Negri, Hardt, distributed governance and open source software

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Introduction

This paper investigates the idea that governance has changed in the contemporary world so that there is no longer, if there ever was, simply a dominant power, or set of powers, which are able to exert control. Governance is distributed, rather than centralised or territorialised, so it is not clear where responsibility lies or where the fulcrum of control resides. Michael Hardt and Antonio Negri describe this situation in their books *Empire* (2000) and *Multitude* (2004), under the rubric of 'Empire.' At the same time, they claim that this situation both manifests and aids the democratic 'Multitude' of people. However, while distributed governance may offer new strategies of radical or democratic subversion, there is no cause for easy optimism that these new systems of power will automatically lead to democracy. Information and communication technology is a central tool in distributing governance, but this technology is not inherently destabilising of arbitrary power. The opposite is as likely as the former. Furthermore, there are radical differences within the Multitude, which in turn is capable of constructing new elites and discriminations. The distribution of governance, with its concurrent disguise of responsibility, may indeed help established powers increase their power.

This paper proceeds first by briefly describing the Autonomist history of Negri's thought, his earlier pronouncements more overtly ambivalent than his recent works. Then Hardt and Negri's ideas about Empire are described within the context of prevalent views about the information society. Examples of distributed governance

being used to reinforce power are presented to show that distribution is not necessarily democratic. Networks such as the internet developed more out of the needs of military and corporate expansion and mobility rather than democracy; thus they may retain features of their original purpose as much as they may challenge the dominant powers. Finally, open source groups do not replicate the democratic features assumed by Negri and Hardt. While agreeing with the general sentiment of Negri and Hardt's work, this paper aims to shift the analytic emphasis in discussions of distributed governance, and to temper over-optimistic views of its democratic potential.

Autonomist Marxism—struggle and technology

Autonomism grew out of the radical Marxist *operaismo* ('workerism') movement in mid-1960s Italy. Both movements claim that the prime conflict is between those who create and those who appropriate, or between those who impose work and those who have to work (Cleaver 1981). In these theories there is no clear line as to who is in the working class, and there is no easy assumption that all members of this class have uniform interests—divisions can be imposed upon them by capital (Cleaver 2000, 113ff.). However, it is the workers, in this loose sense, who drive capitalist development, for the need to disrupt and defeat the workers spurs capital to develop new defences. Therefore, the political history of capital is the 'history of the successive attempts of the capitalist class to emancipate itself from the working class' (Tronti 1965). In this spirit, Panzieri (1981) argued against ideas of the independent development of technology, proposing that capitalism develops technological innovation both as a weapon against the working class, and to reproduce and impose its own form of objectivity and rationality. This innovation may lead to opportunities for subversion, but it is never automatically emancipatory. As Cleaver (1989) regards this situation, '[I]t is often the failure of a given technology to serve its intended purpose of social control which gives rise on the part of capitalist managers to the demand for the development of new technologies and the funnelling of resources into the appropriate fields.' Capitalist technology constantly increases the amount of production possible by a single worker, but it rarely decreases that worker's need to work. 'The efforts of business to convert technological change into higher profits and more work is the desire to maintain its control over society.' Thus, the skilled factory workers of the early twentieth century provoked developments in de-skilling

workplaces, and this led to the semi-participatory welfare State as an effort to control and contain revolutionary activity. Then, as these 'mass workers' refused to limit their demands for wages or for participation in the State, the dominant class attempted to repeal welfare, replacing it with discipline by austerity: trade unions were attacked, factories become more robotic with less workers (or with workers controlled or under surveillance by computers), and middle class work was deskilled and its privileges eroded (Negri 1989, 89-101). Capital became more mobile to escape workers' demands, and more money was invested in speculative activities: 'Beneath the rosy images of the information society lie the stark goals of "control and reduction in the costs of labour"' (Negri, quoted in Dyer-Witheford 2004).

The whole of organised society, then, is geared towards the replication and reproduction of capital. This system is sometimes labelled the 'social factory' or the 'diffuse factory' (Negri 1989, 204). Thus contestation with capitalism moves beyond the actual factory (Dyer-Witheford 2004; Cleaver 2000, 70) and the antagonism is polyvalent and multiple (Negri 1989, 87). This leads to Hardt and Negri's replacement of the 'working class' with the category of 'Multitude.'

The dyad: Empire and multitude

Like a number of contemporary thinkers, Hardt and Negri propose that the world is being divided into two. The governing terms of their discussion are 'Empire' and 'Multitude.' The importance of Empire, which Hardt and Negri distinguish from imperialism, is that 'Empire establishes no territorial center of power and does not rely on fixed boundaries or barriers. It is a *decentered* and *deterritorializing* apparatus of rule that progressively incorporates the entire global realm within its open, expanding frontiers' (2000, xii). Elsewhere, Negri defines Empire as 'the transfer of sovereignty of nation-states to a higher entity,' but not to a World Nation, or to an existent nation like the United States (2004, 59). While Empire contains the dynamics of capitalism, the concept is not restricted to capital alone, for it is intended to capture the diffuseness of contemporary power.

Negri and Hardt's use of the term 'Empire' is unfortunate as it may imply a single center of power, and many critics attempt to refute Hardt and Negri's idea by arguing that the current U.S. government is attempting to establish a conventional Empire or

is acting as if it already had one. However, it is not clear that this U.S. empire will be attained; it depends on the cooperation of other states, and some claim that the Bush Administration's attempts to extend and enforce U.S. control will destroy U.S. dominance (Johnson 2004; Soros 2003). The corporate world seems split on the war in Iraq rather than uniformly behind the U.S.A. The Iraq war favours some corporations (Haliburton, MCI, Bechtel) over others (Microsoft, Coca Cola) who fear destruction of their markets in the Middle East. Furthermore, while the U.S.A. is very powerful, other states also have power, as do NGOs, and the movements of capital and chaos in markets are other sources of influence outside the control of any state.

To some extent, power has always been distributed. Political scientists discuss the 'balance of power,' which implies there is never a sole power and that power arises in 'ratios,' to use Norbert Elias's term. Elias claims that power ratios 'are bi-polar at least, and usually multi-polar' (1978, 74-5, 131). Even dictators and absolute monarchs are not completely free to act, being constrained by the activities of others (Elias 1983, 277ff.). Power ratios are an expression of the dynamic patterning of human coaction. Those patterns, which are easily activated, express the established modes of power. Once power is looked at in this way, rather than in terms of a thing that someone possesses and other people do not, then it can be recognised that there is always contestation. What is different in the contemporary world is that many of these power ratios operate over almost the whole planet simultaneously, rather than being confined to particular areas.

Because the term 'Empire' lacks clarity, I will use the term 'distributed governance' to refer to power being diffused through a system, displaying distributed responsibility, and of appearing in places with no apparent origin. In Negri and Hardt's analysis 'Multitude' is a term with several meanings. Firstly it refers to an irreducible multiplicity of subjects (Negri 2004, 111). As such it is opposed to the supposed unitary conception of 'the people' that has been the conceptual basis of Western sovereignty (Hardt and Negri 2004, 79, 99). Second, Multitude is the 'class of productive singularities, the class of the operators of immaterial labour' (Negri 2004, 112). This is an unfortunate definition as it presumably excludes unproductive singularities or people who engage in 'material labour'—leaving out much of the world, which earlier Autonomist theory did not. The Multitude is all those who labour

and produce under capital, and Hardt and Negri assert that the differences dividing labour no longer exist (2004, 107). As they put it, 'The creation of the Multitude, its innovation in networks, and its decision-making ability in common makes democracy possible for the first time today' Problems of difference and separation are essentially dismissed. Finally, the Multitude appears to have the *singular* desire 'to recreate this world in its image and likeness.' (2004, 340). So, Empire creates Multitude and Multitude creates the Empire of distributed power, in mutuality.

Hardt and Negri claim that, 'the creative forces of the Multitude that sustain Empire are also capable of autonomously constructing a counter-Empire, an alternative political organization of global flows and exchanges' (2000, xv). It appears that the term 'Multitude,' through its connotations of multiplicity, entails the fall of the implied singularity of Empire when itself it makes up part of the distributed dynamics. If taken seriously as intertwined, then no overthrow or freedom need arise from mutual participation, any more than the Hegelian dependence of masters on slaves means that slaves can easily rebel.

Rather than agreeing with Hardt and Negri's techno-optimism, I argue that Empire and Multitude are not separable into power and democracy. In the Autonomist sense, although capitalist social formations may arise as defence from the actions of the Multitude, this does not mean that liberation is automatic, although a new stage of struggle may arise. Power being distributed or networked does not automatically mean democracy. The more powerful the node the more alliances it may be able to make, the more entrenched pathways of action it can activate. Networks can extend central power out into the world as much as weaken it. Networks interact and thus 'communicate,' but there is no need for these communications to be meaningful, and they may not enable us to find commonality as Hardt and Negri suggest (2004, xiii, xv). Groups can interact and polarise or separate. They can increase mutual hatred as much as 'community'. Communication and connection is not an unrelieved good always bringing harmony or unity. Popular resistance can also be oppressive of others, as happens with the Christian Right's resistance to secularism and the non-righteous, or in neo-fascism's resistance to race mixing. Resistance can become institutionalised, in 'rituals of rebellion' and allow people to let off steam and engage

in minor rebellions, which do not affect the overall patterns of power (Gluckman 1956, 1963).

We can usefully compare Negri and Hardt's division between Empire and Multitude, with Benjamin Barber's (1996) McWorld and Jihad division. By 'Jihad' Barber does not refer to Islamic fundamentalism, but to militant localisms or responses to globalisation that bricolage resistance out of traditions in order to oppose the 'mainstream' West. By McWorld he refers to the uniformities of Western corporate capitalism and its overtaking and over-riding of local economies and ways of life. To Barber the forces of 'wild capitalism'—which are described in terms of universal unregulated markets, spread and coordinated by innovations in communication technology, and which reduce freedom to consumer choice while fragmenting 'community'—are intimately bound up with a process of rejection; of localised tribalisms and frustration verging into violence, often based in religion, or ideologies of 'blood.' These rejections often make use of the information technologies necessary for the spread of modern capitalism, so that Jihad arises *via* McWorld. Modern localism depends on globalism and vice versa. Barber comments that since 'neither Jihad nor McWorld promises a remotely democratic future ... the consequences of the dialectical interaction between them suggests new and startling forms of inadvertent tyranny' (1996, 220).[1] The point is simple: interdependence and networks do not of themselves generate democratic process.

Information society

Hardt and Negri suggest that Empire, Multitude and distributed governance are vitally dependent upon communication technology, and they use a fairly standard information society model to describe this situation: 'Empire takes form when language and communication, or really when immaterial labor and cooperation become the dominant force' (2000, 385). That is, 'The development of communication networks has an organic relationship to the emergence of the new world order – it is, in other words, effect and cause, product and producer.

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[1] Castells similarly distinguishes between those who inhabit the global 'space of flows' and those who inhabit the local 'space of place.' Or, as he puts it, 'elites are cosmopolitan, people are local' (1996, 415). There may no longer be a capitalist class but a network, 'a faceless collective capitalist, made up of financial flows operated by electronic networks' (474). Thus, 'At its core, capital is global. As a rule, labour is local' (475).

Communication not only expresses but organises the movement of globalisation (32). Hardt and Negri also point out that information technology ensures that '[c]ommunication and control can be exercised efficiently at a distance,' but rather than conclude that this could extend centralised control directly to the periphery, they only accept the idea of distributed control, suggesting that the internet makes a good model for Multitude (Hardt and Negri 2004, xv). They further imply that informational networks free liberation movements of the necessity of becoming organised in hierarchies, or of having to impose order after the chaos of revolution and thus assert that revolutionary freedom will finally be possible (68-78).

The idea that the economy has fundamentally changed over the last 40 to 50 years from a basis in industry to a basis in knowledge or symbol manipulation, is not new. It goes at least as far back as management writer Peter Drucker's *Age of Discontinuity* (1968), and, more popularly, but more hidden in academia, to the writings of Alvin Toffler, particularly *The Third Wave* (1980), and *Powershift* (1990). In some ways the claims that Negri and Hardt make for this change resemble the claims Toffler made, and which were embraced by the U.S. Republican party's Newt Gingrich and the pro-capitalist Progress and Freedom Foundation. 'Big Government' (the Welfare State) and 'Big Unions' are thus frequently represented by right wing proponents as outmoded relics in the information economy. Similarly, Bill Gates claims that the availability of information and networking equality will make capitalism frictionless and finally able to work (1995, Chapter 8). This is not to suggest that Hardt, Negri or Toffler are right wing theorists or dupes, but that perhaps we are dealing with widespread utopian longings rather than radical analysis—especially given the bypassing of Negri's early writings and the Autonomist awareness of the struggles around technology.

Central to these standard arguments has been the rise to power of the 'knowledge worker,' or in this case, the immaterial worker, or worker with immaterials (ideas, symbols, images, art, and so on). Referring to service work, Hardt and Negri write that 'Since the production of services results in no material and durable good, we define the labor involved in this production as *immaterial labor*—that is, labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication' (2000, 290). They explicitly tie this to computers transforming

'laboring practices in such a way that they all tend toward the model of information and communication technologies' (2000, 291). Negri (2004) argues that the transition 'from material to immaterial production' means that the main instrument of production is the worker's brain (a formulation that deletes the rest of the body). This is supposed to mean that the owners of capital no longer own the means of production and can no longer confiscate the fruits of production (Negri 2004, 91). In fact, work-for-hire provisions are part of all modern copyright law, and it is more real to claim that capitalists now own, for only as long as they want, the 'brains' of the workers. Standard contracts forbid people from working on projects that are similar to projects they have previously worked on, so employee's capacity to build up and use valuable knowledge is restricted. Furthermore, contemporary knowledge management systems seek to replace the specialised knowledge of particular workers with programs—a classic example of the Autonomist theory of capitalist development.

Hardt and Negri imply that knowledge workers will cooperate democratically as Multitude to oppose capital. In contrast Toffler argues that whereas industrial production required standardisation and uniformity in the workplace, allowing the workforce to find a common cause out of a common experience, information work requires change, innovation and individually oriented production; therefore, the workforce has no sense of commonality and finds it hard to organise (1984, 38). Knowledge workers tend to unite only on certain issues rather than around groups of issues. People mix ideas from both 'Left' and 'Right' and can splinter on fundamental points. Lack of permanence in a workplace and constant competition between work groups also fracture bonds between people. Another early theorist of the information society, Daniel Bell, proposed that knowledge workers are divided into 'four estates, the scientific, the technological, the administrative and the cultural' with large operational disjunctions between them (1976, 374-6). Again, this suggests that the Multitude is not necessarily brought together. As Autonomist theory argues, the Multitude can be both divided and rendered replaceable by capitalist innovation.

Hardt and Negri go on to suggest that this information economy challenges traditional ideas of property, as:

> [p]roducing increasingly means constructing cooperation and communicative commonalities … in the context of linguistic and cooperative production, labor and the

> common property tend to overlap. Private property, despite its juridical powers, cannot
> help becoming an ever more abstract and transcendental concept and thus ever more
> detached from reality. A new notion of 'commons' will have to emerge on this terrain.
> (2000, 302)

The information economy's central paradox is that it encourages and requires quick and easy distribution of information, but capitalists need to restrict access in order to charge consumers and generate profit. The internet may thus seem radical as it allows data-products to be copied and distributed easily, causing panic to manufacturers who claim ownership of such products and who make their money selling them.

Although the ways property is viewed may be changing, the ways property is implemented or appropriated may not change as a result of new views—any more than the idea that property is theft, or the idea that property is alienated from the worker, had long term effects on the ways property operates. Society can encompass several different ways of defining property. It could be argued that rather than property exploding under new ideas of digital commons, corporate property is being successfully extended into fields in which it would previously have been legally unjustified, such as patenting genes or other 'natural' products. James Boyle (1996) claims that the notion of the corporate author does for information what economic notions of natural markets did for the industrial revolution, by providing a method of appropriating what is really an intertwined production, or a naturally occurring phenomenon.

If information equals property, then information cannot be free as in the old Hacker slogan. Workers have to create, but what they make is rarely their own. Instead it seems as if workers are appendages to some kind of program, which uses them only for as long as they are not replaceable. In similar fashion 'ordinary people' do not own information about themselves and, due to the risk of leaks, many information workers are under surveillance and control. There is a tendency for intelligence agencies and the corporate sector to work together to beat national competitors. This in turn leads to increased counter and pre-emptive surveillance. Toffler warned that 'If intelligence operations … become so intertwined with the everyday activities of society, so decentralised, so fused with business and other private interests, as to make effective control impossible, democracy will be in mortal peril' (1990, 318). The new economy has intensified patterns of capitalist dominance—the corporate sector has

more relative power than it used to. Work has become total and inequalities of income have increased. Internationalisation is used as an excuse to increase the salaries of high level executives and decrease the wages of workers. The tax burden has shifted from the corporate sector onto the Multitude (Johnston 2003; Wolff 2004). The rollback of the state has mainly occurred in those areas in which it helped people, or in which it acted as a check on corporate action.

Distributed governance

As stated previously, Hardt and Negri imply that the network of distributed power ultimately generates democracy. Unfortunately there is little evidence that this is necessarily so. This section considers some cases in which distribution has not reinforced democracy or democratic accountability.

It is doubtful that al-Qaeda, as network, is democratic, or particularly open, even though Hardt and Negri cover this point by claiming, without reference, that al-Qaeda is a centralised hierarchy like a drug cartel (2004, 89). The military can also organise as a network in response (2004, 59). Again it is unlikely this response will undermine hierarchy, although it may diffuse responsibility. Commanders now appear to have little responsibility for the behaviour of those under their command who supposedly 'act at their own initiative,' as at Abu Ghraib where prisoners were abused in full view of troops who wandered casually around them. Yet it was not, we were told, the responsibility of the army, or of the commander of the gaols, or of the intelligence operatives who implied this might be the best procedure, but rather of a few people who happened to be photographed. The network diffuses connections of power. Even if the command encourages something, or tacitly approves it, they have no responsibility for the results. This vagueness may well help the centre maintain control in ways it could not do otherwise. This is in line with Negri's statement that since 'The world elite decides, but it never considers itself responsible,' its decisions are blamed on, or simply portrayed as accommodation to the universal, and politically neutral, realities of the market; as with decisions about supplying AIDS drugs to Africa (2004, 92). Responsibility is distributed while the impact of power focused. Power is seemingly emptied out of place so that power can become total, as in Guantánamo Bay, where people are sequestered by the U.S.A. while outside the jurisdiction of that country's laws. This is liminal governance.

The Australian government likewise claims that it will not be blackmailed by refugees killing themselves, or by dying while being incarcerated by the government. The power of the government acts by denying its power. 'We' are victims, not the refugees. The government excised parts of Australia from its official control, so that it could excise the rights of refugees arriving there, thus increasing its own power at the same time as diminishing its responsibilities, and incarcerating refugees outside the law. Although the temptation to accuse the Australian Government of lying is strong, perhaps it *is* true that the Prime Minister, John Howard, really does know very little of what is going on, and his constant appeals to ignorance are reflections of a government that finds it hard to negotiate a course amidst overwhelming and conflicting streams of information. Perhaps the Left ascribes the Right an unrealistic omnipotence.

A business parallel is the James Hardie case, whereby an Australian company knowingly poisoned its workers with asbestos for profit. The corporation walled off its responsibility in order to let the profits be unmolested by its victims. Eventually the company's responsibility was defined by the courts, but a year later no compensation had yet been paid. And although the director was sacked for this, he received far more money than any of the victims would.

In daily life we may note that businesses 'fall over' if their network fails, and we are often told 'the computers are down' and nothing can be done, or that the computer does not allow a certain type of response. Telephone service centres seem designed to cause people to hang up after long periods of waiting, and the workers generally have little knowledge beyond that provided by the computer. Fault and responsibility is distributed elsewhere. This distributed responsibility does not increase representation, rebellion or resistance, but confusion and frustration.

The political Left also distributes responsibility. The Left in Australia was voted out of high office; it no longer has any party with appeal (both the main parties in Australia and the USA being of the Right), and it yields to the inevitabilities of the market and globalisation. The Left often refuses to accept how much it *had* penetrated the State. The Left can even see its own achievements, such as social security, simply as modes of state control, and thus surrendered to the Right's rollback of these

achievements. The Autonomist position, as opposed to the *operaismo*, has always been to find power out of the State rather than within it, but this may simply surrender control to the Right. It might well be strategically better to see the State as *a* site of struggle (although not the only such site), rather than just a site of control.

To some extent, the success of the popularist religious Right in countries such as the U.S.A. demonstrates something else. They have not sat passively back, but have organised and taken responsibility for their cause. Certainly they have been co-opted by the corporate Right, largely because the Right is historically capable of using religion while the Left is not, and the Right can be openly authoritarian and repressive while the Left cannot (until it achieves power at least). Meanwhile the conservative critique of capitalism has been forgotten to the extent that most people do not seem to know of its existence.

Without exploring this in detail, or denying the complexities involved, I would suggest that the success of the religious Right involved people meeting regularly offline, and in seeing their identity as involved in their actions. Their churches and groups are organised in a fairly traditional cell arrangement, under various organisations that have national reach and national figures. They are elitist. They communicate through mainstream broadcast media (mainly radio and TV) to promote their aims, as well as through internet groups. They act on specific widely promoted issues—not in terms of a uniform policy. This means that if people disagree with a particular action they do not participate in that action; but they do not have to split from the group. The issues are chosen with wide appeal. Whatever the complexities involved here, the success of the religious Right does point to the fact that surrendering to distributed governance, or engaging only in action outside the state, may limit the Left's potential for success.

Actions such as those used by the religious Right, however, are not the spontaneous organisation of Negri's Multitudes. In fact distributed power causes a problem for revolutionaries as the adversary seems to have disappeared (Negri 2004, 92). All Negri can council is withdrawal, although this may not be possible for everyone (2004, 93). Resistance can be discovered at a private level; there are possibilities beyond oneself (94). Faced with the vagueness of distributed governance, we retreat

away from others. This too is based on an Autonomist tradition (Tronti 1965) whereby the workers were to withdraw co-operation, or to engage in strikes and sabotage. However, in a system in which everyone is intertwined, to where do people withdraw? Negri's suggestion is that people withdraw to the internet, especially the areas apparently outside corporate control.

The internet and radicalism

At the beginning of *Empire*, despite their reliance on information society-type theorising, Hardt and Negri are sceptical about the internet. They write about various intense struggles over the world:

> First, each struggle, though firmly rooted in local conditions, leaps immediately to the global level and attacks the imperial constitution in its generality. Second, all the struggles destroy the traditional distinction between economic and political struggles. The struggles are at once economic, political, and cultural-and hence they are biopolitical struggles, struggles over the form of life. They are constituent struggles, creating new public spaces and new forms of community …. [However,] the struggles do not communicate despite their being hypermediatized, on television, the Internet, and every other imaginable medium. Once again we are confronted by the paradox of incommunicability. (2000, 56)

Later Hardt and Negri seem to forget the uncoordinated nature of single-purpose pressure groups, or of groups gathered together over a slogan or over a particular point presented in the media (as in the protests in the U.S.A. over the death of Terri Schiavo through removal of her life support). By the end of *Empire* optimism reigns:

> In political terms, the global information infrastructure might be characterized as the combination of a democratic mechanism and an *oligopolistic* mechanism, which operate along different models of network systems. The democratic network is a completely horizontal and deterritorialized model. The Internet, which began as a project of DARPA (the U.S. Defense Department Advanced Research Projects Agency), but has now expanded to points throughout the world, is the prime example of this democratic network structure .... This democratic model is what Deleuze and Guattari call a rhizome, a nonhierarchical and noncentered network structure. (2000, 298-99)

In his informal conversations Negri also points to the internet as a source of collaborative freedom: 'levels of cooperation and sharing exist everywhere, even writing an article on a computer means having to rely on a common knowledge, which is to say the Internet' (2004, 27). And, '[C]ontrary to what is believed, people have become more communist than before' (2004, 27). Seeing collaboration as evidence of incipient communism is as misguided as seeing all trade, or exchange, as capitalist.

The history of the internet is more complex than portrayed by Negri and Hardt. Although the internet was largely built by programmers using exchange of information in a way resembling open source groups, it has to be recognised that the internet grew within the framework of military, academic, corporate, and governmental action, as well as through the activities of programmers. It was already embedded in power, and in pre-existing usages and pathways. Many histories of the internet ignore the overwhelming early use of the ARPANet by the military (demonstrated by the extent to which this network diminished when the military separated from it); or the sheer number of independent corporate based computer networks, and their expansion, in the same period; or the volume of state expenditure in this field. This emphasis on programmers could serve a political-identity creating purpose by portraying programmers as supposedly free from external imposition and restraint, and perhaps helps relieve any unease about accepting the imperatives of those for whom they actually worked—especially in the 1960s and 1970s. The discourse of net history has been governed by the rubrics of individualism and futurity, which are among the most popular ways of describing capitalism and technology.

However, this perspective is not the only possible way to view net history. For example, the U.S. Federal Communications Commission inquiry into *The Matter of Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities*, which began in 1966, was told that the number of non-defence computer systems had risen from 91 in 1953 to more than 35,000 in 1966, and that more than 2,000 online systems were in use with more than 45,000 data terminals (Schiller 1982, 22). Representatives from the petroleum, aerospace, computer, banking, insurance, transport and retail sectors all testified before the inquiry into the importance of data transmission and computer networks in their forward planning. They all uniformly complained that the transmission services offered by AT&T hindered this computerisation (23-34). Commercial networks were widespread and militant before the ARPANet was even begun.

Similarly, in 1980, the International Communications Association submitted to the FCC that 'international telecommunications provides the pipeline which enables U.S. industry to extend its enterprise to the vast world markets' (Schiller 1982, 99). A 1982

Business Week article stressed how communication was seen as essential to the internationalisation of corporations. It claimed 'US multinationals are locating their foreign offices in cities with the most accommodating PTTs [Post, Telgraph and Telephone providers]' (1985, 129). One example would be Ford setting up its communications office in Britain because British regulations both allowed it to establish a private email system (*Business Week* 1985, 129), and to use computer services back in the U.S.A. (Schiller 1982, 100).

All of these developments in networking were concerned with speedy control of widespread operations, with processing huge volumes of information to aid in that control, and facilitating centralised response. Such developments also show that despite Hardt and Negri's arguments to the contrary, distributed governance and capitalistic networking preceded the Multitude's use of the internet. Perhaps in Autonomist terms this process can be seen as part of the mobile liberation of the corporate sector from local borders and local workers.

Although it is tempting to think of hackers in terms of Deleuze and Guattari's nomadology, the Critical Art Ensemble points out that it is actually the elite who uses cyberspace to make

> a diffuse power field without location, and a fixed sight machine appearing as spectacle ... hostility from the oppressed is rechannelled into the bureaucracy which misdirects antagonism away from the nomadic power field. The retreat into invisibility of non location prevents [the definition] ... of a site of resistance .... No longer needing to take a defensive posture is the nomad's greatest strength. (1994, 15-6)

As Sterling's book *The Hacker Crackdown* (1994) demonstrates that hackers were at the mercy of a more mobile authority. Hackers were generally caught in their bedrooms.

Of course, this history of the internet being entwined with distribution of corporate, state and military bodies does not mean the internet could not be commandeered for other uses. More to Hardt and Negri's point are the free and open source software movements. They, supposedly, more clearly challenge capitalist ideas of property and show the democratic potential of the Multitude.

Free and Open Source Software (FOSS) movements

Hardt and Negri write that 'we might also understand the decision-making capacity of the Multitude in analogy with the collaborative development of computer software and the innovations of the open source movement' (2004, 339). Open source allows people to read and modify the source code of computer programs. The openness theoretically means that software bugs are fixed quickly and better programs produced as more people can see into the code and modify it. As Hardt and Negri argue, 'The democracy of the Multitude, then, is as an open source society, that is a society in which source code is revealed so that we can all work collaboratively to solve its bugs and create new, better social programs' (2000, 340).[2] It is not, however, clear that open sources actually work like this. Even the notion that capitalist property rights are challenged by open source is disputed within the movement (Raymond 1998, 1999).

Following on from their assertions about open source, Hardt and Negri claim that 'in the Multitude the right to disobedience and the right to difference are fundamental' (2004, 340). This is not the case in open source groups, because technical ability has to be recognised and the groups are organised, at least partially, through attributing this recognition and through its contestation. As such they are rightly not only hierarchical, but also elitist with respect to those with no expertise. Ideas that do not translate into technical terms are discounted. We may consider the common elite programmer refusal of post-modernism (Morningstar 1993), and their common assumptions of being able to solve all social problems without knowing any sociology or anthropology, or even knowing much about societies other than their own. In some ways the FOSS movement is a closed or limited culture, and has to be. It is not open in the sense of welcoming all comers. Furthermore, if there is a dispute that is not easily resolvable by agreed technological criteria, disputes are often resolved by a 'fork.' The groups separate, and largely ignore each other from then on. That may not be possible in large interdependent social groups.

Variants of open source are common online. For example, the wiki model of distributed authorship has no person to 'blame.' Cynically we can observe that the

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[2] This is also the message of programmer Pekka Himanen's work *The Hacker Ethic and the Spirit of the Information Age* (2001b). For a criticism of this book see Marshall (2003).

founder of wiki was planning to sell versions of wiki, and remarked that he should be able to 'kill' *Encyclopaedia Britannica*, because he does not have to pay his writers (Goetz 2003). This kind of thing lead Terranova (2000) to suggest that the main function of open source is to provide free labour to be exploited within the capitalist economy. Many corporations from AOL to IBM have considered themselves unthreatened by using open source or volunteer labour. It means that the sales base is implicated in keeping the product they use moving and improving, acting in some ways like a self-service store. To participate in open source people have to have some other source of income.

It has often been remarked that FOSS, despite the actions of some notable figures, and despite fierce internal debate about the differences between free and open source software and their social consequences (say between Richard Stallman and Eric Raymond), is almost deliberately non-political. Thus Coleman, writing in support of FOSS in general, states that 'One might suspect FOSS of having a deliberate political agenda, but when asked, FOSS developers invariably offer a firm and unambiguous "no" – usually followed by a precise lexicon for discussing the proper relationship between FOSS and politics' (2004, 507). Coleman goes on to suggest that this apolitical stance is one way in which the movement tries to work politically:

> [It] facilitates the broad mobility of FOSS as artefacts and metaphors and thus lays the groundwork for its informal political scope, its key role as a catalyst by which to rethink the assumptions of intellectual property rights through its use and inversion (2004, 508).… [However, some of the appeal of apolticism may be because] it has afforded a wider cultural and political language by which to objectify to themselves and larger publics the nature of their technical life world, an objectification buttressed within a hacker public sphere and as a political vector to make claims against the aggressive application of intellectual property restrictions, primarily in the defence of other programmers. (2004, 511)

The ideal of open source groups is technical meritocracy, that is, an elite to some extent separated from political and social issues, using its position to criticise those not of the elite. As Coleman puts it:

> politics tend to be seen by programmers as buggy, mediated, and tainted action clouded by ideology that is not productive of much of anything while it insidiously works against true forms of free thought. You can't tweak politics in an elegant and creative way to achieve something immediately gratifying, and thus it goes against everything programmers think and love about computing (2004, 513).

This isolation could even cripple their own effectiveness in their own projects. Chan describes the way people within the Peruvian state acted to ensure that Peru would forsake Microsoft and embrace open source or free software for its main computer systems. This success was portrayed by FOSS people overseas not as a local politicised event but as an inevitable part of the international success of free software, a point made by Chan:

> Far from presuming free software's steady advancement, the proponents of Peru's free software legislation undertook various forms of local and non-local work, advocacy, and activism to propel the visibility of their movement. Further, their practices departed from the language of technical and economic rationality that had been repeatedly invoked to explain free software's adoption. They insisted instead on a new framing of free software as necessarily engaged and invested in processes of governance and political reform…. Peru's free software advocates actively sought to build relations with bodies of governance, demonstrating a willingness to engage with traditional political channels. (2004, 532)

In other words, this was not the Multitude abandoning the State and paths already established for something else. It is true they established contacts throughout the world, and especially in South America to engage in their activism, but it was not a product of electronic networks alone—they were an adjunct.

Prominent U.S.-based FOSS people were not supportive of the political action in Peru, as Chan notes:

> Tony Stanco, a senior policy analyst at The George Washington University's Cyberspace Policy Institute… [warned] against the imposition of politics over rational markets. Writing in *Linux Today*, Stanco asserted, 'It is much better for governments to set up a real level playing field in procurement policy and then let the market decide on merit. If a product can't make it in the market without government mandates, then history has shown that it won't make it with government mandates either.' … Stanco was echoed by other free software supporters, who, in a Brookings Institute publication aimed at government policy makers themselves … collectively urged governments to maintain a stance of neutrality in software acquisition policy. Some insisted that free software would advance without the need for government involvement … while others argued that free software preferences would compromise consumer freedom of choice. (2004, 534)

Even Richard Stallman, who is usually considered to be the 'raving communist' of the free software movement, reacted by asserting that 'energies would be better spent preventing governments' over-regulation and infringement on user freedoms, than on fostering ties to legislative bodies' (Chan 2004, 543).

Apathy to anti-capitalism is not uncommon. Pekka Himanen said in an interview on this matter:

> there is not any irreconcilable contradiction between hackerism and money. As long as the Linux companies still work through the open source model the hacker spirit rules. Even the radical Richard Stallman stresses that 'free software' or 'open source software' is not about money but freedom or openness. He says that we should think of freedom (or openness) in the sense of the expression 'free expression,' not 'free beer'…. Even if you just want to win the competition, the best strategy for your greedy goals is not closedness but openness.' (2001a)

Given that these people tend to see markets as neutral, not political, and as providing the best solution as determined by a technical elite, they are perhaps not the best model for open activism.

Are FOSS groups even open to those with the technical abilities? Although research has not been detailed, it appears that these groups are male focused and not open to gender differences. Given the history of hacking (programming), as it has been described by Turkle (1984) and Levy (1994), this is not surprising. Most of the available comment is written by women who participate in open source and, while defending open source groups, they portray a society that is patronising, aggressive, sexually obsessive, and discriminatory. Val Henson (2002) writes:

> I also used to believe that sexism was dead. Shortly after joining several women in computing mailing lists, I realized how wrong I was. Week after week, women have new stories about how they were discriminated against and insulted because they were women. These stories aren't decades old, nor do they involve people who grew up when sexism was more acceptable. These are day-to-day experiences of today's women, in modern settings, who are being driven out of their chosen profession by sexism.

Henson tells of how women who attend offline meetings may be pointed at, or greeted with silence, as they enter the room. And Yuwei Lin writes:

> I have observed that when Allison [Randal, president of the Perl Foundation] spoke at the Italian Code Jam 2004 activity, she acted, and also was treated, rather as an assistant for Larry Wall than being an outstanding programmer whom would be granted as much respect as her male peers. (2005, 4)

A survey of the FOSS movement states 'The FLOSS survey on OS/FS developers confirms the findings of the WIDI project that women do not play a role in the development of open source and free software; only 1.1% of the FLOSS sample is female' (Ghosh et al, Part 4, 8). It might be mentioned that this is the only sentence in the report with the word 'gender' in it. The gender equalities that Hardt and Negri report from Latin American resistance movements, and which they advance as the way of the Multitude, are not present in FOSS movements.

Structurally the FOSS groups tend not to be so equitable amongst men either. Lerner and Tirole remark that 'the top decile of contributors accounted for fully 72% of the code,' and this was accepted by the group (2002, 204). They also note that 'Important contributors are few and ascend to the "core group" status, the ultimate recognition by one's peers' (205). These groups also have leaders who have been described, to me, as 'benevolent dictators.' Bosco remarks:

> It should be noted that there is a central figure called 'project leader' or 'maintainer' who is in charge for accepting, reviewing and integrating new features or fixes into the main source code. Once the project leader has reviewed and accepted the contribution, it is eventually integrated and delivered to the large public of users in the next software version. (2004, 12)

Lerner and Tirole suggest that a leader must convince 'contributors … that their leader's objectives are sufficiently congruent with theirs and not polluted by ego-driven, commercial or political biases' (2002, 222). The initial leader seems usually to be the person who can present enough source code to suggest that the project is viable to enough people who might want to help. Bosco continues:

> In addition, a project leader provides a coordination service to the participants of the project; he makes sure that contributors working on the development of the same functionality are in contact with each other and hopefully collaborate; he makes sure that the development goes smoothly and tries to ease up tensions between disagreeing developers. (2004, 19)

Occasionally, as with the Apache Server, the software may be controlled by a small group of people who vote on particular changes and developments (Bosco 2004, 20). These projects do not automatically arise out of the equitable uncoordinated functioning of the Multitude. A leader is essentially responsible for decisions even though these leaders cannot fire, imprison, or execute people, and have to rely on their abilities to culturally convince others, to maintain their position and prevent forks. This is helped by what Bosco calls a taboo on forking (25), although this could also be explained by the reluctance to engage in duplicate work. Bosco argues that people perceive leaders as good if they are technically competent, are dedicated (expend time), have a vision of the project's future, correct bugs, and are patient (48).

Programmer Alan Cox (1998) commented on the leadership elite factor when describing an effort to port Linux to an 8086. He suggests that good programmers are 'relatively unusual. Not only that but the difference between a true 'real programmer' and the masses is significantly greater than that between 'great' and 'average' in

many other professions. Studies have quoted 30 to 1 differences in productivity between the best and the rest' (1998). Cox complains that the project was inundated with bad programmers 'with opinions—not code, opinions.' As a result 'the real developers have many of the other list members in their kill files' and the group turned into a core team that ignored the rest. Interestingly Cox seems to think this was both inevitable and sad. It takes work to 'separate useful people from the noise.' In this sense technical elitism can be seen as pragmatic—it enables the groups to function. Elitism is also obvious in the technical competency necessary to be able to use open source products. The products are not suited for beginners. Sometimes this complexity is so great that even open source guru Eric Raymond (2004) has commented on the difficulties of implementing the software.

Apart from technical elitism, what other kinds of social structures or political processes emerge in FOSS communities? Crowston and Howison examined 120 project teams and suggest 'that it is wrong to assume that FOSS projects are distinguished by a particular social structure merely because they are FOSS' (2004, 1). They assert that larger projects may tend to become more modular, with groups less connected to the general network. Again this suggests that our models for understanding networking are not complex enough. It may well be that all networks are not the same, and that the way communication is structured effects the dynamics of the groups that arise (Marshall 2004). Technology both enables and restricts actions, and so its potentials must be considered carefully. Vague assumptions about how difference arises, and reducing all difference to the same difference, as in Negri and Hardt's use of the term Multitude, obscure these problems.

Conclusions

With the idea of Empire, Negri and Hardt point to the importance of distributed governance in the contemporary world. However, Empire and Multitude are not separable and opposed but intertwined, and distributed governance is not inherently radical; it can legitimate and extend the control of those who already have more power, and reinforce easily activated pathways. Negri and Hardt seem not to perceive the real diversity of the Multitude, or that resistance to Empire could be localised, reactionary, or oppressive. People could seek fundamentalist certainties in the face of a chronically fluid dominance. Even if Multitude is composed of knowledge workers,

or workers in the immaterial sense, who need to collaborate on projects and produce with their own creativity, those workers may still be fragmented as a group, and the forces that allow them to collaborate may also keep them apart—especially if action is confined to virtual realms.

FOSS movements are not an unproblematic model for democratic, non-hierarchical revolutionary, action. People in the movements tend to self constitute as a hierarchical technical elite (which is not necessarily a bad thing), and they tend to view politics as something they should not be involved in, perhaps as a way of generating unity amongst themselves. They favour quietist and technical solutions, and when technical solutions within their framework are not immediately obvious, they tend to lose interest. They are also inclined to ignore people who are not of the same group, and to ignore issues of promulgation.

What can activists learn from all this? Firstly, it is probably advisable not be seduced by technology in itself. As the early Autonomists emphasised, technology may result from a reaction to a perceived lack of control by dominant groups. Any beneficial freeing effects taken up by the Multitude may produce more attempts at control. Thus struggle is dynamic within the technology. Technology enables and restricts. It is not entirely positive or negative; the effects have to be created.

It is possible to learn from those who have succeeded, such as the FOSS supporters in Peru who continued 'normal' political action within the state. The success of Right-wing Christians in mobilising cannot be ignored—Left-wing Christians have not been as successful. This is remarkable, as the differences splitting these organisations are at least as great as differences within the Left, and their potential differences with the corporatist Right could be explosive. As I have implied earlier the religious Right does not let responsibility lie elsewhere; it takes action. The religious Right also takes action within the official power structures of the state, rather than hoping that new structures will arise. In that sense the religious Right claims the power structures of the state for itself.

Taking responsibility, rather than allowing that responsibility to be distributed, and acting within a particular place, rather than only within vague online spaces, is

important. The idea of distributed governance suggests that those in power are not always in control; they are also confused, and governance can escape them. The network is complicated. Thus they may well tend to be either over-reactive or helpless in the face of a prolonged active and vocal opposition that assumes it can actually do something about the situation in question. Finally, from the hackers themselves we can learn from Cox's idea that everyone who is interested can do something, but not everyone has to do everything. Some people make the tea, or write the manuals, and these actions are important.

The internet can provide a medium for action, but it is not in itself radical or a model for that action, and neither are all the groups that have used the internet as their basis for communication. The internet, or communication technology more generally, is also a site of struggle, as Autonomist theory points out. It is a tool that can be co-opted, implemented and changed to support the dominant groups. It can help to fracture the Multitude, thus transforming the tool back to its origin as a mode of extending corporate, military and State power. The world is shaped by ongoing political struggle, not by the inevitable forces of society and technology.

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