing a model of solidarization across continents and different forms of struggles (Holloway 2005). There was a two-way connection: as the Zapatistas reached out to a newly forming global civil society, which in itself was diverse and was helped in its self-recognition by that process, they benefited from becoming part of that civil society. The one-way structure of politics and mass media was challenged by mobilization from below.

Digital Zapatismo created a blueprint for ways in which—through a combination of on- and offline actions—topics could be brought onto the agenda of news media and government.

Electronic Civil Disobedience

On December 21, 1995, the first Netstrike took place. Organized by Italian activists around Tommaso Tozzi and Stranonet, the Netstrike targeted web sites of French government institutions in protest against the nation's nuclear policies (Tozzi 1995). Users of the Web were asked to direct their browsers at government sites and keep clicking, which resulted in what came to be called a "denial-of-service attack" in hacker jargon: through overloading the server, the bandwidth would get clogged and the server's ability to serve web pages diminished. The Netstrike, however, was not a form of web vandalism, but the attempt to introduce a new form of virtual protest, a conscious act of civil disobedience, the virtual sit-in. Only six weeks later, on March 2, 1996, a "Chiapas net strike" was called, this time directed against web servers of the Mexican government, combined with demonstrations in front of embassies, and articles and programs in other media of the left (Tozzi 1996).

Electronic Disturbance Theater

The term "digital Zapatismo," while initially attributed solely to the EZLN (Lane 2003), has also become associated with the practice of Ricardo Dominguez and his collaborators[13] in the Electronic Disturbance Theater (EDT). Dominguez was a member of the CAE and, in 1995, after splitting from the group, became "web-wise" by joining The Thing, New York.[14] Tuning into the strange thing that was net culture in those days, Dominguez began developing his own theory (1995, 1996) and practice. Dominguez had a background in theater and had always emphasized the peaceful nature of protest. EDT wanted to create a "performative matrix" that forced the opponent into their way of thinking through "Mayan technologies" (Fusco 2003). While real hackers acting in secrecy could unleash denial-of-service attacks that easily brought down web servers, EDT's work emphasized the public nature of electronic civil disobedience, using performances in real space and online actions to raise awareness about topics.

In 1998 EDT called for a virtual sit-in against Mexican financial sites in support of the Zapatistas. Inspired by the tactics of Netstrike but taking things a step further, the action was accompanied by the release of the tool Floodnet, a small script on the EDT web site that multiplied the click-frequency of users. The Floodnet action in 1998 brought EDT the attention of the Pentagon and a front-page article in the *New York Times* (Medosch 2003, 276–278). Around the turn of the millennium, a whole range of groups exercised different forms of hacktivism, often accompanied by the release of toolkits for automating distributed denial-of-service attacks.

After being appointed professor at University of California, San Diego, Dominguez set up B.a.n.g. Lab with old and new collaborators.[15] B.a.n.g. Lab made a fresh contribution to the history of political border art in San Diego and Tijuana by developing the Transborder Immigrant tool, a "GPS cell phone tool which acted as a safety net for migrants crossing the Mexico/US border'" (Cardenas et al. 2009).

Another group which creates new tools and devices for political purposes are Preemptive Media.[16] Their work *AIR* (2005) uses cheap electronics to enable non-specialists to monitor air quality and visualize their findings. Tools such as these stand in for a much wider range of other projects that combine DIY creativity with critical thinking.

It seems that practices similar to Netstrikes have been adopted by the hacker groups Anonymous and LulzSec. These groups claim to deface or bring down web sites for political reasons, in support of Internet freedom and as protest against governments' attempts to control information. A key difference is that the tactics of these groups are usually very secretive. The artists always make it very clear that their works are about influencing perceptions and that they visibly stand behind their works even if that can mean trouble with the law. Transcultural network protest pioneered new forms of political activism that included new types of action—such as the virtual sit-in—and the creation of migratory public spheres, albeit often only temporarily, for a new political subjectivity to express itself.

Neoliberalism and Its Discontents

The years 1999–2000 saw the culmination of many forms of networked protest and a surge of anti-capitalist movements, but also more viral forms of protest that insinuated themselves in attention economies. The traditional sphere of media, politics, and government suddenly found itself confronted with the motley crew of transglobal resistance, from urban ravers to Indian farmers. The "motley crew" here does not refer to the rock band Motley Crue but to the way in which Marx stylistically represented the (sub)working class, as indicated by Peter Linebaugh and Marcus Rediker (Linebaugh and Rediker 2000, 211–247). The descendants of Hewers of Wood and Drawers of Water, the new Levellers and Diggers, managed to surprise, initially at least, their opponents by the effectiveness of their network-coordinated protests.

On June 18, 1999, the activist network Reclaim the Streets (RTS) orchestrated a Global Street Party, a day of simultaneous street protests in the form of parties in dozens of venues worldwide, with the biggest event in London's financial center. RTS had organized parties as a form of environmental protest since the mid-1990s, taking inspiration from Britain's DIY activist networks who had successfully fought the expansion of road building in the 1980s and 1990s. j18 was the first explicitly anti-capitalist action by RTS, targeting the financial sector and echoing a growing sentiment within the anti-globalization movement that finance was at the root of many problems (Annie and Sam 2012). After gathering at Liverpool Street station, demonstrators walked out in three different directions, wrong-footing police who found it difficult to act in narrow streets filled with "sound systems, puppets, colourful banners, dancing crowds swinging in the glistening sunshine" (Annie and Sam 2012). RTS projected the image of a resistance movement that had no leaders and no center. They organized j18 via word of mouth, mobile text messages, and the Web, but without any traditional form of political organization, thereby contributing to a "grassroots-mediated form of political articulation" (Annie and Sam 2012). For a few hours there was a carnival in the streets of London, with 50,000 people enjoying the sunshine and a political rave party (Figure 15.1).

FIGURE 15.1   June 18, 1999, Carnival against Capitalism, City of London.
Photo: Armin Medosch.

The internet cafe and gallery Backspace—one of London's precious self-organized hubs of net art and culture—became the training ground for a new type of radical multimedia online journalism. Artists and activists were shuttling back and forth between Clink Street, where Backspace was located, and the scenes of protest just across the river Thames, quickly copying and encoding video footage for live streaming via the Net, which was quite a novelty at the time.[17]

Similar things happened later that year in Seattle, on the occasion of the meeting of the World Trade Organization from November 29 to December 3, 1999. The discourse produced by the alter-globalization movement created a rainbow coalition against the WTO, which had become a symbol of capitalist globalization (Burbach 2001). For the duration of the WTO meeting activists installed an Independent Media Center (IMC). The creation of the IMC in Seattle and the practices at Backspace during j18—which would soon lead to Indymedia UK—saw the inauguration of a new "open" publishing model using the Net, where live news, photos, and videos could be posted. Since then Indymedia has become a sprawling network of sites that pool resources and reports to provide alternative news and create a "new communications commons" (Kidd 2003). While Indymedia is not an artwork, many artists were instrumental in setting it up and creating its pioneering "open publishing" model, where everybody could submit stories through an unfiltered channel. The materials submitted in Seattle and at j18 also allowed demonstrators to present their

own version, since television reporting on demonstrations often tends to scandalize violence while misrepresenting the reasons for the demonstrations.

The creation of Indymedia reflected the fact that activists had stopped believing that the media mainstream could be changed. If activists wanted those demonstrations to get covered in a fair and just way, they needed to create news channels of their own. The combination of demonstrations, sit-ins, and blockades on the street with online stories with a global outreach allowed mobilization of an unprecedented number of people who voiced their discontent with neoliberalism. Having been blamed for being politically apathetic, the net generation forcefully demonstrated that this criticism had been just another media fabrication. People had indeed stopped caring about the field of representation, about the lack of representation in the media and in party politics, but that did not make them apolitical. Instead, they started to take media representation into their own hands, which created the nucleus of a big change in the landscape of politics and media. Seattle and j18 planted the seed of disengagement from the current political system. Through strategies of self-empowerment, politically engaged people started rebuilding democracy from below (Castells 2012).

Media Hacking

Seattle was the break-through moment for another form of digital activism, the web spoofs and media hacks by groups such as *RTMark*. The latter group, founded in 1996 by Igor Vamos and Jaques Servin, registered the domain name Gatt.org[18] and made it look like the official web site of the WTO, using its logo and other graphical elements. Instead of GATT information, it contained links to the growing number of direct action initiatives who resisted "the unfettered rule of global capitalism in general and free trade in particular" (Stalder 1999). RTMark, descendants of 1980s appropriation art, practiced subversion-by-affirmation. They presented themselves as a venture capital investment fund which offered several opportunities for investment into direct action against "the neo-liberal juggernaut" (Stalder 1999).

Vamos and Servin then changed their identities into Andy Bichlbaum and Mike Bonnano and became the *Yes Men*. They developed efficient techniques for bringing media attention to controversial subjects by taking on the guise of their opponents. The Yes Men attended meetings of the WTO posing as overzealous businessmen and produced a series of spoof web sites in order to carry out acts of "identity correction," as they called it (Boyd 2005). One of their biggest successes was the appearance of Yes Men's Andy Bichlbaum live on air on BBC World, pretending to be Jude Finisterra, a spokesperson of Dow Chemical, and admitting responsibility for the chemical disaster that had killed thousands in Bhopal, India.

The year 1999 was also the year of the *Toy War*, a symbolic battle between the net art group Etoy and e-commerce corporation Etoys. The company threatened the artists with a lawsuit, accusing them of domain infringements, as if they were cybersquatters who had registered a domain name close to theirs for profit. They had overlooked the fact that Etoy had registered their domain much earlier and had won prizes already, such as Prix Ars Electronica with the *Digital Hijack* in 1996. The apparent injustice of the case brought the artists a huge wave of support among the general public which they skillfully harnessed to orchestrate a so-called toy army of net citizens ready to take their action to cyberspace. With each step in the court case, a

torrent of protest letters and press releases was launched. Etoys versus Etoy became viral in online media such as *Wired* and *Telepolis*, and soon also reached the mainstream press. The artists, supported by thousands of volunteers, managed somehow to force the company to give in, as the opinion of the court also changed in their favor (Wishart and Bochsler 2002).

It can be argued that this technique of "cultural hacking 2.0" represents a genre of its own. Shortly after the Etoy/s case, in 2000, Ubermorgen.com, an Etoy offshoot, began promoting voteauction.com, a web site that promised to bring "capitalism and democracy closer together." On the web site people could sell their votes to the highest bidder in the 2000 US presidential election. They drew the attention of state prosecutors and other US law enforcement agencies, and managed, like the Yes Men and Etoy, to get into the media mainstream. The technique applied has been described by me elsewhere as "creative resistance," whereby the energy of the opponent is used against them (Medosch 2009). This principle is most obvious in *Google Will Eat Itself* (GWEI), where money paid by Google is used to eventually buy it. GWEI is the first part of the *Hacking Monopolism Trilogy*.[19] In part two, *Amazon Noir*, a script is used to liberate books in PDF format from the online bookseller. For part three, *Face to Facebook*, personal profiles were collected and posted on a dating web site.

Those media hacks are a special case among strategies of cultural hacking which can be argued to have been part and parcel of historical avant-gardes such as the Dada movement and neo-avant-gardes such as Situationism (Düllo and Liebl 2005). The media h/activist strategy has been updated by those groups for the digital and network age. What is to be admired is the demanding and varied tool-set the artists need to "play" with to carry out such a work. It is not only necessary to shape an image that leads the opponent into a trap of overreacting, so that the media battle can begin. This needs also a lot of legal knowledge, expressed by the term "legal ready-made" by Manu Luksch (2009), who made her film *Faceless* (2006) by letting herself be filmed by CCTV and then requesting the material based on Freedom of Information legislation. At best, the media guerrilla art of the network age can seem like one of the most adequate art forms for our age, hitting at the center of informational capitalism, using hacks and exploits to find loopholes in the system, such as *Loophole For All* (Cirio 2013) who are taking the battle to the center of informational, financial capitalism.

Yet the downside is that those methods get recuperated, as the Situationists would have said (McDonough 2004). This means that tactics that once had a revolutionary or avant-garde edge become incorporated by the system, for instance through advanced marketing agencies and political PR campaigns. Culture jamming and media hacking have become generalized cultural techniques of the network age.

Art of the Digital Commons

In 2001, self-styled artist Shu Lea Cheang launched *Steam the green, Stream the field* (Cheang 2002a). Cheang's intervention reconnected the digital commons with the real world and natural commons resources. While tactical media activism had often focused on media as both means and ends, free media and open source principles were increasingly used to address other, mainly green topics, such as energy, renewability, sustainability, and ecology, in the new millennium. Cheang announced a "field harvesting and public network project" as a part of "a fictional 'after the crash' scenario" (Cheang 2002b).

According to her scenario it was the year 2030, the capitalist economy had crashed, and organic garlic became something resembling the gold standard transferred onto a gift economy. The project took its inspiration from the Argentinian truque clubs that had formed after the Argentinian credit crisis in 2001. Argentinian citizens had issued coupons that allowed them to trade services and goods despite the crash of the currency. In 2002 Cheang and supporters drove around Manhattan for three days in a pick-up, performing on location from Wall Street to Tompkins Square Park. The truck doubled as a mobile urban wireless network node and a farm stand. It made people get involved in barter economies by the curb, as they dealt truque coupons for garlic bulbs, bandwidth for services, accessing landscapes and datascapes simultaneously. In an almost prophetic way, this project anticipated things to come, in particular the rising importance of the commons in the context of the crisis of capitalism.

At some point in the 2000s, the framework of references changed, and discussions shifted from tactical media to the notion of the commons. This is not to say that these concepts are opposed to each other; they can exist side by side. The change that took place was a shift in emphasis. Tactical media implied short-term thinking, an immediacy of action, an intervention in the media to get a different message through. But it turned out that the revolution can take a while, so artist-activists started paying more attention to issues surrounding intellectual property in the meantime. There were several reasons for this shift in attention, one being that the importance of intellectual property in the knowledge economy was increasingly recognized by business leaders, and the industry started pushing for draconian legislation to protect copyright in the digital domain. Another reason was artists' realization that sustainability could only be achieved by using free and open source software (FOSS). The success of Linux instigated a rediscovery of the notion of the commons. In analogy to the commons as a shared natural resource, the notion of the commons as a shared digital resource emerged as a movement. Many artists started to use FOSS tools for their work and emphasized the digital commons as a space for sharing, learning, and a collaborative culture in general. The key principle of this movement has been formulated as "commons-based-peer production" by Yochai Benkler (2006), for whom it contained the new organizational logic of the network society.

Over the past fifteen years artists have made many contributions to this growing tide of an art of the (digital) commons, often on an infrastructural level. The Brussels-based group Constant has engaged in a sustained inquiry into free software tools for creative work, experimenting with software for graphic design, audio, and video; working out how best to substitute FOSS tools for proprietary ones; and documenting the process on individual blogs. Artists are behind initiatives such as *Floss Manuals*, an effort to write good free documentation for FOSS. The artist-engineer Jaromil, alias Denis Rojo, has led an effort to create a special Linux distribution for creative and activist work, Dynebolic. A fork[20] of Dynebolic, Puredyne, has been released by French hacker group Goto10.

These practices were accompanied by a rising activity on the discourse barometer. In Berlin a series of conferences under the title "Wizards of Operating Systems" (WOS) was held between 1999 and 2006, exploring the many ways in which open source ideas and principles could be applied in other areas. By the mid-2000s there was an "open everything" euphoria that culminated in events such as *Open Congress* at Tate, London, and *Node.London* (Vishmidt 2006). I myself was involved in *Kingdom of Piracy* (Shikata, Medosch, and Cheang 2003), which originally was a

curatorial project about art and intellectual property and then increasingly turned toward commons research. The discourse on and activism for the commons found particularly strong support in nations such as India and Brazil.

Free Culture in Brazil

In Brazil, the call to set up tactical media labs, sent out in the context of N5M IV in 2003, was heard and artists and activists started to organize an event called Mídia Tática (tactical media), which took place March 13–16, 2003, in São Paulo. As Ricardo Rosas, one of the co-organizers, pointed out, Brazil is a country of extreme contrasts, where a thriving technological culture meets abject poverty. The media landscape is dominated by one powerful corporation, Globo, which owns not just the main TV stations, but also radio and print media, and is pushing out a "narcotic" stream of "telenovelas" (TV soap operas). Rosas concluded that any interpretation of tactical media that took computers as its privileged entry point would fail to grasp the complexities of Brazilian society. The tactical media lab thus "embraced a wide spectrum, from art/activist groups and collectives to DJs and street theatre performances" (Rosas 2004, 426).

Mídia Tática also brought together a number of high-profile speakers, such as Richard Barbrook, the Internet activist, and Electronic Frontier spokesman John Perry Barlow, and Brazil's then minister of culture, the musician Gilberto Gil. During Mídia Tática, an idea was hatched to turn the tactical media lab into a more permanent structure, and the Autolabs were invented, "laboratorial prototypes for media literacy, technological experimentation and creativity created with the help of local communities," as Rosas describes them (2004). In 2004, three Autolabs were organized in the eastern parts of São Paulo, where hundreds of local people got involved in making films, music, citizen journalism, as well as the recycling of hardware and many other things (Garcia 2004).

The Autolabs raised the interest of Gilberto Gil. The outcome of meetings with the activists was the shaping of a program to subsidize hundreds of *Pontos de Culturos* (points of culture) throughout the country, which would be fitted out with hardware and be given training in free software (Freire, Foina, and Fonseca 2007). As the program unfolded and hundreds of such places were registering for support, free culture activists went through the vast country on planes and coaches to teach people how to use Linux and other free software for writing and making videos and music (Brunet 2005). After Gil retired from politics and the new government came in, the program was discontinued. The free culture syndrome, however, keeps permeating Brazil and Latin America as the connection between free speech and free software is recognized. Groups such as Metareciclagem (meta-recycling) and Estudio Livres in Brazil keep producing and distributing tools supporting a free culture ideal.

Raqs/Sarai

A decisive contribution to the artistic discourse on the commons has been made by Raqs Media Collective from New Delhi, founded in 1992 by Jeebesh Bagchi, Monica Narula, and Shuddhabrata Sengupta. Raqs was also co-founder of the Sarai program at the Centre for the Study of Developing Societies (www.sarai.net). In

2001 the online curatorial project *Kingdom of Piracy* commissioned twelve net artworks that addressed topics surrounding freedom of information and intellectual property. Raqs contributed *Global Village Health Manual* (2000), a work that "evokes a 19th century print culture" to "suggest the fragility of the body, especially the laboring body in cyberspace (Raqs Media Collective, Bagchi, Narula and Sengupta, n.d.).

In 2002 Raqs presented Open Commons, a web site for sharing tools and works, at Documenta X. Raqs's work proposes the digital commons as a diverse, transcultural space and a collaborative methodology (Bansal, Keller, and Lovink 2006). They contest the notion of ownership and instead propose one of custodianship of culture: as Raqs puts it, each item of information in the hands of a person does not simply get consumed but has value added to it (Raqs Media Collective 2003, 30–31). These ideas have been further elaborated in the book series *Sarai Reader* (1 to 9). Raqs/Sarai developed a vision of the commons from the point of view of the Global South. As Sarai co-founder Ravi Sundaram argued, modernity often reached India through recycled goods and gray markets, and its instruments were pirated to construct alternate publics (Sundaram 2001). The conference "Contested Commons / Trespassing Publics"—organized by Sarai, Raqs, and the Alternative Law Forum, Bangalore, in New Delhi in 2005—addressed social and political issues connected with intellectual property across a wide terrain, from seeds to medicine and digital culture (Medosch 2005).

The digital commons was a conscious attempt to create mechanisms for the de-commodification of more and more aspects of culture and knowledge creation. In commons-based peer production, use values are produced through shared labor. The exchange value is neglected and the tendency toward objectification gets temporarily reversed through this gift economy where code is shared without ever becoming a commodity. The digital commons provided artists with an opportunity for horizontal collaborations and exchanges in a commodity-free zone. This ideal, however, is threatened by the precarious status of knowledge workers and the overall political economy. Free culture producers have to eat and pay rent within a capitalist economy while they create economies of abundance. This disparity gnaws away at the foundations of a liberal ideal of a possible knowledge society. In 2008 the financial system of the rich nations crashed, pushing them into a prolonged economic crisis. As austerity measures are plowing their ways through social systems, failure to act on climate change and a looming energy crisis create rising dissatisfaction with the current regimes and their inability to tackle questions of such fundamental importance.

At this historical moment, many artist-activists are working out post-capitalist and ecological survival strategies. In these scenarios the commons occupies a central position as a potential new framework for a political economy not based on markets. The separation between digital and natural commons is not so important anymore. The interest has shifted toward the conditions and rules that allow forms of commons to prosper. The forms of exchange in the commons may offer better possibilities for artists, as they can become part of a wider ecology. Yet there is also the danger that the commons can become recuperated, a tendency already visible in the world of software.

Conclusion

During the 2000s the Net changed quite dramatically as it became dominated by dynamic web applications known as Web 2.0, mobile applications, or so-called apps, tablets, and other new gadgets. The prophecy of two-way communications from the early 20th century seemed to have finally become realized on the scale of mass participation. Yet the egalitarian ideas of the emancipatory media paradigm were implemented only on the surface level. Behind the screens, communications between users form the basis of a new industry of Big Data. Informationalism, as the current economic paradigm has been called by Manuel Castells (2010), relies on harvesting massive amounts of data for all kinds of reasons, threatening to turn the Web and social media into one giant surveillance machine (Lyon 2007). With financial institutions on top of the social pyramid, the Web has become just another infrastructure that is beyond people's control and appears to dominate their lives, even if they do the clicking themselves.

The digital revolution has moved to the next level, commodifying communications and social relations. Now Baudrillard suddenly appears to be right once again. Objectification and the commodity-form cover the Web and social media, and thus also impinge on our social and communicative behavior. The dichotomies have been shifted on to another level. While the producer–consumer dichotomy has become blurry, another dichotomy gaining in importance is the one between the front end and back end of information systems, between client and server. While people have full two-way playful interaction on the client side, data at the server end is harvested not just by corporations but also by state institutions. Under the shifting circumstances of a globalized information economy, there is an urgent need to update the political economy of communications for the information society. Besides the political economy of the sign, we also need a political economy of information, one that is not detached from reality as the discourse of the 1990s has been, but as clear and cogent as Baudrillard's. At the same time, it should be able to account for other forms of exchange that transcend the parallel hierarchies between signifier–signified and transmitter–receiver. Many of the projects cited here have provided examples of how this can be realized. More work will be needed to develop a political economy of information that offers depth and resonates with a cultural and philosophical worldview that goes beyond the limits of the transmitter–receiver model. Cutting-edge digital art offers a unique advantage for the development of such a theoretic strand as it is not limited by disciplinary boundaries and the works are rich with links and references into different social, cultural, and techno-scientific domains. Although Enzensberger's recommendations rested on weak theoretical foundations, we need more of the type of experimentation that tries to realize the emancipatory media paradigm. The potential of empowerment through and with digital technologies is not a foregone conclusion—there is no automated utopia sitting there like a ghost in the machine—but can be considered a project: a projection of what can be attained if people fight for it, combining political will, collective action, and creativity. The 21st century creates new conditions in which the sensibilities shaped by tactical media and the aesthetics of protest are needed to address urgent issues.

Acknowledgments

Notes

1 Named after the Irish politician and Nobel peace prize winner Sean McBride who was appointed to head this commission.
2 Several reasons were cited such as undue politicization and poor management, but the New World Order of Information and Communication was clearly one major issue (Weiler 1986).
3 The term "transculturation" emerged in literary studies and has since become common in culture studies and media studies (Hall 1996; Trigo 2000; Chakravartty and Zhao 2008).
4 The title of this text has indeed nothing to do with a piece of software named Shockwave that was initially written to allow display of interactive and animated content online.
5 Also stopped short were the efforts of a group of brilliant designers, economists, and computer people who had converged on Chile to build a cybernetic operations room for the economy, an idea of Stafford Beer (Bonsiepe 2009).
6 There is convergence on this point with Welsh literary and culture studies pioneer Raymond Williams (1980).
7 Adam Smith: "The word VALUE, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called value in use;' the other, 'value in exchange.' The things which have the greatest value in use have frequently little or no value in exchange" (Smith 1904, bk.1.4.13).
8 Which, according to his translator, was strongly influenced by Lévi-Strauss (Levin 1981).
9 Core members were Karel Dudesek, Benjamin Heidersberger, Gerard Couty, and Mike Hentz.
10 The term is used here in accordance with Baudrillard's usage (1989).
11 Alexander Nikolic, Lukas Pusch, and Sam Hopkins.
12 *Agonie des Realen* is the title of a German book by Baudrillard (1981).
13 Carmin Karasic, Brett Stalbaum, and Stefan Wray.
14 The Thing is a BBS and web project by New York City-based German artist Wolfgang Staehle. http://www.thing.net (accessed January 15, 2015).
15 Brett Stalbaum, Micha Cardenas, Christopher Head, Elle Mehrmand, and Amy Sara Carroll.
16 Preemptive Media was a collaboration between Beatriz da Costa (1974–2012), Jamie Schulte, and Brooke Singer.
17 Based on narrative by Manu Luksch, private notes, December 2012–January 2013.
18 GATT was the predecessor of the WTO and stands for General Agreement on Tariffs and Trade.

19 GWEI was created by Ubermorgen together with Paolo Cirio and Alessandro Ludovico; parts 2 and 3 were co-productions of Ludovico and Cirio only.
20 A "fork" in hacker language occurs when one or more developers split from a project, taking the code base with them, which is possible under open source software licenses.

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