Hacking Global Justice

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On November 30, 1999, as tens of thousands of protesters blockaded the World Trade Organization (WTO) Summit in Seattle, the electrohippies organized a simultaneous collective action in cyberspace. The U.K.-based collective, composed of environmentalists and computer programmers, developed a special website allowing activists from around the world to take part in a "virtual sit-in." Using Floodnet software developed by the Electronic Disturbance Theater (EDT) during previous actions supporting the Zapatistas, the electrohippies' site automatically transferred visitors en masse to the official WTO domain as if thousands of surfers repeatedly clicked their browser reload buttons at the same time. The action was designed to overload the WTO web server by sending multiple requests over a period of several days. The electrohippies claimed more than 450,000 people ultimately swamped the WTO site from November 30 to December 5, while participants sent an additional 900 e-mails to the server per day. The group later explained their action in this way, "In conventional sit-ins people try to occupy gateways or buildings. In a virtual sit-in people from around the globe can occupy the gateway to the WTO's web servers. In this way we hope to block the flow of information from the conference- which is significant because it will cement proposals to expand globalization in the 21st Century."[1]

The virtual sit-in against the WTO is an example of what activists call Electronic Civil Disobedience (ECD), an information-age tactic intricately tied to an emerging wave of resistance against corporate globalization (cf. Jordan and Taylor 2004: 43). However, ECD itself forms part of a broader phenomenon widely referred to as "hacktivism."[2] For many activists and observers, hacktivism and ECD are largely synonymous, both pointing to the way "the popular politics of direct action has been translated into virtual realms (Ibid: 1)." Viewed in this light, hacktivism

has played a relatively modest role, complementing traditional street protest within global justice movements. At the same time, the fusion of "hacker" and "activism" suggests a potentially more significant phenomenon informed by the original sense of the former term. Indeed, as we shall see, some self-described hacktivists specifically reject ECD as contradiction of the basic hacker tenet: "all information should be free!"

To assess the impact of global justice hacktivism, a broader definition is required, which includes, yet goes beyond ECD. In the original sense, a hacker is someone who enjoys tinkering with computers to find concrete solutions to technical problems. In this light, Graham Meikle has characterized hacktivism as "an engaged politics which seeks solutions in software, in the search for a specific technological fix to a social problem (2002: 141)." Here, hacktivism refers to any use of computer technology for political ends, including diverse on-line practices: cross-border information sharing, action planning, and coordination via personal e-mails, chat rooms, and electronic distribution lists. At the same time, others have identified a broader "hacker ethic," which has migrated out from the technological domain, pointing to a general philosophy of information sharing, openness, decentralization, and playful exploration (Levy 1984; Himanen 2001). Even more broadly, McKenzie Wark (2004) conceives hacking as differentiation and the generation of abstractions. In this article, I develop a view of hacktivism that encompasses all these domains, and explore its significance within diverse realms of global justice organizing.

Since the anti-WTO protests in Seattle and through subsequent mobilizations in cities such as Prague, Quebec, Genoa, Barcelona, and Porto Alegre, global justice activists have used new digital technologies to practice ECD, disseminate alternative information, and engage in horizontal collaboration. "Hacktivists" have not only incorporated new technologies as tools; they have also used them to practice "informational utopics"- the physical expression of utopian

imaginaries through collective experimentation with new technologies.[3] Based on ethnographic fieldwork among global justice hacktivists based in Barcelona, I contend that hacktivism implies more than online political engagement. Influenced by the logic of computer networking, global justice hacktivists are not only carrying out tactical interventions in cyberspace, they are also generating alternative organizational forms, political norms, and cultural grammars. In what follows, I begin with an exploration of the multiple meanings of hacktivism, and then examine global justice hacktivism within five movement domains: Electronic Civil Disobedience, Independent Media, alternative media hubs, culture jamming, and collaborative networking. Finally, the article concludes by examining the wider significance of hacktivism with respect to the production of alternative social, cultural, and political models.

Specifying Hacktivism

In a general sense, hacktivism can be defined as "hacking for a political cause (metacOm 2003: 1)." But what exactly do we mean by hacking? First and foremost, hackers enjoy tinkering with computer systems and software code for personal satisfaction rather than instrumental gain. According to the hacker's "jargon file," a hacker is primarily "a person who enjoys exploring the details of programmable systems and how to stretch their capabilities," and second, "one who programs enthusiastically." To hack thus involves interacting "with a computer in a playful and exploratory rather than goal-directed way." Hackers are further driven by what Steven Levy calls the "Hands-On Imperative," believing that "essential lessons can be learned about the systems-about the world- from taking things apart, seeing how they work, and using this knowledge to create new and even more interesting things (1984: 40)."

On one level, then, hacktivism refers to experimentation with computer systems and/or software code toward some political purpose. But this immediately presents a paradox, given that hacking theoretically involves non-goal oriented activity. Indeed, as Patrice Riemens points out, unlike activists, hackers engage in "the pursuit of knowledge and the exercise of curiosity for its own sake (2003: 330)." At the same time, however, despite this ideal, all practices are implicated in complex relations of power. Moreover, self-defined hackers such as Richard Stallman have long engaged in expressly political activity in defense of free software,[4] while opposing growing corporate influence on the Internet. Indeed, hacktivism specifically refers to the coming together of activist and at least some hacker communities. On the one hand, hacktivism in this strict sense includes unauthorized computer intrusion (Jordan and Taylor 1998: 1), including ECD,[5] while on the other hand, computer-based hacktivism may also involve the use of digital technology to facilitate the circulation of information, while embodying broader political visions and ideals.

This latter point suggests a second way to understand hacking: as a wider cultural ethic that goes beyond the technological realm. In this sense, the jargon file also refers to a hacker as "an expert or enthusiast of any kind (cf. Himanen 2001: viii)." To hack thus means "to work on something" enthusiastically, as in the title of this article "Hacking Global Justice." At the same time, hacking also refers to pulling a prank in a surprising, playful, harmless, and skillful way. Moreover, as initially conceived, the hacker ethic further includes the following imperatives: "All information should be free" and "Mistrust Authority- Promote Decentralization (Levy 1984: 40-41)." As we shall see, global justice hacktivists also express these values when they engage in horizontal networking, which includes coordination across diversity and difference, the free and open exchange of information, and directly democratic decision-making (cf. Juris 2008). In this

sense, hacktivism refers to any political praxis inspired by the hacker ethic, such as networking, creative direct action, or guerrilla communication involving skill, wit, and irony.

Finally, hacking can also be viewed in an even broader sense as differentiation and the production of abstractions. As Wark suggests, to abstract is "to construct a plane upon which otherwise different and unrelated matters may be brought into many possible relations (2004: [008])."[6] Just as computer hackers continuously update programs or generate new ones by skillfully combining and recombining strings of code, hackers engage more generally in the creation of new relational forms, ideas, and knowledges. With respect to politics, hacktivists do this in two ways. First, at the organizational level, hacktivist networking involves creating spaces where diverse, autonomous elements interact within shifting alliances. Second, hacktivists also engage in what Italian media activists call "reality hacking," which, as we shall see, involves learning how complex social systems operate in order to deconstruct and reconstruct them in alternative ways. Hacktivism thus signifies the creative, skillful, and often playful manipulation of computer technologies- and the broader ethics, logics, and practices associated with them- for a concrete political purpose. Although ECD is perhaps the most widely recognized mode of hacktivism within global justice movements, it is by no means the most significant.

Electronic Civil Disobedience

Electronic Civil Disobedience brings together activists and computer programmers in the development of new forms of direct action in cyberspace. ECD involves not only the pragmatic use of computer technology and software, but also their creative adaptation in the service of expressly political ends. Initially conceived as a way for a small group of highly skilled digital

artists, activists, and programmers to achieve significant impact by making innovative and strategic use of the Internet, ECD has since become a more popular, mass-based practice. At the same time, hacktivist groups have debated the legitimacy of blockade and trespass techniques that seek to block the free flow of information.

Critical Art Ensemble (CAE) first coined the term Electronic Civil Disobedience in a 1996 work of the same title, where they argued that as capital becomes increasingly dispersed, mobile, and electronic, resistance should assume similar forms (cf. Wray 1998a: 2). Given that contemporary power operates through global information flows within decentralized networks, effective civil disobedience should aim to block these flows. As conceived by CAE, Electronic Civil Disobedience has three attributes that are particularly notable. First, it should take place exclusively in cyberspace. Given that power no longer resides in concrete places, street level tactics have lost their effectiveness. CAE thus writes "the streets are dead capital! Nothing of value to the power elite can be found on the streets, nor does this class need control of the streets to efficiently run and maintain state institutions (1996: 11)." Second, ECD should prioritize practical results. By denying access to information through electronic trespass and blockade techniques, an institution will ultimately become unstable and collapse (Ibid: 13). Finally, ECD is best practiced by an elite technocratic cell with sufficient skills and education, reflecting the early hacker emphasis on technical mastery.

Moving beyond theory, Electronic Disturbance Theater (EDT) first developed ECD as a tactic in support of the Zapatistas. EDT's vision differed in several important respects from that proposed by CAE. While CAE had favored small elite cadres of technically proficient activists, EDT conceived ECD as an open, mass-based democratic practice. Indeed, Floodnet software makes it possible for large numbers of non-technically minded activists to participate in a virtual

sit-in by simply clicking a link on their browser. Overloading the target server *requires* mass participation. Moreover, as EDT members readily admit, ECD has rarely, if ever, shut down a server entirely, but rather constitutes a simulated or symbolic threat (Wray 1998b: 6; cf. Meikle 2002: 149). As Ricardo Dominguez suggests, EDT's actions have an important performative dimension (Dominguez 2003: 100). In this sense, at least, they have been relatively effective, generating what W. Lance Bennet (2003) calls "micro to mass media cross-over," thus helping groups with limited resources attract mass media attention.[7] Finally, in contrast to CAE's rather pessimistic view of street protest, EDT has always recognized the links between physical and virtual action, as Stefan Wray suggested several years ago, "In the near future, we can expect to see hybrid civil disobedience actions that will involve people taking part in electronic civil disobedience from behind their computer screens while simultaneously people are engaging in more traditional forms of civil disobedience out in the streets (1998a:3)."

This is precisely how ECD has developed within contemporary movements for global justice. EDT organized the first large-scale virtual sit-ins against the Mexican government and related targets to protest the escalating war on the Zapatistas during a series of actions in 1998. According to organizers the first action in February mobilized 18,000 participants during a two hour period. An April action drew more than 8,000 people from around the world, while the "Digital Storm" in August mobilized three times that many (Meikle 2002: 143-144). Since then, hacktivists have organized ECD in conjunction with numerous global justice street protests, including actions against the WTO in Seattle (November 1999), the World Bank and IMF in Prague (October 2000), the Free Trade Area of the Americas in Quebec City (April 2001), and the World Economic Forum in New York City (January 2002).

In addition to virtual sit-ins, these mobilizations have also included bombarding target servers and websites with e-mails, leaving behind ironic messages or "electronic graffiti," and "hijacking," or re-directing, surfers to mock sites. For example, global justice hacktivists used ®™ark funding and software to build the clone "World Trade Organization/GATT Home Page" during the anti-WTO protests in Seattle featuring mock quotes by WTO Director-General Mike Moore (Ibid: 118).[8] In addition, during the mobilization against the World Economic Forum in Melbourne on September 11, 2000 (S11), the Nike domain name was rerouted to the S11 site (Meikle 2002: 163). Beyond creatively using computer technology for political purposes, these actions also reflect the hacker affinity for enacting pranks which are relatively harmless, playful, and technically masterful.

At the same time, other hacktivists have criticized ECD for betraying the fundamental hacker imperative to facilitate the flow of information. Jordan and Taylor (2004) thus distinguish between mass action hacktivism and "digitally correct" hacktivism, which promotes freedom of expression as a basic human right. For example, the Cult of the Dead Cow (CDC) collective, which created the Hacktivismo project in 1999 to fight censorship on the Internet, has criticized the Electrohippies, suggesting that "Denial of Service" attacks violate the basic freedoms of expression and assembly. CDC emphasizes an alternative approach to hacking, as one of its members, Count Zero, insists, "Focusing on empowering the people … with the TOOLS of hacktivism … making the WORLD know about the injustices and human rights abuses … in other words, getting the FLOW of INORMATION pumpin' around the globe … UNIMPEDED and UNCENSORED … THAT's hacktivism (cited in Jordan and Taylor 2004: 98)."

Indeed, hacktivism is a complex, differentiated, and contested field, as diverse groups draw on distinct aspects of the hacker ethic to inform their political praxis. Whereas those who

conduct ECD stress the creative use of new computer technologies to electronically blockade, digitally correct hacktivists are more inspired by the values of openness, free exchange, and connectivity. For example, CDC has helped develop a project called peek-a-booty, which aims to ensure the free flow of information to people whose governments censor the Internet (Ibid: 109). Moreover, the project's distributed network architecture, which Jordan and Taylor refer to as its 'politico-technological formation,' allows hacktivists to imbue "the very fabric of cyberspace with their political values (2004: 110)," which is precisely what I mean by informational utopics. Indeed, as we shall see, global justice hacktivists often inscribe their broader utopian visions directly into emerging technological architectures (cf. Lovink 2002: 34).

Indymedia

Independent media provides another crucial terrain for hacktivist practice within global justice movements, specifically with respect to classic hacker values regarding the free and open exchange of information and decentralized coordination. Not only do Independent Media Centers (IMC), or Indymedia, allow global justice activists to circulate alternative news and ideas within global circuits in real time, the network also physically incorporates broader hacker ideals into its open publishing software. In this sense, Indymedia constitutes a key example of informational utopics, as media activists creatively adapt new digital technologies to facilitate social movement organizing while promoting a more far reaching politics of open communication.

The first IMC was established during the mobilization against the WTO in Seattle, where independent journalists reported directly from the streets, while activists in Seattle and beyond uploaded their own text and image files. Indymedia sites would soon be up and running in cities

such as Philadelphia, Portland, Vancouver, Boston, and Washington D.C., while the network quickly expanded on a global scale to Prague, Barcelona, Amsterdam, Sao Paolo, and Buenos Aires. Indymedia has since transformed into a worldwide alternative communications network involving multimedia platforms comprised of electronic print, video, audio, and photography. The global network now has more than 170 local sites, and receives two million page views per day (cf. Downing 2003; Halleck 2002; Kidd 2003; Meikle 2002).[9]

Reflecting hacker values, local Indymedia collectives are organized along decentralized, non-hierarchical lines- at least in theory, which involve consensus decision-making, autonomous working groups, and horizontal coordination. For example, the IMC collective in Barcelona is structured around technical, editorial, and video commissions, which coordinate via bi-weekly assemblies and e-mail lists. The worldwide Indymedia process is similarly managed through a series of transnational editorial, technical, and logistical working groups, which communicate through global e-mail lists and periodic web meetings using Internet Relay Chat technology.

Central to Indymedia's organization and philosophy is open publishing software, an innovative technical system that allows activists to create and distribute their own news stories. Users simply fill out an electronic form provided on the site, click "publish," and the story instantly appears on the right-hand column. Readers can also provide comments, which are included below the original posts, generating an open forum for discussion and debate. Editorial groups then select the most relevant posts to include within the featured stories in the central column, though some local collectives use a completely automated system. Most sites continue to run an adapted version of the original Active software, while others have created their own programs. Regardless of the particular format, all sites involve open publishing technology, which means, as Mathew Arnison suggests:

> The process of creating news is transparent to the readers. They can contribute a story and see it instantly appear in the pool of stories publicly available. Those stories are filtered as little as possible to help the readers find the stories they want. Readers can see editorial decisions being made by others. They can see how to get involved and help make editorial decisions. If they can think of a better way for the software to help shape editorial decisions, they can copy the software because it is free and change it and start their own site. If they want to redistribute news, they can, preferably on an open publishing site.[10]

Open publishing is not simply an efficient model of decentralized news production and distribution; it also represents a highly valued political and cultural goal, reflecting wider hacker values regarding horizontal coordination and the free and open exchange of information. Open publishing specifically reverses the implicit hierarchy defining the relationship between author and consumer, empowering grassroots users to participate in the production process, as Evan Henshaw-Plath, and Indymedia programmer, points out, "It's all about using technology to dis-intermediate the authority and power structure of the editor." [11] Open publishing facilitates active participation over passive consumption by providing decentralized infrastructures, as Henshaw-Plath explains, "I see my task as building technological systems where people can exert power through egalitarian systems that will reproduce horizontal [and] cooperative social relations."[12] Open publishing thus allows hacktivists to practice informational utopics, where broader hacker values involving open access, horizontal collaboration, and the free and open exchange of information are inscribed directly into Indymedia's network architecture.

At the same time, as Indymedia expands, and along with it the number and diversity of posts, many activists see an increasing need to develop mechanisms for shaping and controlling content. Some believe that Indymedia can offer more relevant stories, while taking advantage of new software tools and technologies to emphasize the network's commitment to participatory multimedia production. For example, Mathew Arnison has proposed creating an "automated open-editing" system, similar to the open publishing concept. Users would independently post "sub-edits" to correct facts and sources; edit spelling, grammar or content; translate the story to another language; or nominate features for the central column. Editorial collectives could then periodically survey these sub-edits to develop Indymedia front pages. An alternative solution would allow people to link their own weblogs to an automated system for making front-page decisions. In the hacktivist spirit, open editing would foster new technological mechanisms for expanding grassroots participation, decentralized coordination, and horizontal decision-making.

Hacktivism Embodied

Beyond Independent Media Centers, global justice mobilizations have become key sites where hacktivists use and experiment with new digital technologies during temporary media labs, thus practicing informational utopics along physical terrains. For example, the July 2002 Strasbourg No Border Camp was designed to challenge the Schengen Information System (SIS), which tracks movement across EU space. The alternative media zone, ironically called "Silicon Valley," housed the most lively and innovative spaces within the entire camp, including an IMC, Internet Café, radio tent, Web-based news and radio, and a double-decker media bus from Vienna called Publix Theater Caravan, which itself offered video screening, Internet access and

streaming, and a bar and lounge. The Internet Café and the entire zone were outfitted with WiFi (wireless) connection, and the radio tent was equipped with a 50-watt transmitter that generated simultaneous web and broadcasts.

The media zone also housed an experimental project called d.sec (database systems to enforce control), which explored conceptual and practical links between freedom of movement and freedom of communication, and physical and virtual struggles against growing mechanisms of control. Specific workshop themes included open source, guerrilla communication, media activism, and technology and the body. More generally, d.sec was conceived as an open space for experimentation with digital networking, self-organization, and horizontal collaboration, as the program flyer explained:

> d.sec is… an open structure where activists, anti-racists, migrants, hackers, techs, artists and many more put their knowledge and practices into self-organized interaction: a space to discuss and network, skill share, and produce collaborative knowledge. A laboratory to try out ways to hack the streets and reclaim cyberspace with crowds in pink and silver; experiment with virtual identities, Linux, and open source… explore the embodiment of technology, learn about the meanings of physical and virtual border crossing.

D.sec provided a forum for generating new ideas and practices expressing broader hacker values. Indeed, emerging hacktivist practices are beginning to generate new political idioms. For example, Andalusian hacktivists have developed the notion "hackitecture" to signify emerging "forms of spatial production that connect social networks, information and communication technology (ICT) networks, and territories."[13] Jose Perez de Lama (2004) similarly writes about

"Geographies of the [connected] multitude." Media activists are building experimental terrains where the physical and virtual meet through "the construction of situations using digital tools that facilitate the appropriation and resignification of space."

Such digitized "temporary autonomous zones" (Bey 1985) were modeled after both the experimental media labs of the late 1990s (Lovink 2002: 240-253) and the Italian tradition of autonomous hackmeetings, where hacker values regarding technological experimentation and the free exchange of information are put into practice inside squatted social centers. Hackmeetings involve workshops related to technology, open source, and communication politics; informal networking spaces; and chill rooms, but they principally revolve around the networked space, "an area in which everyone can bring his own computer and wire it to the net to communicate with everyone else, experimenting, playing, and sharing freely."[14] Since the first hackmeeting in Florence in 1998, annual gatherings have been organized throughout northern and central Italy, and more recently in the Iberian cities of Barcelona, Madrid, Bilbao, and Pamplona.[15]

Activists have also set up permanent "hacklabs" in Italian and Spanish social centers. Equipped with recycled computers running on open source software, hacklabs provide Internet access, spaces for digital experimentation, and public workshops. Reflecting a conception of hacktivism as involving differentiation, abstraction, and cultural recombination, Blicero, an Italian hacktivist, explains, "We try to combine the hacker attitude… the act of understanding the functioning of complex machines in order to deconstruct them and reconstruct them in a non-conventional manner, with the ambition of analyzing the real."[16] Reality hacking thus involves the extension of hacker values and logics into the social realm in order to deconstruct dominant ideas and practices, and reconstruct them as concrete alternatives, creating an affinity between technological and non-technological domains, as Blicero continues, "If we transpose these

characteristics into the 'non technical milieu', it easy to identify occupied social centers and self-managed social spaces as clear and obvious attempts at reality hacking."[17]

A parallel argument can be made regarding d.sec or No Border camps, which hacktivists refer to as "hacking the border." The Kernel Panic hacklab in Barcelona organizes similar events combining public computer installations, workshops, and music, which they call "hacking-in-the-streets."[18] Contrary to CAE's claim that the streets have become dead space, hacktivists are thus struggling to reclaim both public space and cyberspace from the logic of commodification and state control, while expressing their own self-managed utopias through digital praxis.

Global justice hacktivists have built similar media labs during the European and World Social Forums. For example, the "Euraction Hub Project" in Florence in November 2002 was designed as an open space for sharing ideas and experiences, experimenting with new digital technologies, carrying out autonomous actions, and above all, organizing in a horizontal and participatory fashion. Specifically, the project was conceived "as an implicit critique of vertical, non-inclusive, and non-participatory structures," in order "to reflect on activist communication and new forms of expression of antagonism and conflict."[19] The Hub was thus conceived as an alternative to the hierarchical practices associated with the official Forum. Reflecting a hacker ethic, the Hub emphasized "opening spaces as a political element in itself, and as a catalyst to the multiplication of spaces and relationships among networks and movements."[20] It thus brought together diverse strands of an emerging digital media culture within a larger global justice context, pointing to the broader fusion of virtual and physical hacking domains.

Culture Jamming and Guerilla Communications

As we have seen, hacking thus extends beyond the technological realm to encompass a wide array of practices reflecting a broader hacker ethic. What hacktivists call tactical media further reflect this playful, recombinatory logic in the context of political and cultural critique. For example, culture jamming involves the playful parodying of corporate advertisements and logos to generate alternative messages that challenge corporate power (Klein 2000: 279-310; Lasn 2000). Pirating billboards, ironic graffiti, and altering websites are all specific instances of culture jamming. For example, the Canadian-based Adbusters magazine, founded by Kalle Lasn in 1989, and the related Media Foundation, provide on-line commentary and multimedia resources allowing local participants to download materials and participate in anti-corporate campaigns, including Buy Nothing Day.

Guerrilla communication is a related practice, involving the creative juxtaposition of incommensurate elements to generate subversive meanings. Rather than emphasizing arguments or facts, guerilla communication uses paradox to shatter tacitly accepted notions about how the world works to open a space for alternative formulations, as the Autonome a.f.r.i.k.a. gruppe suggests, "Communication guerillas want to create those short and shimmering moments of confusion and distortion, moments which tell us that everything could be completely different: a fragmented utopia as a seed of change (2003: 88)."

Culture jamming and guerilla communications make use of the old Situationist strategy of “détournement,” which takes well-known phrases, images, and ideas from mass culture, takes them out of context, and gives them an unexpected twist, or detour, in order to create surprising, often playful combinations (Richardson 2003: 124-125). These practices constitute a form of

reality hacking, given their emphasis on cultural mastery, use of virtuoso pranks, and creative combination and recombination of textual codes. In Barcelona, hacktivists associated with the political art collective the "Agencies" have developed various tactical media projects using digital technologies to produce and distribute physical and virtual materials, including posters, flyers, stickers, and videos. For example, during the Barcelona mobilization against the World Bank in June 2001, the Agencies developed an ironic action concept involving the Barcelona Stock Exchange (La Bolsa) called, "La Bolsa, o La Vida," which roughly translates, "Your Money, or Your Life!" After the anti-G8 protests in Genoa, the collective designed the "New Kids on the Black Bloc" project, which fused images of militant protest with those of a teen rock band to challenge taken-for-granted notions of violence.

The Agencies' latest project, "YOMANGO," combines guerrilla communication, culture jamming, civil disobedience, and corporate sabotage. "Mango" is a Spanish-owned multinational clothing chain, while the slang phrase "Yo Mango" means "I steal." The campaign specifically provides materials and information that encourage people to steal clothing and other items from Mango and related corporate outlets. The project also involves public events featuring collective shoplifts and YOMANGO banquets with stolen foodstuffs. For example, during one action, more than fifty activists converged in the transnational clothing store Bershka, shoplifted a discount dress, marched with it through the streets of Barcelona, and then exhibited the dress as an art installation in a well-known museum in the center of Barcelona. The action was announced before hand, and open to the general public.[21] Reflecting a classic hacker ethic, YOMANGO thus aims to provide "tools and dynamics that flow, proliferate, and are re-appropriated," [22] to facilitate, as hacktivists ironically point out, "the free circulation of goods!" [23]

As with electronic civil disbobedience, culture jamming and guerrilla communication tactics are symbolic, and often generate significant mass media attention. However, the broader significance of these practices may lie elsewhere, as they form part of an emerging hacktivist culture involving a diverse array of practices informed by hacker values surrounding the creative use of new digital technologies, decentralized coordination, the free and open exchange of ideas and information, and the combination and recombination of both software and cultural codes. As tactical media practitioners and theorists Geert Lovink and Florian Schneider explain with respect to this "new actonomy":

> Equipped with pies and laptops, [it] consists of thousands of bigger and smaller activities, which are all by themselves meaningful and sustainable. For this we do not need a General Plan, a singular portal website, or let alone a Party... Create and disseminate your message with all available logics, tools, and media. The new actonomy involves a rigorous application of networking methods. Its diversity challenges the development of non-hierarchical, decentralized, and deterritorialized applets and applications (2001:4).

Global Justice Networking

Finally, the hacker ethic and practices outlined above have given rise to new forms of networking within global justice movements, which many activists refer to as a "new way of doing politics" (Juris 2008). Whereas traditional politics are based on recruiting new members, developing unified strategies, democratic representation, and the pursuit of political hegemony, hacktivist politics involve the generation of broad umbrella spaces, where diverse organizations,

collectives, and networks converge around a few common hallmarks, while maintaining their autonomy and specificity. Rather than recruitment, the objective becomes horizontal expansion by articulating diverse movements within decentralized information structures that allow for maximal coordination and communication.

Guided by this networking logic, key activists serve as relayers and exchangers who receive, interpret, and distribute information to diverse network nodes.[24] Like computer hackers, global justice hacktivists combine and recombine codes, in this case, political signifiers, sharing and circulating information about projects, mobilizations, strategies, tactics, and ideas through global communication networks. Specific hacktivist practices, facilitated and shaped by digital technologies, have generated network-based organizational forms and new political visions based on the network as an emerging cultural ideal. In this sense, global justice movements are characterized by an increasing confluence among network technologies, organizational forms, and political norms, mediated by concrete hacktivist practice.

With respect to new technologies, global justice hacktivists have used digital networks to share information and resources, organize actions, and coordinate campaigns. For example, anti-WTO protests in Seattle and subsequent actions in Washington, D.C., Prague, Quebec, Genoa, Barcelona, and elsewhere were organized, in part, through a global web of Internet listserves. More generally, activists used e-mail lists to share logistical information regarding meetings, protests, and activities; engage in debates regarding the future direction of their networks; and exchange information about political mobilizations and events in Spain, Catalonia, Europe, and around the world. Electronic information sharing allowed local networks to articulate with regional and global processes. Although global justice hacktivists have primarily used e-mail lists for planning and coordination, they also employ interactive web pages. Particular activist

networks and processes- such Peoples Global Action, the World Social Forum, or ATTAC- have their own websites while temporary sites are created during mobilization to provide information, resources and links; post documents and calls to action, and house real-time chats.[25]

Digital technologies and hacktivist practices have also generated network-based forms that embody broader hacker ideals. For example, the Movement for Global Resistance (MRG) in Barcelona, founded to mobilize for the anti-World Bank/IMF protests in Prague, was conceived as "a network of people and collectives against economic globalization and unitary thinking, a tool to provide local struggles with global content and extension."[26] MRG was a flexible tool for communicating and coordinating among diverse local struggles, including environmentalists, squatters, Zapatista supporters, anti-debt and solidarity activists, and opponents of the EU. Rather than top-down command, hacktivists within MRG preferred loose, flexible coordination among autonomous groups with a minimal structure involving periodic assemblies, logistical commissions, and project areas. MRG often dissolved into broader campaigns, but remained an effective space for sharing resources and information, generating analyses, and inspiring what activists viewed as a new form of action based on "working as a network, through horizontal assemblies, and with local autonomy to reach people with a more open, less dogmatic style." [27]

Catalan hacktivists have also been active in broader regional and global networks, such as Peoples Global Action (PGA), itself a diffuse network facilitating communication among diverse local struggles around the world. PGA has no formal members, but rather seeks to provide a tool to help "the greatest number of persons and organizations to act against corporate domination through civil disobedience and people-oriented… actions."[28] Anyone can participate in PGA as long as they agree with the basic hallmarks.[29] Rather than a central coordinating committee, each continent selects rotating "convenors" to organize conferences, carry out logistical tasks, and

facilitate communication with the help of support groups. MRG and PGA are thus generated in practice through hacktivist networking, while their organizational architectures reflect classic hacker values surrounding decentralized coordination and the free exchange of information.

Moreover, technologists within the world and regional social forums increasingly draw the connection between technology and the forum's open space ideal, particularly through their use of free software. As one member of the United States Social Forum's (USSF) Information and Communications (ICT) Team explained, “We felt the selection the social forum makes for its software should mirror the politics of the social forum, which are about the development of a large network and community where there is genuine shared commitment, a sense of equality, respect, and collaboration, and that is what free and open source software is.” The use of an open blog on the USSF website further reflected a commitment to collaborative knowledge production and the free exchange of information, as another ICT Team member suggested, " “The Forum is… the collectivized and refined experience of masses of people… so that we would blog it that way… [is] the only way for a social forum to report what happened.”

Beyond technology and organization, the network has also become a widespread cultural ideal among global justice hacktivists. For example, the Citizens Network to Abolish the Foreign Debt (RCADE), which preceded MRG, self-consciously employed the terminology of computer networks to characterize its organizational structure.[30] The RCADE network was composed of local, regional and statewide “nodes.” Local nodes, the organizational and political base, were conceived as “self-defined, self-managed and self-organized spaces.” RCADE-based hacktivists coordinated more widely during meetings of regional and statewide nodes and larger annual gatherings, as one activist explained, "We organized ourselves as nodes, using the nomenclature of the Internet. It was completely new, because we were thinking in network terms. The nodes

were the spaces where information was produced and made public, the physical embodiment of the Internet, what we might call affinity groups today."

The larger goal was not just abolishing the foreign debt; but rather expanding the network and its directly democratic modus operandi, as a document explains, "The Network is a tool for creating social fabric, and we do this in our local contexts… Participatory democracy is not only a transversal theme in our work; it constitutes our model of … operation."[31] Such a network ideal was widespread among Spanish and Catalan hacktivists in the late 1990s, as an MRG organizer explained, "[In] the 21st century, with the discourse of postmodernity, people are always talking about the 'network of networks of networks,' but for me building these networks represents the world we want to create." She went on to define her ideal world as comprised up of "small, self-organized, self-managed communities, coordinated on a worldwide scale." When asked about networks, another global justice hacktivist responded, "The revolution is also about process, no? The way we do things is also an alternative to capitalism."

Indeed, global justice hacktivists often characterize networking as an end in itself, just as early computer hackers were committed to technological tinkering and exploration for their own sake. Although global justice networking is situated within a specific political context- a global struggle against corporate globalization- the political target is often eclipsed by an emphasis on the intricacies of directly democratic process. Activist networking thus shares with other forms of hacktivism a preoccupation with skillful mastery and technical virtuosity. In this sense, perhaps the seeming gulf between activism and computer hacking is less significant than some might otherwise believe.

Conclusion: Hacking Alternative Worlds

Although many observers and practitioners have equated hacktivism and Electronic Civil Disobedience, in this article, I have defined the practice more broadly as hacking of any kind for a political purpose. I have thus gone back to early conceptions of hackers as not only computer enthusiasts who enjoy programming and manipulating software code, but also as a group of people who share a specific ethos or disposition. In this sense, hacking refers more widely to a mode of playful exploration, technical mastery, and cultural recombination, as well as a shared commitment to decentralized coordination and the free exchange of information. As we have seen, hacktivism, or political hacking, involves the expression of classic hacker values in the context of broader political projects within technological, organizational, and cultural-ideological domains. I have specifically explored five modes of global justice hacktivism: ECD, Indymedia, temporary media labs, culture jamming, and networking. In each of these areas, hacktivists have combined the hacker attitude with concrete projects for social change.

But how do we assess the broader political impact of global justice hacktivist practice? Has it been effective, and how can we measure success? In the case of ECD, for example, virtual sit-ins against the Mexican government and WTO have rarely shut down target servers, but they have generated a great deal of media attention. Similarly, culture jamming campaigns and direct actions against multilateral institutions, which are facilitated by hacktivist networking, have also raised awareness about corporate power and the negative impact of neoliberal globalization. On one level, then, as a form of tactical media, hacktivism has provided a concrete mechanism for intervening within dominant public spheres. On another level, the transnational circulation of alternative news and information promoted by projects such as Indymedia and broader social

movement networking, have generated a dense network of activist counter-publics (Fraser 1993) from which to mount directed political campaigns and mobilizations. In this sense, hacktivist practice involves what Cohen and Arato (1992) refer to as "dual politics," targeting institutional political spheres- in this case via symbolic politics, while simultaneously building an alternative network of self-managed associations within the realm of civil society.

But how should we understand the widespread technological, organizational, and cultural experimentation among contemporary global justice hacktivists? What is the broader impact of social movement networking beyond the institutional sphere, or practicing informational utopics, where political visions are expressed through concrete organizational and technological practice? Here we might turn to Alberto Melucci (1989), for whom social movements are not just political pressure groups, but are also innovative social and cultural laboratories. In this sense, as they experiment with new computer technologies, global justice hacktivists are generating alternative cultural codes and social practices that involve new modes of tactical intervention, political organization, and cultural expression.

For example, a group of hacktivists in Barcelona formerly with MRG went on to build a new collective called the Infospace. The project combines virtual tools, such as an Internet server and movement directory, with physical tools, including publishing and editing services, research and documentation, a solidarity economy project, and a storefront office that houses reception, meeting, and digital workspaces. The Infospace aims to create an alternative network of self-managed institutions, and beyond that, to provide the necessary tools, practices, and resources to help others do the same. Regarding the project's long-term vision, one activist had this to say, "We are building autonomous counterpower by networking movements and creating our own alternatives without waiting for the government… and helping others to achieve them as well."

The European Social *Consulta* (ESC) represented an ambitious attempt to do just that: use hacktivist networking to build a directly democratic political process involving horizontal collaboration, self-management, and the free flow of information.[32] Developed by activists with networks such MRG, RCADE, and PGA, the *Consulta* was first conceived as an Internet-based referendum. However, the focus ultimately shifted to a sustained process of critical reflection and debate concerning corporate globalization and democracy. The first step would involve an Internal Consultation (IC) to decide which issues to address. Indeed, the IC was an innovative experiment in collaborative development. In this sense, many activists saw the ESC was a way to extend their hacktivist practices outward, as a flyer explained, "We have to take the way we organize ourselves, our movements, not only as a way to organize protests, but also as a way to organize society." This would entail initiative such as "municipalism, bio-regionalism, consultas and referendums, community neighborhood plans, and neighborhood assemblies."[33]

In the end, the project proved overly ambitious, and the IC failed to elicit the anticipated response. Perhaps it was too abstract, divorced from everyday life in the neighborhoods activists sought to mobilize. At the same time, the *Consulta's* most far reaching goal- creatively using digital technologies to build an alternative, self-managed political system- stands as a testament to the ongoing search for new political norms, forms, and practices. In the broadest sense, global justice hacktivism thus aims to generate innovative political, cultural, and technological tools for building utopian social worlds that are infused with classic hacker values related to the free and open exchange of information, playful experimentation, and autonomous self-management.

[1] Electrohippies press release distributed November 30, 1999, www.fraw.org.uk/ehippies/action/wto_press.shtml (accessed November 13, 2005).

[2] According to Oxblood Ruffin, member of the hacker collective Cult of the Dead Cow (cDc), the term hacktivism was coined by Omega, a fellow cDc member, in 1996. It was initially meant as a joke, but Ruffin later defined it more precisely as "using technology to improve human rights across electronic media (2004:2)." Ruffin opposes using hacktivism to refer to web defacements, denial of service attacks, or other forms of electronic civil disobedience.

[3] Kevin Hetherington characterizes the appropriation and organization of physical territory during radical activist actions, gatherings, and encampments as the spatial practice of "utopics," where "a utopian outlook on society and the moral order that it wishes to project, are translated into practice through the attachment of ideas about the good society onto particular places (1998: 123)." Hacktivists engage in similar dynamics when they experiment with digital technologies along the physical/virtual divide, which I call informational utopics (cf. Juris 2008).

[4] According to Stallman's Free Software Foundation, software is considered free if users have the following freedoms (which require access to source code): 1) freedom to run the program for any purpose, 2) freedom to study how the program works and adapt it to your needs, 3) freedom to redistribute copies, and 4) freedom to improve the program and release improvements to the public (http://www.gnu.org, accessed on November 13, 2005). This latter principle is the basis for the open source model used to develop programs and operating systems such as GNU/Linux.

[5] Unauthorized website access and defacement are perhaps better understood as "cracktivism," or politically motivated hacking that is disruptive in nature www.thehacktivist.com, accessed on November 13, 2005). This definition is derived from cracking, the criminal act of breaking into a computer system (Himanen 2001: viii).

[6] In the Hacker Manifesto (2004), McKenzie Wark argues that industrial-age class conflict involving workers and owners has given way to a struggle between the creators of information- the hacker class- and the vectoralists who would exploit their products as intellectual property.

[7] For example, EDT made front page news in the New York Times on October 31, 1998 in the midst of their virtual sit-in campaign against the Mexican government, while on February 1, 2002 another New York Times article publicized their call for cyberaction against the World Economic Forum.

[8] See http://www.gatt.org (accessed on November 13, 2005). The ®™ark (pronounced "artmark") website provides funding and technical assistance database and exchange for corporate sabotage projects, and also provides a software program that automatically copies corporate websites (see http://rtmark.com, accessed on November 13, 2005).

[9] See Indymedia faq, http://process.indymedia.org/faq.php3 (accessed November 13, 2005).

[10] "Open publishing is the same as free software," www.cat.org.au/maffew/cat/openpub.html (accessed November 13, 2005).

[11] "Interview with Evan Henshaw-Plath," http://lists.indymedia.org (accessed November 13, 2005.

[12] Ibid

[13] Call for "The Multitude Connected Conference," organized by hackitectura.net in Huelva, Spain on September 2-4, 2003; retrieved from the prep-@geneva.03.org listserve on August 23, 2002.

[14] Call for Hackmeeting 2002 in Bologna from June 21 to 23, www.ecn.org (accessed November 13, 2005).

[15] See http://es.wikipedia.org/wiki/Hackmeeting, accessed on November 13, 2005.

[16] “Hacklabs- A Space of Construction and Deconstruction,” www.hubproject.org (accessed March 19, 2004).

[17] Ibid

[18] See www.sindominio.net/kernelpanic/cst/index2.php, accessed on November 13, 2005.

[19] “Call to EUR@ACTION Hub Project," http://www.nadir.org/nadir/initiativ/agp/ (accessed November 13, 2005).

[20] Ibid.

[21] Yo Mango, "Presentación de la Marca Yomango," www.yomango.net (accessed January 26, 2007).

[22] Yo Mango, "10 Sugerencias para un Estilo Yo Mango," www.yomango.net (accessed January 26, 2007).

[23] Yo Mango, "Presentación de la Marco Yo Mango," www.yomango.net (accessed January 26, 2007).

[24] Networking logics involve a series of dispositions that orient actors toward 1) decentralized coordination across diversity and difference, 2) the free and open circulation of information, 3) directly democratic decision-making, and 4) self-directed networking (Juris 2008).

[25] See www.agp.org, http://www.forumsocialmundia.org.br, and www.attac.org (all accessed on November 13, 2005). For an analysis of global justice movement websites, see Van Aelst and Walgrave (2002).

[26] “La Organización del MRG,” published in the February-March 2001 edition of EIMA, a Catalan activist journal.

[27] Unless otherwise indicated, all subsequent quotations are cited from personal interviews with Barcelona.

[28] PGA Organizational Principles, www.nadir.org/nadir/initiativ/agp/ (accessed November 13, 2005).

[29] The PGA hallmarks include: 1) a clear rejection of capitalism and all systems of domination, 2) a confrontational attitude, 3) a call to direct action and civil disobedience, and 4) an organizational philosophy "based on decentralization and autonomy www.nadir.org/nadir/initiativ/agp/ (accessed on November 13, 2005).

[30] RCADE was founded to organize a consulta asking Spanish citizens if they were in favor of abolishing the foreign debt owed to the Spanish government by developing nations.

[31] Proposal presented at the Fifth RCADE Encounter (October 12 to 14, 2001).

[32] The ESC was modeled after the March 1999 Spanish *Consulta* for the Abolition of the Foreign Debt and the Zapatista National *Consulta* for Peace and Democracy in August 1995.

[33] Flyer called "This is What Democracy Looks Like."

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