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ARTICLE

From hackers to hacktivists: speed bumps on the global superhighway?

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Abstract

This article traces the emergence of the new social movement of hacktivism from hacking and questions its potential as a source of technologically-mediated radical political action. It assesses hacktivism in the light of critical theories of technology that question the feasibility of re-engineering technical systems to more humane ends. The predecessor of hacktivism, hacking, is shown to contain certain parasitical elements that provide a barrier to more politically-orientated goals. Examples are provided of how such goals are much more in evidence within hacktivism. Its alternative conceptualization of the human–technology relationship is examined in terms of a purported development from conceptualizations of networks to webs that incorporate new ways of producing online solidarity and oppositional practices to global capital.

Key words

agora • electronic civil disobedience • hackers • hacktivists • neo-tribes • the hack • the Prince

[We need] a future communications guerilla warfare – a manifestation complementary to the manifestations of Technological Communication, the constant correction of perspectives, the checking of codes, the ever renewed

> interpretations of mass messages. The universe of Technological Communication would then be patrolled by groups of communications guerillas, who would restore a critical dimension to passive reception. The threat that the 'the medium is the message' could then become, for both medium and message, the return to individual responsibility. To the anonymous divinity of Technological Communication our answer could be: 'Not Thy, but our will be done.' (Eco, 1967: 144)

INTRODUCTION

There is a long tradition of theorists who emphasize the way in which technology circumscribes human action and indeed consciousness (see Harris and Taylor, 2005). The fact that Eco's above call for a 'communications guerilla warfare' with which to confront 'the anonymous divinity of Technological Communication' ends with the invocation of the Lord's Prayer, even if ironic, highlights the way in which technologies and particularly communications technologies tend to produce feelings of subordinance and powerlessness. This article uses 'hacktivism' – the combination of hacking techniques with political activism – to explore this perennial tension between human agency and technological structures. The rise of hacktivism is traced from its more technologically focused and politically insular predecessor, hacking, which is shown to have failed to develop the radical potential of its original celebration of human ingenuity over technological systems and has largely become an uncritical celebration of those systems for their own sake. Put simply, hacking as it evolved over time increasingly became the pursuit of technological means as an end in itself. Hacktivism, by contrast, is presented as a refocusing upon the political nature of the end to which technological means should be put: a normative element has been put back into objectified computer code. The rest of the article explores the more politically informed status of hacktivism and its efforts to apply technology as means to more reflexive ends. To do this, the work of a number of social theorists concerned with the issue of the nature of power in technological society is used to assess the likely success of hacktivism as a political project to answer Eco's prayer. The article concludes by presenting a dot com(munist) manifesto for the work-in-progress that is hacktivism.

The main aim of this article is simply to discuss the likelihood of an answer being found to Eco's technological Lord's Prayer. For Eco, the supremacy of technological communication is such that it represents 'an extremely powerful instrument that none of us will ever manage to regulate' and which is 'not controllable either by private will or by the community' (Eco, 1967: 141). Eco's pessimism is matched by his fellow theorist of the hyperreal, Jean Baudrillard, who refers to the cumulative affect of contemporary communications systems as producing 'total disillusionment' (Baudrillard, 1994: 61). Cocking a snoop at the dominant paradigm of hi-

tech boosterism, he sarcastically asserts that the media is no better at facilitating meaningful human relations and human communications than 'the possession of a refrigerator or a toaster' (Baudrillard, 1981: 171). This article aims to offer at least a partial counterweight to these largely negative assessments of the human–technology power imbalance by suggesting that although the jury is still out on their ultimate chances of success, hacktivism at least offers some hope that a critical, proactive dimension can be restored to the predominantly passive nature of our usual reception of the media.

Whether optimistic or pessimistic and at the risk of using an oxymoronic expression, theoretical interpretations of the human–technology power balance tend to be heavy on abstractions and light on concrete examples. This article offers a reinterpretation of such theories, informed by the various guerilla-type practical strategies of those new social groups that use a range of different communicational strategies and which can be classed under the umbrella term 'hacktivism'. A schema of the different hacker generations is given, which makes it easier to see the extent to which hacktivism marks a positive, empowering departure from the weaknesses of hacking and a welcome return to fundamental elements of the original hacker ethic. We see how, despite being initially predicated upon the imaginative reappropriation and reverse engineering of the original purposes and design of *any* technology, by the mid-1990s the technological ingenuity of hacking had become limited somewhat de facto to the artefact of the computer. From this it can be seen that, rather than being a deviation from hacking's core activities, hacktivism actually marks a return to its purest concern of ingenious reappropriation and re-engineering of all technology. The self-justifying enjoyment of technical means has been re-engineered for social ends. In this context, the suffix 'ism' applies not only to hacktivism but capitalism. Despite its affinity with the manipulation of technical systems, hacking is shown to have a fundamental blind spot in its engagement with the overarching system within which those systems are contained. Hacktivism engages with this metasystem directly and, with its close ties to the politics of globalization, marks the beginning of a significant new chapter in radical technological politics. Therefore, in the following we ask whether Eco may have been unduly pessimistic.

THE HACKER GENERATIONS: FROM HACKING TO HACKTIVISM

The connotations of hacking have changed significantly over time, even though the essential elements of the activity have remained relatively constant. Therefore, it is necessary to get a clear sense of its original key features and the extent to which hacktivism has successfully re-energized them. Although they have tended to be forgotten, as the term hacking has become synonymous with illegal access to computers, let me suggest that

there are three key core elements of the early hacking ethic which offer the basis for the strategies of those seeking to use technologies to promote rather than hinder human agency:

- the ingenious use of any technology;
- the tendency to reverse engineer technology to do the opposite of its intended design; and
- the desire to explore systems.

Elsewhere (Jordan and Taylor, 2004; Taylor, 2001; Taylor and Harris, forthcoming 2005), this author has used variations upon the following basic schema to trace the various generations of hackers so that we can see better the extent to which these three core hacker elements have fared over time, and the extent to which a hacktivism marks their revival. Levy (1984) identified the following three main hacker generations:

(1) '*true' hackers*: these were the pioneering computer aficionados of the earliest days of computing who experimented with the capabilities of the large mainframe computers at such US universities as Massachusetts Institute of Technology (MIT) during the 1950s and 1960s.
(2) *hardware hackers*: these were the computer innovators who, beginning in the 1970s, played a key role in the personal computing revolution which served to widely disseminate and dramatically decentralize computing hardware.
(3) *game hackers*: in the 1980s these were the creators of popular gaming software applications for the hardware developed by the previous generation. It could be argued that the hackers of phone systems, 'phone-phreakers', are an important category which should be added to Levy's list of early generations.

Notwithstanding this, the following loosely chronological categories (the generations tend to overlap each other) can be added to these initial generations identified by Levy:

- *hacker/cracker*: from the mid-1980s to the present day both these terms are used to describe a person who illicitly breaks into other people's computer systems. The choice of the particular phrase to be used by a commentator depends upon their moral or professional perspective. 'Hacker' tends to be used by those within the computer underground or largely sympathetic to its values, while 'cracker' tends to be used by those within the computer security industry who oppose them. In this era, hacking assumed

the more limited connotation of the ingenious manipulation of computers and firmly under the aegis of commercial development – little evidence remained of the early radical agenda that Roszak (1986) termed 'electronic populism', which sought to empower the people with the information processing capabilities of computing.

- *microserfs*: increasingly co-opted by the commercial mentality of the then-burgeoning software industry, hacking's insular obsession with code to the exclusion of all other considerations culminated in the phenomenon of hackers as commercially co-opted nerds, a phenomenon vividly described in Douglas Coupland's zeitgeist-defining 'factional' novel of life at Microsoft: *Microserfs* (1995). This addition to the four generations originally described by Levy was introduced and described first in Taylor (1998, 1999).
- *open source movement*: from its earliest days, elements of hacking culture have been associated with their belief that information should be free. This has led to schisms within the hacking movement (e.g. see Jordan and Taylor's 2004 account of the digitally correct). In more recent times, however, groups promoting freer access to information and the programs that distribute it have become increasingly influential as part of the open source movement (see Taylor and Harris, forthcoming 2005).
- *hacktivists*: the mid-1990s marked the merging of hacking activity with an overt political stance. Politics was a concern relatively absent from the fourth generation of hackers and even when it was present, the political targets tended to be relatively ad hoc. In contrast, in hacktivism, politics provides the *raison d'être* of the activity.

While the ingenuity of the hack (see Taylor 1999, Chapter 1) remains a common feature across the above generations, there is little evidence of a perspective that looks much beyond technology itself until the advent of hacktivism as the seventh generation. The first generation's intellectual curiosity remained largely within the ivory towers of MIT and Stanford. The second generation gave birth to the emancipatory notion of personal computing but then literally sold out to big business. The third generation's games were quickly commodified. The fourth generation was stigmatized by the establishment that it opposed and, even when left to its own devices (literally), has been compared to an 'alienated shopping culture' (Ross, 1991: 90). As its name implies, the fifth generation represents the nadir of the co-opted hacker spirit. The sixth generation has obvious radical political potential because it serves to emphasize the anti-commodity properties of

information (their suitability for easy sharing and their threat to copyright), but it tends to do this from an 'information needs to be free' perspective rather than a well-articulated political position. Before we examine in more detail how hacktivism represents a regeneration of the more empowering and outward-looking features of hacking, it is helpful to explore the hacking ethic's nadir of 'microserfdom'.

TECHNOLOGICAL EMPOWERMENT: CRITICAL THEORIES

Adorno's (1991) description of the archetypal radio ham provides an early portrayal of the tendencies of the extreme hacker mentality: a politically unenlightened, even pathological conformity to the mores of industrial society. Even sympathetic accounts of early hacking culture such as Levy's (1984) provide vivid illustrations of hackers as embodiments of the Frankfurt School's notion of instrumental reason and the apparently inherent inability of its practitioners to see beyond the technical artefacts presented to them by the dominant social system. The essential conformity and absorption of hackers within the system showed how the countercultural promise of 'the hack' had been lost in hackers' inability to gain a critical distance from the artefacts and overarching systems that they loved to manipulate. Insofar as the early hacker community had a political agenda it was premised upon ensuring the best possible conditions (access) for its technical needs. It is clear, however, that there is little in this approach to suggest a solution to the essential political problem of the passive nature of the individual's reception of mass media output. According to Baudrillard, this strategy is doomed to political failure because, as with Adorno's ham radio operator, 'this "revolution" at bottom conserves the category of transmitter, which it is content to generalize as separated, transforming everyone into his own transmitter, it fails to place the mass media system in check' (1981: 182). He complains that the familiarity of the masses with technical objects merely produces a form of 'personalized amateurism, the equivalent of Sunday tinkering on the periphery of the system' (Baudrillard, 1981: 182). Awareness of a social system's deficiencies is not easily reversed by simply trying to turn more people into proactively skilled transmitters of information themselves.

The disproportionately male nature of Baudrillard's 'Sunday tinkerers' raises additionally complex questions about the possibly gendered nature of relations to computing which we do not have space to explore fully here (see Taylor, 2003). However, two female writers, Boorsook (2000) and Ullman (1997), the latter of whom writes from the perspective of a female computer programmer in an overwhelmingly male world, describe in unequivocal terms both the negative political and social consequences of over-identification with computer code. In *Cyberselfish* (2000), for example,

Boorsook gives a scathing account of technolibertarian excesses in California's Silicon Valley. She argues that the detailed technological knowledge of hackers and its facility with coding solutions has led to a rather disturbing, fundamentalist belief in the disproportionate role to be played by the code of market forces in the wider social system: '[T]he most virulent form of philosophical technolibertarianism is a kind of scary, psychologically brittle, prepolitical autism . . . these technolibertarians make a philosophy out of a personality defect' (Boorsook, 2000: 15). Ullman, meanwhile, provides a similar description of such tendencies in a manner that highlights the extent to which the love of programming begins to exclude the external world. She talks of its 'nearly sexual pleasure' and the way it promotes a perception that 'human needs must cross the line into code . . . Actual human confusions cannot live here' (Ullman, 1997: 15).

Such descriptions serve to raise the basic question of the extent to which those working within complex technological systems are capable of avoiding this excessive identification with the systems that surround them. In his seminal essay, 'The Question Concerning Technology' (1977), Heidegger uses the notion of 'the Danger' to describe his fear that, immersed with enframing technological systems, humankind would be increasingly unaware of the extent to which such systems facilitate our withdrawal from the non-technological world. In a world of systemic technological ubiquity such withdrawal becomes increasingly difficult to detect: a withdrawal from the concept of withdrawal. In the literary genre of cyberpunk, which gave us the working concept of cyberspace, the danger is not so much a problem as something to be celebrated. For Case, the protagonist of *Neuromancer* (Gibson, 1984), for example, the body is deemed to be 'meat', escape from which represents an addictive enjoyment described, as with Ullman, in explicitly (and somewhat paradoxically) orgasmic terms. A charitable interpretation of the more prosaic act of hacking would be that it represents a less dramatic version of cyberpunk's embracement of withdrawal. In the sense that the average non-hacker tends to deal with technology in an ad hoc, accommodative and generally passive manner, active enjoyment of technology-induced withdrawal can be seen as a positive development. However, from what we have already seen, the more likely danger seems to be that withdrawal signifies a disturbing level of alienation from what was formerly known as the real world.

In terms of the consequences of withdrawal, it is interesting to note the resonance with which Lukacs's much earlier account of worker alienation applies to the condition of microserf workers at the forefront of production in the digital age. Thus, Lukác's commentary on the enframing laws of the capitalist market's use of technology refers to creativity in this context as a 'bourgeois legend', arguing that:

> The 'creative' element can be seen to depend at best on whether these 'laws' are applied in a – relatively – independent way or in a wholly subservient one . . . The distinction between a worker faced with a given type of mechanical development, the technologist faced with the state of science and the profitability of its application to technology, is purely quantitative; it does not directly entail *any qualitative difference in the structure of consciousness*. (Lukács, 1971: 98; emphasis in original)

Lukács's analysis provides a useful insight into the appropriateness of the neologism 'microserf', the apparently anachronistic juxtaposition of 'serf' with the technologically connoted 'micro' is justified by the way in which the presence of hi-tech gadgets does not fundamentally alter the state of alienation of the worker using them if such use is still governed by laws over which they have no control, and in the case of technologically-fixated hackers, of which they are are oblivious (hacking's blind spot, as mentioned in the introduction). Lukács later talks in terms of the 'total submission' that people create within such systems, whether in terms of the worker's labour power or the bureaucrat's dedication to the system that they serve. We shall see how hackers and cyberpunks, rather than exemplars of autonomous behaviour within a technological system, can be viewed instead as extreme examples of total submission to the system's laws.

PROTESTORS OR PARASITES?

Drawing upon Derrida's thoughts upon parasitism, Gunkel identifies hacking as essentially 'parasitic activity: It is an undertaking that always requires a host system in which and on which to operate' (2001: 5). This analysis provides an important context for debates over the significance of the decline in the potentially radical political qualities of the original hacker ethic, witnessed by the advent of microserfs. Using Gunkel's perspective, the relative ease with which aspects of the hacking approach were quickly co-opted by Microsoft can be explained by the extent to which hacking depends upon the good health of its host for the necessary conditions for its own operations:

> As a parasite, hacking draws all its strength, strategies and tools from the system on which and in which it operates. The hack does not, strictly speaking, introduce anything new into the system on which it works but derives everything from the host's own protocols and procedures. (2001: 6)

Given this parasitical nature, it was a relatively short step to move from a 'pure' hacker culture to the 'campus' at Microsoft, with its corporate co-optation of programming expertise. At the same time, however, the microserfs generation represented a betrayal of the hacker ethic: 'Hacking deliberately exceeds recuperative gestures that would put its activities to work for the continued success and development of the host's system' (2001:

7). Thus 'true' hacking is in the system but not of the system, and to remain true to itself it remains dependent upon, but not beholden, to that system: a task which becomes more difficult when one is holding a large amount of Microsoft share options.

In terms of radical potential, even when it does not succumb to such corporate blandishments, the parasitical nature of hacking creates a condition of political stasis. This stems internally from hackers' reliance upon a system which they cannot afford to disrupt (they risk killing the goose that lays the golden egg), and externally from the manipulation of any radical action by those seeking to redirect the social impact of hacking for their own purposes. Gunkel (2001: 7) quotes Richard Stallman to point out that a direct attempt to use technical systems to oppose the overarching system is readily co-opted: 'By shaping ourselves into the enemy of the establishment, we uphold the establishment.' Elsewhere (Taylor, 1999) this author has shown the specific ways in which, once they had served a useful purpose in the development of computing technologies in their first three generations, the fourth generation of hackers was in fact manipulated in such a way. A process of stigmatization and demonization was undertaken by various establishment groups to reassert proprietary attitudes to computer systems and their information: hackers were the enemy that the computer security industry needed against which to establish itself. Thus beyond the marginalization of the fourth generation and the co-optation of the fifth generation, the room for a radical political component to hacking would seem small. Gunkel's response is to identify the true radicality of hacking in its transcendence of the categories that the establishment would seek to apply. The distinguishing feature of hacking resides in its ingenious reinterpretation and re-engineering of the systems that it confronts.

According to Gunkel, hacking's method is essentially apolitical. Rather than seeking to confirm or dispute established categories,

> it constitutes a blasphemous form of intervention that learns how to manipulate and exploit necessary lacunae that are constitutive of but generally unacknowledged by that which is investigated . . . to locate, demonstrate and reprogram the systems of rationality that not only determine cyberspace but generally escape critical investigation precisely because they are taken for granted and assumed to be infallible. (2001: 20)

As the name of his book *Hacking Cyberspace* implies, Gunkel proceeds to adopt the same approach as the grounding for a basic reinterpretation and questioning of the dominant frameworks of the information revolution. He argues that the ingenuity and technical cleverness of hacking are not ends in themselves, but rather are essential tools in this questioning process. However, the question of the political potential of hacking remains unresolved, to the extent that the outcome of its methods, whether in terms

of actual hacking or in the adoption of the hacking ethos for theoretical purposes, is

> neither good or bad, positive or negative, nor constructive or destructive but constitutes a general strategy by which to explore and manipulate the systems of rationality by which these modes of assessment become possible, function and make sense. (2001: 21)

This final sentence of the book's introduction marks a crucial identification of the political lacunae in hacking that produced the need for hacktivism as well as its less general and more explicitly political search for techniques which can blend both technical methods and political aims. A 'general strategy' that is 'neither good nor bad' and is based upon being able to 'reprogram the systems of rationality' is an excellent summary of the unfulfilled political potential of hacking. It contains both its lack of an explicit political target to which normative judgements can be applied, with its 'neither good nor bad', as well as the reverse engineering element of hacking in the word 'reprogram'. We will see in the rest of this article that hacktivism adopts the strategy of 'reprogramming systems of rationality' by producing its own idiosyncratic uses for the internet's global reach and informational mode, but in contrast to hacking it has very definite views as to what constitutes social goodness and badness.

HACKTIVISM IN PRACTICE: ELECTRONIC CIVIL DISOBEDIENCE

Elsewhere, this author has provided a full account of hacktivism (Jordan and Taylor, 2004) and various examples of the forms that it takes. As pointed out above, hacktivism is an umbrella term that includes a disparate range of activities. Within it, for example, could be included 'culture jamming' (the reverse engineering of high-profile corporate advertising) and various performance-based satirical interventions involving, as they both do, the hacking of corporate adverts or events by the reverse engineering of their content. Notable groups from the whole range of activity would include Adbusters, The Yes Men and the Electronic Disturbance Theatre (EDT). For the purposes of this article, let us concentrate upon the last of these groups and the concept of electronic civil disobedience.

In 1998, the EDT coordinated a series of web sit-ins in support of the Mexican anti-government group, the Zapatistas. This incident was perhaps most noticeable for its use of an automated piece of software, revealingly called Floodnet. Once downloaded to an individual's computer, the Floodnet software automatically connects the surfer's web browser to a pre-selected website and every seven seconds the browser's reload button is automatically activated by the software. If thousands of people use Floodnet on the same day, the combined effect of such a large number of activists

will disrupt the operations of a particular site. A particularly striking example of the use of similar techniques was the 1999 Etoy campaign, in which hacktivists responded to a commercial company's litigious attempts to remove an art collective's website domain name because they argued that it was too similar to their own. In what was described as the 'Brent Spar of e-commerce' (Reinhold Grether, cited in RTMark, 2000), a combination of hacktivist and public relations stunts were used to force an eventual volte-face by the company who, faced by a 70 percent decline in its NASDAQ stock value, soon relented with their litigation.

Virtual sit-ins are viewed by hacktivist groups such as the EDT as a form of electronic civil disobedience in which the social form of the protest takes precedence over its technological content. One example of the difference between hacker and hacktivist outlooks is the way in which elements of the former objected to the resource-hungry nature and technical inelegance of such programmes as Floodnet. They argued that the rationale for political protest did not justify the disruption of users' bandwidth (see Jordan and Taylor, 2004). This digitally correct position holds that protest then becomes a form of censorship because it interferes with people's access to the internet. For the EDT, the digitally correct are nerdishly missing the point. The fact that the relatively technically inefficient programme required large numbers of people to clog up the internet was precisely its strength, because it represented the solidarity of simultaneous collective action. This instance provides a good illustration of the politically myopic nature of hacking and its failure to separate technological means from social ends, to which we now turn.

INSIDE THE PALACE OF THE PRINCE

Implicit in Latour (1988) and much more explicit in Hardt and Negri (2000), are calls for engagement with the internal power structures of the otherwise amorphous 'system' that radical politics frequently wishes to re-engineer for more humane purposes. In these theoretical analyses of the nature of power in technological society, terms such as 'Empire' and 'Princes' have been used as tropes for some of the feelings of subordinance and powerlessness described earlier. In '*The Prince* for Machines as Well as for Machinations' (1988; emphasis in original), for example, Bruno Latour provides an early and interesting manifesto for the argument that resistance to the system should seek to go beyond the simultaneous 'within and without' of Gunkel's parasitical hacking and work squarely from within. Latour uses Machiavelli's notion of 'The Prince' to personify those social forces (commonly referred to by the catch-all phrase 'the Establishment') that seek to shape and control their effects for their own purposes. For Latour, there is a need to seek power in the palace of the Prince. Since

science and technology are now the real site of politics, it becomes necessary to adopt new political strategies in order

> to penetrate where society and science are simultaneously defined through the same stratagems. This is where the new Princes stand. This is where we should stand if the Prince is to be more than a few individuals, if it is to be called 'the People'. (Latour, 1988: 38–9)

For Latour, traditional Luddites and Marxists such as Lukács are misguided. He argues that their accounts are one-sided in their condemnation of technology's systemically oppressive effects, and that they are put on the back foot whenever a technological development arises which does not oppress workers because they fail to conceptualize adequately its beneficial aspects. He proposes a more sophisticated and grounded interpretation of technological change that is much more sensitive to the diverse and complex distribution of power in practice. In an argument further developed in *We Have Never Been Modern* (1993) Latour argues that the true implications of technological change tend to take place behind the backs of social actors because they are misrepresented as stemming from two misleadingly separable realms: the human and the non-human. In contrast, he advocates much more appreciation of the necessarily conflated nature of technical power:

> The duplicity we have to understand is no longer in Princes and Popes who break their word, but in the simultaneous appeal to *human* and *non-human* allies . . . threatened democrats who had to fight for centuries against machinations, have now, in addition, to find their way through machines. (Latour, 1988: 21; emphasis in original)

In relation to Gunkel's notion of parasitism and the status of the within and without, Latour calls for closer attention to be paid to the imbrication of technical and non-technical:

> If 'technology' appears to have an inside it is because it has an outside. More exactly, society and technology are two sides of the same Machiavellian ingenuity. This is why, instead of the empty distinction between social ties and technical bonds, we prefer to talk of association. (Latour, in Eliot, 1988: 27)

For the purposes of this article, both this specific concept of association and the broader notion of getting inside the palace of power are crucial. As parasites, hackers are well within the palace walls but do not wish to risk attracting detection. Hacktivists exemplify Latour's theory in action because they purposively favour the associations that blend the social and the technical, unlike hackers with their tendency to privilege the technical for its own seductive sake. Typically, for example, hacktivists seek to blend

cyberspatial internet protest with direct physical action on the streets and in the cities, so that, à la Latour, the (im)material is seen as a natural ally. The strategies of the Prince have been associated with networks (Latour is, after all, a key figure in actor network theory). We can see now how new social movements premised upon opposition to the Prince increasingly seek to counter networks with webs.

NEO-TRIBES IN THE WEB

The use of the world wide web as an integral part of new social movements offers at least the promise of responding more effectively to the global effects of the Princes' moves. It is a strategy that meets what Lash claims is a need to confront the problem on its own terms: 'There is no escaping from the information order, thus the critique of information will have to come from inside the information itself' (Lash, 2002: vii). The importance that Latour places upon 'flat' associations, which do not distinguish between human and non-human elements, appears in Lash's analysis with the concept of informational immanence. Drawing upon McLuhan's notion of the media as extensions of our central nervous system, Lash argues that the world thus created replaces the linearity of the mechanical world for a more 'flattened, immanent world'. He extends Latour's emphasis upon the inextricable nature of human and non-human bonds by pointing out that: 'In the immanentist technological culture subjects and objects converge in ontological status: the subject is so to speak downwardly mobile and the object upwardly mobile . . . subjects and objects fuse' (2002: 178). In recent reassessments of Marx for the cyber age, Dyer-Witheford (1999) and Hardt and Negri (2000) make arguments that accommodate not only Latour's call to step inside the palace of the Prince and Lash's characterizations of the immanent qualities of information, but also explore further the inside/outside issue faced by the hacker. For these writers, the circulation of capital doubles as an important vector for the circulation of struggle. Hardt and Negri, for example, suggest that in fact, traditional political militancy allied to a new level of technological savvy has resolved the within/without dilemma that hackers generally avoided by virtue of their parasitic status:

> Here is the strong novelty of militancy today: it repeats the virtues of insurrectional action of two hundred years of subversive experience, but at the same time it is linked to a new world, a world that knows no outside. *It knows only an inside*, a vital and ineluctable participation in the set of social structures, with no possibility of transcending them. This inside is the productive cooperation of mass intellectuality and affective networks, the productivity of postmodern biopolitics. (Hardt and Negri, 2000: 413; emphasis added)

For Hardt and Negri, 'biopolitics' results from the fact that in an informational age, revolutionary material is everywhere. Because capitalism has extended its interests beyond mere production and into communication,

it recreates society as a social factory. The corollary of this capitalistic colonization of the social realm, however, is the creation of the social worker and a newfound strength of the mass intellect and its affective networks.

Through such vehicles as the internet, traditional social struggles now have an additional non-traditional impetus:

> They exist as a sort of fine mist of international activism, composed of innumerable droplets of contact and communication, condensing in greater or lesser densities and accumulations, dispersing again, swirling into unexpected formations and filaments, blowing over and around the barriers dividing global workers. (Dyer-Witheford, 1999: 157)

Despite this essentially immaterial nature of its environment, electronic culture facilitates the emergence of global groups of like-minded radicals. Maffesoli (1996) describes the rise of 'empathetic' neo-tribes that are based upon Hardt and Negri's affective links rather than geographical propinquity. Empathy becomes both a cause and a consequence of specific mass online actions. Numerous commentators have highlighted the social flux and increased pace of change brought about, first, by the industrial revolution and second, by its information successor. In this context, Maffesoli argues that in such times of 'collective effervescence' it makes perfect sense 'surfing over the waves of sociality' (1996: 5). In a matching vein, Hardt and Negri suggest that the traditional Marxist revolutionary mole and the subterranean tunnels from which he periodically emerges to revolt, may need to be replaced by the image of an undulating snake. In language akin to Lash's, they argue that the solution to the problem of contemporary power lies in finding an answer to the inside/outside question:

> [A]ny postmodern liberation must be achieved within this world, on the plane of immanence, with no possibility of any even utopian outside. The form in which the political should be expressed as subjectivity today is not clear at all. (Hardt and Negri, 2000: 65)

Hacktivism represents the practical manifestation of these neo-tribes or 'fine mist' and a good working, unifying illustration of the theoretical concepts put forward by the various writers that we have examined. Not only is this new form of subjectivity so produced unclear, its strength of being a dispersed force, a 'fine mist', also may be its Achilles' heel.

RECONNECTING THE EXCOMMUNICATED AND RECLAIMING THE AGORA

In *Netocracy*: *the New Power Elite and Life After Capitalism*, Bard and Soderqvist (2002) provide a rather pessimistic assessment of the way in which the co-optive process of the fifth generation of microserf hackers has

become generalized and spread out wider into the networked society at large:

> The consumtarian protest movement will suffer a chronic lack of leaders – because potential talents are constantly absorbed into the netocracy – and will have little ideological sophistication. Its thinking will be contradictory, its actions erratically sporadic and impulsive. Social discontent will be blind. Consumtarian rebels will lack the old workers' movement's education and discipline and will have no long term objective . . . What remains will be a kind of revolutionary aesthetic: a romanticization of resistance as such, an intoxication of spontaneous, confused collective destructiveness. But that will be all. (2002: 246)

Here, the collective effervescence on which Maffesoli pins his radical hopes is transmuted into a mere 'intoxication' of the spontaneous. In addition, Bard and Soderqvist lack Hardt and Negri's faith in the reapplication of traditional militancy due to a lack of the necessary educational grounding and discipline, which is perhaps easier for the diligent burrowing mole to acquire than for the undulating snake. Finally, they fail to see grounds for radical purchase whether inside or outside the system. Further pessimism can be gleaned from Baudrillard's interpretation of the new informational order and the way in which it not only creates the familiar notion of disenfranchised groups, but does so in a way that excludes them from revolutionary capabilities. He argues that:

> The social order is contracting to include only economic exchange, technology, the sophisticated and innovative; as it intensifies these sectors, entire zones are 'disintensified' . . . There are therefore none of the elements here for a future revolution. (Baudrillard, 1988: 113)

His description of such zones prefigures Lash's discussion of 'wild' and 'tame' zones in *Critique of Information* (2002) and the accompanying assertion that the exploitation of the capitalist order has been replaced in the new informational order by exclusion from informational flows. For Baudrillard, this exclusion takes the form of the withdrawal of both political and social interest, thereby creating the ironic situation 'of that excommunication which affects precisely the communications-based societies' (Baudrillard, 1988: 113).

Eco (1967) addresses head-on the problems faced by political protest in a media-dominated age, distinguishing between a strategic and tactical approach. The former aims to fill the existing channels of communication with radically like-minded people who can seek to change their impact with their own liberating opinions and information. The latter involves more directly confrontational techniques. For Eco, the likelihood of success for the strategic approach is limited because, while it may achieve good short-

term political or economic results, 'I begin to fear it produces very skimpy results for anyone hoping to restore to human beings a certain freedom in the face of the total phenomenon of Communication' (Eco, 1967: 142). There is similar doubt over the likely success of the tactical approach. Using the example of the French student protests in 1968, Baudrillard adds to the pessimistic perspective. Echoing Eco's technological communication, the tactical approach risks being subsumed by the regime of what he calls total communication:

> [T]ransgression and subversion never get 'on the air' without being subtly negated as they are transformed into models, neutralized into signs, they are eviscerated of their meaning . . . there is no better way to reduce it than to administer it a mortal dose of publicity. (Baudrillard, 1981: 173–4)

However, Baudrillard does see potential in the non-mediated activities of the street where, for example, he notices approvingly the way in which graffiti appears more immune to the media's ability to tame protest.

This vivid phrase, the 'mortal dose of publicity', can be viewed as a species of the co-optive, de-radicalizing process that we have seen at work throughout the various generations of hackers. It is why the previously noted hacktivist facility for operating within the (im)material space of the Latourian sociotechnical association, which tactically combines the cyberspatial web and the physical world, is so important. It allows hacktivists to recognize the real nature of the power that they are seeking to oppose:

> This is always the case under the logic of advanced capitalism. Already there are commercials for a soft drink that depict hordes of angry protestors facing off with riot police. All very sanitized and all the people are good-looking. But someone pulls out this soda and everything stops, all eyes are on the soda, everyone bursts into cheers. But that's only the sanitized image of what's going on in the streets of Seattle, Washington, Philadelphia, Genoa and on and on. And if there are corporate appropriations of electronic protest tools and techniques, as there inevitably will be, it doesn't invalidate them as long as they are used as tools and techniques. Once people start hinging their identity on such things, it's dangerous, because their identity will indeed become bound up with the corporate appropriation – even if it's only because they will spend energy resisting the colonization of their 'hacker' identity. So don't hang your hat on tools, on tactics, don't romanticize this, get engaged with the broad and deep history of humanity's struggle for justice.[1]

While some hacktivist acts are designed to have an impact within existing media systems, their particular tactical approach avoids the previously cited concerns from Adorno and Baudrillard that they will merely amount to boy scout activities or 'Sunday tinkering', respectively. The ongoing maintenance of hacktivism's mass digitally-incorrect nature reinforces its political rather than technical purpose and so affords some immunity not only to

Baudrillard's 'mortal dose of publicity', but also the commercial exploitation of hacking's over-identification with its tools. In place of such over-identification, it subordinates its technical expertise with those tools for the purpose of a particular type of social performance and drama.

In *Perform or Else: From Discipline to Performance* (2001), McKenzie explores in detail the way in which the whole concept of performance has been transformed from one whose primary connotation was dramaturgical to one which has become fatally compromised by a commercially-driven sense of efficiency. Similarly, according to Lash, the performativity (in the commercial sense) of information is the dominant factor in the spread of global communication systems. The ubiquitous immanence of information and communication technologies (ICTs) means that all social meaning becomes disproportionately mediated through the prism of immediate, functional data. Hacktivism represents a rejection of this merely functional immanence. Unlike the tendency of hacking culture to privilege access to the technical over the political, hacktivism rejects the media's fixation with the technical aspects of political protests, preferring instead to concentrate upon their notion of a three-act social performance which Ricardo Dominguez of the EDT calls a 'social drama'. The first act of the social drama involves stating what is going to happen and its political purpose; the second is the act itself; and the third is the subsequent dialogue and discussion that this creates. In this way he argues:

> A virtual plaza, a digital situation, is thus generated in which we all gather and have an encounter or an *encuentro*, as the Zapatistas call it – about the nature of neo-liberalism in the real world and in cyberspace. (Dominguez, in Fusco, 1999)[2]

The digital 'Zapatismo' of those opposing the Mexican government on the ground has added an additional transgressive element to such social drama. It uses periods of tactical silence where, literally in Mexico and metaphorically elsewhere, physically present and internet-based activists retreat back into the jungle for a period of calm reflection. The effect of this is heightened by its deliberate contrast with the conventional mass media's need for the constant noise of news.

Groups such as the EDT borrow liberally from both European theatre traditions such as the Situationists and Brechtian alienation effects. A Latin-American influence is also much in evidence and heavily influenced by indigenous Mayan culture. The digitial Zapatistas regularly adopt performance techniques in which their periodic reliance upon hi-tech equipment does not overwhelm simpler, physically-based symbolism. One publicity video, for example, shows rows of Chiapas Indians forcing Mexican government soliders back with nothing more than white rags held on the ends of sticks: a social drama of 'practical magic realism'.

From a western perspective it is hoped that the street-level critical energy of such modes of protest as Baudrillard's graffiti can be recreated. As Maffesoli asserts:

> It is not impossible to imagine that, correlatively with technological developments, the growth in urban tribes has encouraged a 'computerized palaver' that assumes the rituals of the ancient agora. (Maffesoli, 1996: 25)

Using the same frame of reference but providing a more nuanced account of Maffesoli's claim, Dominguez describes how hacktivism is designed to reject a particular type of rationality contained both within the logos of the ancient agora and contemporary corporate logos:

> The idea of a virtual republic in Western Civilization can be traced back to Plato and is connected to the functions of public space. The Republic incorporated the central concept of the Agora. The Agora was the area for those who were entitled to engage in rational discourse of Logos and to articulate social policy as the Law and thus contribute to the evolution of Athenian democracy. Of course those who did speak were, for the most part, male, slave-owning and ship-owning merchants, those that represented the base of Athenian power. We can call them Dromos: those that belong to the societies of speed. Speed and the Virtual Republic are the primary nodes of Athenian democracy – not much different than today. The Agora was constantly being disturbed by Demos, what we would call those who demonstrate or who move into the Agora and make gestures. Later on, with the rise of Catholicism – Demos would be transposed into Demons, those representatives of the lower depths. Demos did not necessarily use the rational speech of the Agora, they did not have access to it; instead, they used symbolic speech or a somatic poesis – Nomos. In the Agora, rational speech is known as Logos. The Demos gesture is Nomos, the metaphorical language that points to invisibility, that points to the gaps in the Agora. The Agora is thus disturbed; the rational processes of its codes are disrupted, the power of speed was blocked. EDT alludes to this history of Demos as it intervenes with Nomos. The Zapatista FloodNet injects bodies as Nomos into digital space, a critical mass of gestures as blockage. What we also add to the equation is the power of speed is now leveraged by Demos via the networks. Thus Demos_qua_Dromos create the space for a new type of social drama to take place. Remember in Ancient Greece, those who were in power and who had slaves and commerce, were the ones who had the fastest ships. EDT utilizes these elements to create drama and movement by empowering contemporary groups of Demos with the speed of Dromos – without asking societies of command and control for the right to do so. We enter the Agora with the metaphorical gestures of Nomos and squat on high speed lanes of the new Virtual Republic – this creates a digital platform or situation for a techno-political drama that reflects the real condition of the world beyond code. This disturbs the Virtual Republic that is accustomed to the properties of Logos, the ownership of property, copyright and all the different strategies in which they are attempting enclosure of the Internet. (Dominguez, in Fusco, 1999)

Thus we have an alternative manifesto with which to promote social drama within the postmodern social factory. Hacktivism is committed to social dramas that are allied with actions on the ground, whether it be the links that are consciously built between those in the West typing their support and those on the ground in Mexico, or those who are comfortable with moving quickly from web-based actions to wielding a spray can on an oversized corporate poster.

CONCLUSION: SURFING THE WAVES OF SOCIALITY?

In *The Network Revolution: Confessions of a Computer Scientist* (1984), Jacques Vallee describes a hacker, Chip Tango, who 'takes for granted that computer technology is out of control and he wants to ride it like a surfer rides a wave' (1984: 150). Presented with an Orwellian scenario of an informationally controlled world, Chip replies: 'I'm not worried for a minute about the future. If the world you describe is going to happen, man, I can fuck it up a lot faster than the world we live in now!' (Vallee, 1984: 150–1). As pointed out by Hardt and Negri earlier in this article, it is unclear what form the new mass subjectivity of networked culture will assume. If this article lacks any definitive conclusions, it is because the most that can be offered validly is an account of both the radical potential and possible pitfalls of hacktivism. On the negative side, one can argue that hacktivism's reliance upon the speed and technical infrastructure of its webs may be ill-founded. In relation to speed, the enthusiasm shown by Chip Tango for the rapid dissolution and flows of capitalism (perhaps not surprisingly, given its emphasis upon instability), has not hitherto proven to be a stable basis from which to build a radical politics. It is reminiscent of Marx's famous characterization of capitalism as a mode of production where 'all that is solid melts into air' (Marx and Engels, 1978[1848]: 476), but so far, the Prince always seems to be one step ahead in the speed game. The question remains as to whether embracing this flux is a sign of rude radical political health or a last desperate throw of the revolutionary dice: to risk mixing metaphors, there is a fine line between surfing the waves of extreme social change and drowning under them. Even if the surfing is successful it risks becoming, as Bardt and Sonderqvist pointed out, just 'a revolutionary aesthetic'. In relation to the technical, we have seen how hacking has been susceptible to excessive identification with either technological systems or capitalism or both. From a pessimistic perspective this might suggest that those seeking to use computing for radical political purposes face a 'double-whammy' of potential co-optation. On the one hand, the technological systems are seductive per se; on the other hand, great technical skill within these systems is quickly co-opted for the productive needs of the wider capitalist system that both contains and maintains those communication networks. Thus, even though in theory the culture jammer needs only

spend a few dollars on a spray can to at least partially undermine the expense of a whole advertisement campaign, those very campaigns increasingly seek the 'edgy' look initially provided by the culture jammer – once again the Prince wins.

More positively, the political consequences of reverse engineering may be rising to match the increasingly complex nature of those technological systems. Not only is the technical system relatively more vulnerable to such reversals at its weakest points, but these weakest points become relatively more accessible as the technological chain becomes more attenuated. Added to this, because of the ever-more closely imbricated nature of the technological and the social, reverse engineering promises more radical results if successfully carried out. Each technical act of reversal promises to contain a more politically charged and symbolic payload (an essential argument in Baudrillard, 2002).

This article has shown how, although adopting certain aspects of the original hacker ethic, hacktivism seems fully conscious of the dangers of over-identification with the technological means of protest. It demonstrates a self-reflective consciousness of the simultaneously (im)material status of its webs and it has imaginatively blended the positive features of Baudrillard's street-level-type graffiti activities with an approach that seeks to reconnect with the excommunicated of the desert zones. Despite the innate countercultural potential of hacking, the first five generations of hackers evinced relatively little radical political activity. The tendency of hackers to adopt an 'access is all' attitude produced at best a heavily circumscribed, instrumental and apolitical mindset and, at worst, the technolibertarian excesses that Boorsook describes. In contrast, the hacktivist movement has no such ends–means confusion. The ingenious use of various artefacts and systems is valuable, not for the aesthetic beauty of 'the hack' but insofar as its aesthetic qualities can be used to make a political point. Thus the key significance of hacktivism is the unique manner in which it seeks to imaginatively ally technology-based techniques with traditional and indigenous cultural resources. It rolls back the microserf mentality and reasserts values more reminiscent of those ancient hacktivist predecessors who sought to disrupt the logos of the Greek agora. As the seventh generation of hackers, hacktivists mark a revitalized attempt to re-engineer the penchant of hacking for systems and to apply it to the biggest system of them all: capitalism.

Notes

1 Email interview with Sasha Costanza-Chock, September 2001.

2 Quotations cited as (Fusco, 1999) were taken from an interview entitled 'Performance Art in a Digital Age: a Conversation with Ricardo Dominguez', which took place on 25 November 1999 at the Institute of International Visual Arts. The interview was

heavily edited by Coco Fusco and transcribed by InIVA staff. It was republished at Centrodearte.com and Latinarte.com.

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