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Citation for published version (APA):

Gillan, K. (2008). Diverging attitudes to technology and innovation in Anti-War movement organisations. In T. Häyhtiö, & J. Rinne (Eds.), *Net working/Networking: : Citizen Initiated Politics* (pp. 74-102). Tampere: Tampere University Press.

Published in:

Net working/Networking:

Citing this paper

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Diverging Attitudes to Technology and Innovation in Anti-War Movement Organizations¹

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From October 2006 a year-long campaign of daily direct action was waged against a UK naval base that serves the UK's Trident nuclear weapons system. During the first week of protests I visited a small flat in the nearby town of Helensburgh, in which two members of the campaign's steering group lived,

This had become the central hub of activities for the first week of the campaign and was strewn with the paraphernalia of modern activism: in addition to banners and posters around the place, three laptops were on and networked, several mobile phones were charging as well as the landline and a dedicated campaign phone line.

(Field notes, Helensburgh, October 2006)²

The fact that this had become a well-equipped office would feel quite unsurprising to visiting blockaders, as simply part of the bustle and buzz of a new campaign. During the same trip I visited the Faslane Peace Camp, a ramshackle collection of brightly painted caravans, mobile homes and improvised sheds that has been inhabited by varying groups of protesters for twenty-five years. A seasoned anti-nuclear campaigner, and new resident of the camp, described their plans to set up a computer lab with donated equipment and noted that the following day they would be having a broadband internet connection installed. The only real surprise here is that they'd managed to convince a telecommunications company that bills would be paid regularly. For contemporary activists, high-tech comes as standard.

While recognising the familiarity of such developments, however, we should not lose sight of the rapidity and scale of change represented by the integration of information and communication technologies (ICTs) into social movement activism. For instance, given that the text message has only been a possibility since the mid-1990s, and the mobile phone call has been affordable for just a little longer, it is remarkable that, as one very experienced interviewee claimed: 'you couldn't not have

¹ This chapter has been accepted for inclusion in Tapio Häyhtiö & Jarmo Rinne, eds (forthcoming) *Net working/Networking: Politics on the Internet*. University of Tampere Press.

² This chapter draws on qualitative data from an ESRC-funded research project (RES-228-25-0060) with Jenny Pickerill and Frank Webster. The dataset comprises transcripts from over sixty interviews with anti-war activists carried out 2006-7, field notes from numerous observations of anti-war activity and documentary analysis of media sources and movement produced literature. Further information on the project is available at www.antiwarresearch.info.

them, you'd be stuffed without mobile phones' (Lindsay German, Convenor, Stop the War Coalition). Another respondents wondered, 'its hard to think how it worked before [the internet]' ('Fiona', Trident Ploughshares activist). Anti-war groups in the UK, typically working on a shoestring budget, have mobilized significant resources in order to operate within technologically advanced information networks (Gillan, Pickerill & Webster 2008). But that bare fact masks a multitude of individual decisions concerning the benefits of campaign websites, email lists, discussion forums, mobile communications and so on. This chapter examines the attitudes that commonly influence those decisions and their implications for activist groups who adopt new ICTs.

Even if ICTs have become nearly ubiquitous in campaign organizations, at least in the UK, this by no means implies a homogeneous relationship between activists and technologies. Rather, the particular uses to which technologies are put is differentiated by a range of factors including campaign goals, organizational structures and strategies for change. Additionally, as I will argue below, the attitudes that people bring with them to the engagement with technology – what Kirkpatrick (2004) calls 'computational temperaments' – delimit the potential that may result from activists' adoption of ICTs. We will see that UK anti-war groups have mainly displayed a user-oriented approach to technology, making use of the manifest functionality of new communication tools, more or less as intended by their inventors. Occasionally, however, a more innovative approach to communication technologies is evident. This approach, which has some features in common with computer hacking, is characterized by an irreverent attitude to the rules embodied in ICT devices, as individuals stretch and blend the functions of different devices and discover new ways to mobilize participants, reach audiences and coordinate protest. By examining instances where these two approaches have come to the fore we will be able to discern more clearly how some kinds of technological innovation can benefit particular forms of activist organization. I will argue that it is particularly where the pursuit of collective action requires horizontal communication structures that the hacker attitude may offer significant benefits. Alternatively, where the horizontal structure of communication is less relevant to the execution of movement tasks, the user attitude offers an efficient articulation with technology.

Hackers and Users: Attitudes to Technology and Innovation

The key role of 'hackers' in the development of technology has long been acknowledged in sociological studies of computing. Turkle's (1984) investigation of programmers working with the Massachusetts Institute of Technology's mainframe machines was particularly instructive in teasing apart the influences of social institutions, personality traits and subculture on the innovation occurring in that particular location. Others have identified hackers more widely, suggesting a range

of common characteristics such as a shared ‘work ethic’ appropriate to the information age (Himanen et al. 2001), or a political world-view centred on the value of total and free access to information (Nissenbaum 2004). But depictions of the social or ideational milieu of hackers are inevitably contingent on specific technical subcultures or epistemic networks. What is stable across these accounts, and what I will describe as the minimal specification of the hacker attitude, is a distinctive relationship between people and technology.

The hackers’ approach to technology has usually been described through examining what hackers value about their innovations. Jordan and Taylor usefully summarise the ‘good hack’ as being masterful, simple and illicit (2004, 7). These terms require some unpacking. First, mastery is displayed by a high level of understanding of a complex system, which is a requirement for the hacker to be able to meaningfully modify it: ‘Hackers are people who have acquired the expertise required to take control of a personal computer and make it do things that are not part of the publicised functionality of specific, pre-packaged software’ (Kirkpatrick 2004, 118). Second, simplicity is displayed through a parsimonious approach to system resources. Due to hardware limitations, of both mainframes and personal computers (PCs), this was certainly a requirement of the early hackers’ work. While some such limitations have been overcome there remains a tendency to admire those hacks that make the most efficient use of the least inputs. Thirdly, what Jordan and Taylor refer to as the ‘illicit’ nature of the ‘good hack’ may be more broadly described as boundary-crossing or rule-breaking. For Kirkpatrick ‘the thrill of the hack lies in this getting a machine to do something its designers did not intend’ and the hacker is consequently ‘someone who is disrespectful of the rules that are codified into the machine interface ... (who) reaches straight through the lie, into the code and protocols that make it possible’ (Kirkpatrick 2004, 118, 117). Similarly, for Turkle, ‘the hacker is a person outside of the system who is never excluded by its rules’ (Turkle 1984, 227). When transposed to the overtly political contexts that Jordan and Taylor examine, this characteristic may well imply illicit uses of informational technologies. But the rule-breaking described by other authors tends to refer to the rules of the technological systems themselves and such behaviour need not cross the line into uses of technology that are in some way forbidden or unlawful. At minimum, then, the hacker attitude to technology displays a desire to learn about a technology, and to use the knowledge gained to cross the boundary from prescribed uses to find unintended and efficient new applications.

The user is typically defined in opposition to the hacker. Turkle was again instrumental here, pointing out that ‘A user is involved with the machine in a hands-on way, but is not interested in the technology except as it enables an application. Hackers are the antithesis of users’ (1997, 32). Users wish to apply the publicized benefits of technologies but show little interest in reaching beyond the

surface. Kirkpatrick uses the ‘cynically compliant game player’ as a prime example of the user attitude. The user is ‘the reference point for interface designers’ and ‘does not think about how the machine works when she is using it. She takes for granted that it is able to tell what she wants on the basis of her clicking neatly representative icons’ (2004, 117). The game player is described as cynical because Kirkpatrick claims that it is impossible that they have failed to see through the interface and realise that their own actions are programmed by the software, but they nevertheless continue to play along, performing a set of prescribed mechanical motions. This ideal typical representation of the user is important because computer games were used to pioneer the development of graphical user interfaces that increase the distance between the user and the underlying codes and protocols required for genuine mastery over the machine. The resulting ‘user friendly’ interfaces make certain prescribed tasks easier to accomplish, but at the expense of disempowering the user from utilising the technology for a wider range of functions that may not have been conceived of by the original designers.

The dominance of, first, the Apple Macintosh, and then computers running Microsoft Windows, was based on the continual extension of the ‘user friendly’ operating system and so implies the prevalence of the user attitude among PC buyers. There are three important developments in ICTs that may push people’s engagement with technology towards the user attitude. First, as ICTs have become embedded deeply into ever more sectors of lived experience the demographics of technology use have changed. In reference to the Internet, Nissenbaum claims, ‘Technologies of information quickly passed from early obscurity and mythological idealism into the mainstream of everyday experience and the early demographics of cyberspace ... expanded’ (2004, 201). Early adopters of technologies are more likely to have been interested in technology *per se*, and therefore been more likely to experiment and push the limits of the technologies available. As it becomes progressively easier to achieve complex tasks, however, more people are drawn to technological solutions simply for their immediate, advertised benefits. The demographic shift in ICT use should temper our expectations about the degree of innovative, boundary-crossing solutions discovered within non-technical communities. Second, the user attitude is encouraged by technology manufacturers who try to delimit the possible relationships between user and machine. As Woolgar’s (1991) examination of usability trials for a new PC in the mid-1980s illustrates, the development of the interface and its supporting manuals is a route through which manufacturers ‘configure the user’ on the basis of assumptions of what users understood about the machines and what software developments the user ought to value. Moreover, the ‘user friendly’ approach to software design is equally ‘hacker unfriendly’. The dominant graphical user interfaces are distributed as precompiled binary code, readable only by machine. This is done in order to protect intellectual property and because of designers’ assumptions

about users' needs. It is primarily among the open source software movement that delving behind the interface is really encouraged and consequently the distribution of the human-readable source code is a central tenet. Unsurprisingly, it is within that community that contemporary studies of hackers typically find the creative engagements with technology that they seek (Himanen et al. 2001; also Lessig 2002). Third, the variety of ICT devices available to consumers in developed economies has increased rapidly, and many of these are built in ways that are even less conducive to hacking than the modern PC. For instance, it is generally harder to change the hardware provided in a laptop than a desktop computer, so new functions that depend on different hardware configurations are further off-limits. More fundamentally, both hardware and operating interfaces for mobile phones are far less accessible to the would-be hacker. As we will see below, mobile phones may be even more important than computers in the context of activist uses of ICTs. Additionally, digitization of different information forms such as photographs and sound and video recordings offer great potential for activists who seek to produce their own media (Juris 2005), but the codes and protocols behind the relevant devices, and even the patented, proprietary file formats on which they depend, are still further removed from the experimental, rule-breaking hands of the hacker.

In defining the hacker, Kirkpatrick specifically points to the actions of 'writing their own code in programming language, or changing code in an existing system' (2004, 118). If we understand hacking in this way, then the preceding points indicate that the barriers to hackers have been raised. This should not be taken to imply that code-level hacking is impossible within activist circles; Tim Jordan evidences quite the opposite in his contribution to this volume. Nevertheless, work at the hardware or code levels of modern ICT devices does require increasing levels of technical knowledge, access to some of which is carefully restricted. But the trends indicated above also open up opportunities for different kinds of application of the hacker attitude. We might profitably broaden the notion of the 'hack' away from its focus on code-level work with computers. Indeed, as Jordan and Taylor describe it, 'the essential attribute of a hack resides in the eclectic pragmatism with which hackers characteristically approach *any* technology' (2004, 7; original emphasis). One of their interviewees uses the apparently trivial example of boiling water for tea in a coffee maker and explained that hacking 'pertains to any field of technology ... Because you're using the technology in a way its not supposed to be used' (ibid). In a world where many devices come 'network-ready', we should look far beyond what is inside the PC case sitting on the desk. Identifying a wider system as the potential object of hacking encourages examination of linkages between any two devices that can exchange information. The minimal specification of the hacker attitude described above is equally as applicable to this broader system level as it is to code-level software hacking. The central concern is not the precise phenomenology of the interaction with a technological device, but rather the

willingness to explore a system, to learn its characteristics, and to come up with innovative ways of using it.

One danger in broadening the concept of the ‘hack’ away from a particular kind of physically recognizable exchange between individual and computer is that it may become impossible to distinguish between a hack, on the one hand, and a sophisticated use of available technologies, on the other. The first answer to this is to refine our conception of innovation, thus allowing a closer reading of what characterises a hack. Particular technologies have always offered different blends of potentials and constraints. Even the original hardware hackers were dependent on prefabricated computer kits to build their computers (Kirkpatrick 2004, 26). While the hacker may reconfigure the components in numerous ways and, perhaps, add functionality through home built components, they will always run up against hard limits that are produced by designers’ decisions. Similarly, software hackers are constrained by both their hardware and the code level and language they choose to work with. The inclusion of ‘elegant simplicity’ as a defining feature of the ‘good hack’ flows from awareness of such limitations among the early hackers. Hard limits indicate the difference between innovation through hacking and pure invention. The hacker uses tools already available to achieve something new. For this reason we should examine what can be done with technologies – that is, their functionalities – rather than a technical specification of how they work. We may consider the advertised, intended uses of a device or system to be its *manifest functionalities*. Manifest functionalities are prominent in both advertisements and user manuals, and require little creativity or sophisticated understanding on the part of the user to be applicable. At the other end of the scale are *latent functionalities*. These are the applications that, while being enabled in some way by a device or system, are not made obvious to the user and may not have been intended by the designer. At the furthest reaches, hackers may find a use for a technology that was simply inconceivable to the designer, perhaps by adding new hardware or writing new code. Even there, the potential must have existed in the system for the hacker to have anything with which to work. More commonly, however, new uses are closer to the original specification, as in the coffee maker example mentioned above. The utility of the distinction between manifest and latent functionalities lies in helping to specify what ‘counts’ as a hack. A use of any technological device that goes beyond the manifest functionalities evidences the hacker attitude, at least in the minimal form specified above, because it requires a level of understanding of the system and creativity with its potential that takes one beyond the manual and beyond the configured relationship of user to device.³

³ For further development of the distinction between manifest and latent functionality, see Gillan, Pickerill & Webster 2008, ch. 7.

The boundaries between hacker and user, and between manifest and latent functionalities, inevitably remain a little fuzzy. This is not least because designers sometimes seek to build flexibility or extensibility into their systems. In such cases the whole notion of an ‘intended’ use for a particular technology is problematic. The second answer to the problem of distinguishing between a hack and a sophisticated use of technology is, therefore, epistemological. If, like Kirkpatrick, we take the user and hacker attitudes as ideal typical analytical constructs then we might accept that there is no a priori statement that we can make that would answer every borderline case (2004, xi). Rather, the analyst must consider both the general context of action and the specific features of the range of empirical cases available. The value of the concepts used here is proven, not by the imputation of the reality of our categories, but in the degree to which they aid interpretation of the available data; they are valuable just to the extent that they offer analytical purchase on empirical facts. In the remainder of this chapter, I hope to show that these categories do indeed aid the comprehension of a variety of forms of activity that constitute anti-war protest in the information age.

The User Attitude: Finding Efficient Tools for Movement Action

Given the sheer scale of recent anti-war protest, it is unsurprising to find that it is a richly diverse movement that has been responsible for mobilizations like that of 15th February 2003. Diversity of participation may be registered on a range of dimensions (Pickerill and Webster 2006), but what is of relevance here is the different kinds of organization represented in the movement. Four examples will give some indication of the range of group structures involved in contemporary anti-war activism. First, the descriptions of ‘everyday’ technological sophistication that began this chapter were organized by a core group of less than ten activists involved in creating the Faslane 365 (F365) campaign, and put at the service of hundreds of individuals who, organized into smaller blockading groups, took part in protests at the submarine base over the course of a year (interviews, Anna-Linnéa Rundberg and Adam Conway, 2006). Second, within the same broad anti-war and peace movement are also found much larger and more formal organizations such as the Campaign for Nuclear Disarmament (CND), which has had a democratic structure of individual members and affiliated organizations providing a steady income stream since the 1950s. As a result, CND can maintain office space in central London with a small core of full time staff supported by a larger group of volunteers. Third, the Stop the War Coalition (StWC) who co-organized the UK’s biggest anti-war demonstrations with CND, rely primarily on individual donations to finance their activities. Their ability to mobilize has been dependent on dozens (and for some time hundreds) of local anti-war groups composed entirely of volunteers (interview, Kate Hudson, CND Chair and StWC Officer). Finally, Justice Not Vengeance (JNC) produce regular newsletters offering high quality analyses of

recent political events, making use of publicly available, ‘establishment’ sources of information such as broadsheet newspapers and government reports. Occasionally, JNV have organized small protests, such as a public reading of the names of UK soldiers killed in Iraq, that have garnered coverage in mainstream news. JNV is largely run on the basis of individual donations, by three volunteers, with a wider group of supporters who meet occasionally and a much larger group of email supporters (interviews, Maya Evans and Milan Rai, JNV activists).

Despite the variety of organizational forms these groups do, of course, have a number of goals and political beliefs in common, and it is this feature that generally defines a group of organizations and individuals as a movement (della Porta & Diani 1999, 15-25). Central to this chapter, however, are the features they share as collective actors. Collective action requires groups to engage in a set of informational and communicative tasks, which, for present purposes, we may divide into representation, decision-making and coordination. In the following paragraphs I present instances of some of the most common responses from over sixty interviewees who were asked in depth about their use of information technologies in activist work. As we will see, ICTs have been widely adopted for their manifest functionalities, and are now deeply embedded each area of activity.

Representation

The representation of ideas, critiques and rationales for action have always formed a central component of social movement activity, which is an idea captured in the wealth of literature on interpretative framing (Johnston & Noakes 2005). Control of the media of representation has frequently been sought by movement groups as is evident from, for instance, the important role played by newspapers in far left organizations in the UK, who have often owned their own printing presses (Allen 1985). In this respect, internet technologies offer clear benefits to movement groups as low cost means for the dissemination of alternative analyses of political events. These representations may be aimed at the general public, or at a closer group of supporters and email subscribers. One campaigner at the Religious Society of Friends (Quakers) noted that storing information on the web offered savings in both financial terms and in the amount of work required of the central office: ‘postage mainly, paper... it means it’s more accessible, and we would expect less requests from our volunteer people’ (interview, Steve Whiting). The speed of dissemination is also clearly important, with another interviewee stating that ‘it’s astonishing how quickly so many people become au fait with the arguments’ (interview, Lindsey German).

For some groups, the representation of ideas is the core function: JNV’s primary purpose is collating and distributing arguments and factual materials deemed potentially useful for other peace activists.

For others, the point of informing supporters and the general public is to mobilize participation in protest events. Kate Hudson distinguished clearly between a ‘campaigning’ and ‘information organization’. CND’s website, she explained, while ‘as accurate and up-to-date as possible’ does not set out to be ‘the last word in scientific information’. It rather aims to be ‘the last word in campaigning effectively on nuclear weapons’ (interview, Kate Hudson). StWC’s use of their website is also focused in this way:

if something big breaks on one day, then on the homepage I might quickly write a short piece to do with that, and links to do with that. Nearly always, given the type of campaign we are, it will be links to some activity that we’re involved in, which is the main function of our website – to actually support activity (interview, StWC office manager and website developer.)

As will be discussed below, many anti-war movement groups are focused primarily on protest events. While these certainly require detailed planning, information sharing and decision making to carry out, this focus also means that groups’ websites, understood as presenting the public face of the organization, seek to encourage action above all else.

It was commonly recognized among interviewees that the Web is a ‘phenomenal resource, absolutely phenomenal ... [for] the resources, the information you can access’ (interview, Steve Whiting). Milan Rai described his previous campaigning against sanctions in Iraq during the 1990s, wherein

having the text of the UN Security Council resolutions was crucial ... and the only way we could get those was from the UN information office in London, which had to request them from New York... it would be weeks of delay before we got these Security council resolutions... foundational documents like that suddenly became immediately accessible.

And it did make a really big difference to our work. (interview, Milan Rai)

It is unsurprising then, that with a positive experience of using such resources, anti-war activists increasingly see a part of their work as the creation of electronically available information sources. Whatever their particular goals and modes of action, both the creation of group websites and the distribution of mass email messages offer anti-war groups a speedy route through which to represent their analyses and inform potential supporters about opportunities for protest.

Making Decisions

Decision making was another everyday task for which interviewees from a wide range of groups praised the utility of ICTs. Email discussions, usually utilising listserv software attached to particular subscription-based groups, were utilized by many as decision making forums. Typically, interviewees enjoyed the ability to work together without the need to organize a time and place to meet, so that ‘decision making can happen where people don’t have the same schedule’ (Jesse Schust,

Voices in the Wilderness UK). The asynchronous nature of email communication means that ‘you can all work at your own pace and your own timescale ... and across time-zones as well’ (Jane Tallents, Faslane 365), thus making the best use of available human resources. This is particularly important since most anti-war activists juggle their political commitments with many others. Even where an organization has office space and paid workers,

[Email] makes for ease of decision-making. Our Officer team is the centre of the decision making process, there are five of us, we meet less frequently physically because we’re in email communication... And for things like getting agreement about leaflets, for example ... you can agree the whole thing in five minutes, whereas previously it would have taken much longer (interview, Kate Hudson).

Furthermore, some interviewees also felt that the text-based nature of these communications also helped improve the quality of decision making because ‘you consider your position more carefully, writing something compared to when you’re speaking’ (interview, Tom Shelton, CND Office Worker). Similarly, this is ‘an important way for people to share views, who might not be confident enough to do it in person. I find it easier if I’ve got a problem or want to describe how I’m feeling to actually write it down and amend it a bit, so you actually know what you’re saying’ (interview, Anna Liddle, CND Education Worker). Anna added that ‘you can actually research the facts and send what you mean, you can even add references from a website’. However, almost every interviewee who discussed the benefits of email in this sphere also emphasized that more complex or politically loaded decisions worked less well over email. Without careful planning of the timescale of decisions, discussions had a tendency to revolve around a number of contentious points without resolution. The lack of spontaneity was also a frequently cited problem: ‘electronic resources are really important in organizing.... But also it’s equally important to come to meetings... where we see each other face-to-face, because it’s really hard to bounce ideas off each other through emails’ (interview, Maya Evans). Where a high level of awareness of the limitations of computer-mediated communications is present, this aided the deployment of ICTs in a manner that offered significant efficiency gains in their organizational tasks.

Coordination

As noted above, while groups such as JNV define their activity squarely in terms of information, most use informational tools in work that is driven by protest events. Whether small-group, high-risk actions like F365’s blockades of a very high security naval base or CND and StWC’s joint-organized demonstrations of hundreds of thousands marching in the capital, protest events tend to be unpredictable. It is in the coordination of such events that the ‘anytime, anywhere’ nature of the mobile phone comes to the fore (Castells et al. 2006). One interviewee indicates the strategic benefit

of the mobile phone at demonstrations where police sought to block protesters' movements. This common tactic involves the creation of police cordons that block groups of protesters into side streets. Armed with their mobile phones, those in the cordon can phone others to update them on police tactics, so they 'can then organize in another place... there's more spontaneity and flexibility' (interview Steve Whiting). But the gains from 'perpetual contact' are not limited to these more radical forms of action. In relation to the more orderly national march,

we don't have the hassle any more like we used to. At the first Stop the War demonstration someone had to walk up and down the whole length of the Embankment to try and find the flipping bus - it was a pain you know. Whereas now we can coordinate people to get back on the buses a lot more easily with mobile phones and I think that makes a difference to people coming because they're not so likely to get lost (interview, Chris Goodwin, Leicester Campaign to Stop the War).

Activists' mobile phone use relates clearly to what Ling and Yttri describe, in a study of everyday mobile phone users in Norway, as 'micro-coordination': 'largely a functional and instrumental activity' (2002,139). Clearly it is not just activists that enjoy the greater flexibility and speed of making arrangements with friends and colleagues; rather this is the core purpose of the mobile phone and has simply been transposed into the context of protest events.

The brief presentation above focuses on the practical benefits of technologies that have been most frequently described by interviewees from a wide range of anti-war groups in the UK. At this level we see a quite straightforward adoption of ICTs by users taking advantage of manifest functionalities. The capacious store of information available on the Web is utilized by activists to inform themselves. They also see potential in the speed and relative cheapness of publishing for representing their own groups in that sphere. The asynchronous and place independent characteristics of email communication come to the fore particularly in simpler decision making processes and planning of events. And the ability for spontaneous communications with permanently connected friends and allies through the mobile phone has proved invaluable at all sorts of events. Anti-war activists therefore relate to ICTs with the 'user attitude', taking 'off-the-shelf' technologies and picking up applications of interest.

This is not to say, however, either that these benefits come without any drawbacks or limitations, or that the practical benefits are the only consequences of technology adoption. In relation to the former, activists' concerns about accessibility, surveillance, limited relationships with audiences through the Web and the difficulties of creating trust through CMC have been documented (Pickerill 2003, Gillan forthcoming). In relation to the latter, it is clear that ICT's offer social and emotional benefits too.

One interviewee described email discussion lists as ‘just so good ... it is a relief to be able to talk to like minded people. It is also very helpful to be kept in touch with what is going on both within the Society and in the world in general’ (focus group, Quaker activist). Similarly, another described the importance of staying connected through the Web: ‘if you’re an activist and you’re not connected to the relevant websites in your area... its possibly a lot more isolated, and there’s issues of morale and maintenance which websites can help overcome’ (interview, Milan Rai). Another explained that one benefit of attending national demonstrations was being able to reconnect with friends who lived far away, and that mobile phones were very important in being able to make plans and find each other (interview, CND employee). These complicating features may have heightened relevance in the activist context. The quotations from the Quaker activist and Milan Rai, above, are particularly sensitive to the need for activists to find other ‘like minded’ people, lest they face ‘isolation’; recognizing the difficulties of maintaining a position outside of the mainstream. Limitations, as well as benefits, are tied to the particular context. This is clear, for instance, in relation to concerns about surveillance which can be vital for groups planning protests that the police wish to stop.

Despite the particular areas of emphasis that may flow from the specific context of technology use, the limitations adumbrated above are inherent features of the technologies in their standard configurations. And the social benefits arising from ICT adoption are really a result of human interaction, per se, rather than the medium through which it takes place. What remains, therefore, is the fact that the practical purposes to which anti-war activists put new ICTs are just those purposes to which the designers of these technologies had intended. This highlights the similarity, at the level of informational and communicative needs at least, between activist groups and any other purposeful organization, whether they are businesses, voluntary sector associations or government agencies. Technologies designed with those other organizations in mind are highly pertinent for activist groups too, and so benefits arise from engaging with a user attitude, making use of suitable applications without trying to alter the technologies they use. This attitude is rarely made explicit, but the evidence above suggests that it does inform the interaction between people and technologies in the context of the anti-war movement.

The Hacker Attitude: Reimagining Technologies, Restructuring Communications

Politically motivated hacking has been well documented among certain groups of activists, such as movements directly concerned with technology or media and those opposing neo-liberal globalization. Key examples display a high level of sophistication in code-level work with computers in order to write software programmes that may be used in a variety of forms of action against

identified political opponents (Jordan and Taylor 2004; see also Jordan, this volume). But such activities are largely absent from the discussions of technology offered by our interviewees from across the UK peace and anti-war movements. As suggested in the first subsection of this chapter, this is to be expected given the widespread uptake of ICTs and the increasing level of knowledge required for innovative engagement with them. But the minimal specification of the hacker attitude is intended to enable a focus on creative uses of technology that do not take the form of code-level work, but nevertheless display the key attitudinal characteristics. The following material presents a series of vignettes that illustrate the application of the hacker attitude in the activist context. Examples are drawn from a somewhat broader examination of contemporary activism than the interviews cited above and, for this reason, two methodological caveats apply. First, the statements below are necessarily less suitable for generalization, either to the anti-war movement or to wider trends in protest. Nevertheless, the purpose here is to explore the further horizons of activist uses of technology without any implications about whether such forms are likely to spread or to meet with success. As we will see, this exploration will enable further reflections on the implications of the attitudes that activists bring to technology. Second, in examining secondary sources of data it is noteworthy that the ‘behind the scenes’ work of organizing and mobilizing often becomes obscured as commentators – scholars as well as journalists – typically focus on the public activities of movement groups. As above, I will use divisions of organizational work as representation and coordination. Underlying processes of decision making are, unfortunately, rendered invisible in most secondary sources and will not be considered in detail below. Under ‘representation’, we see the representation of ideas as an end in itself; that is, communication becomes the main purpose of the action. Under ‘coordination’, we will see communication as a means, with efficient, effective protest as the ends.

Representation

A striking illustration of the application of the ‘hacker attitude’ in representing political views occurred around the Republican National Convention (RNC) in New York in 2004. These protests were a critique of George Bush ahead of the US presidential election the same year. The range of political messages brought by protest participants was very wide but, for many, this was an anti-war demonstration and thus motivated by many of the same concerns as much of the activity described above (Democracy Now! 2004). In preparing for the demonstration, a graduate engineering student, Joshua Kinberg, designed and built a ‘dot-matrix graffiti bike’. This was a pedal cycle mounted with computer-controlled chalk aerosol cans that could spray messages onto the pavement. Kinberg’s website, Bikes Against Bush, enabled visitors to write short message that could be transmitted directly to the ‘printer’ via his mobile phone and bicycle-mounted laptop. Messages could thereby be submitted from anywhere with Internet access and almost instantaneously sprayed as graffiti onto the

pavements outside the convention. Kindberg demonstrated his technology, but was never able to use it in protest since in the lead-up to the demonstrations he was arrested, and his equipment was seized, by the New York Police Department (Singel 2007).

Regardless of the impact of the protest, Kindberg's design is illustrative in two ways. Firstly, it clearly represents an application of the hacker attitude. In order to piece together the website, his mobile phone and his home made 'printer', Kindberg needed a sophisticated understanding of modern systems of ICTs. Moreover, he clearly made an innovative use of the technologies he had access to; even though the potential for these connections existed in the devices he owned, he brought latent functionalities to the fore in a way that was certainly outside of the expectations of their inventors. Second, the system designed in this way was novel specifically in relation to the communication structure it created. The mobile phone is, of course, intended to be a one-to-one communication device but in this system is placed as a single node mediating an ad hoc many-to-many communication system. That is to say, by hooking the phone to his website, Kindberg stretched its capabilities to allow many-to-one communications and by hooking it up to his graffiti printer he produced one-to-many communication. The result was a horizontal structure that encouraged people unable to attend the demonstration to represent their views through a system that was technologically mediated but, nevertheless, transparent with regards to meaning. The intention, if not the result, was to widen participation at the RNC demonstration by enabling those not present to take part.

Where the communication of ideas is a form of protest, we must consider both the originators of protest messages and the audience for them. While the example above shows potential in reaching new originators, the audience for Kindberg's relayed graffiti would have been identical to that of the placards typically carried at such events. Another case, however, shows some potential in reaching new audiences. Joseph DeLappe, a Professor of Art at University of Nevada Reno, spent several hours a week for most of 2006 reciting the names of US soldiers killed in Iraq in the context of an online, multiplayer computer game (Clarren 2006). The game, America's Army, was developed by the US army and features team combat missions set in the Middle East, with players armed with standard US military equipment. The game is explicitly a recruitment tool, and is given away for free and heavily promoted among those sought to join the US military. Repeatedly logging in to the game under the name 'dead-in-Iraq', DeLappe simply dropped his weapon and used the chat interface of the game to give the name, age and date of death of all US military personal killed in the invasion and occupation. These messages were seen by all other players logged into the same game at the same time.

The recital of names of war dead is hardly a unique form of protest and memorial; indeed, Maya Evans of JNV was arrested in October 2005 for doing so outside Downing Street in London. But DeLappe is clearly reaching a new audience, utilising both the technological structure of the game, and the social structure within which it is set, to target people likely to be sympathetic to the US military. *Salon* columnist Rebecca Clarren (2006) quotes DeLappe as arguing that ‘online spaces like “America's Army” are a critical place to interact with the world. “I’m going to where these impressionable kids are spending their time,” he says. “If you get them where they live, and this causes them to think, even for an instant, then I think it’s effective”’. Another interviewer quotes DeLappe saying ‘you have a fantasy about killing and being in the military, but nobody dies, there are no consequences. It's a complete fabrication’ (DeLappe, quoted in Kuo 2006). Moreover, DeLappe’s action is self-consciously rule-breaking: ‘We come into these games to do A, B, and C, not C, D, and F. My response is to say, who says you're only allowed to do those things in these spaces?’ (ibid).

The two stories presented above are very different. Kindberg used his technical understanding to produce a horizontal, many-to-many communication structure that enabled wider participation in public protest. DeLappe, conversely, produced a vertical, one-to-many communication structure in which, notwithstanding the abusive replies he received from other game players, he dominated. But at the same time, he used his understanding of the structure and context of a particular computer game in order to communicate with a highly pertinent social group rarely reached by the messages of protesters. What both examples have in common, therefore, is the application of elements of the hacker attitude in imagining new purposes for particular ICTs, utilised in order to bring something new to the representation of political ideas.

Coordination

Returning to the RNC demonstrations of 2004 highlights further examples of the use of ICTs. Indeed, technological innovation was such a strong theme there that one *Village Voice* commentator claimed, ‘Thanks to this week’s protests ... the streets of Manhattan have become an outdoor gallery for the latest trends in the fusion of art and digital technology’ (Dayal 2004). One of the most popular systems in use was TxtMob: a method of distributing text messages on a large scale. The system was designed by Tad Hirsch with a group called the Institute of Applied Autonomy and required individuals to subscribe to groups they were interested in through entering their mobile phone number on a website interface. Once at the demonstration, any subscriber could send a text message to one number which, via Hirsch’s own server, would be forwarded to all other subscribers. The system was used frequently by a range of groups, such as: protesters keeping track of location and behaviour of

police, 'critical mass' bicycle riders staying informed of traffic flow; and volunteer medics in order to attend areas where violence had broken out or teargas had been used (Di Justo 2004; Hirsch & Henry 2005). Like Kindberg's graffiti bike, the key to innovation here was to combine the web and the mobile phone in order to create a many-to-many communication structure, except here communication was utilized as a means to more efficient and effective protest rather than, as in the Kindberg case, as an end and a protest in itself.

Both the TxtMob and the graffiti bike systems suffered a highly significant drawback, however, since both were centralized through one key point in the system. Kindberg's ambition was ultimately thwarted when the NYPD seized his equipment before the start of the demonstrations. TxtMob suffered problems because some mobile phone networks stopped passing its messages either because of network overload, spam protocols or police action (Castells et al. 2006, 202-204). Perhaps more importantly, after legal wrangles between protesters and New York City over large numbers of arrests, the city administration has served a subpoena on Hirsch, demanding the text of hundreds of messages and the phone numbers of their senders (Moynihan 2008).

There have been several well-documented cases of the use of text messages without an intervening, centralized point of relay. Most notable is the use of such messages in coordinating protests against Philippine President Joseph Estrada, who was ultimately forced from office in early 2001. Mobile phone use was prominent not just during demonstrations, but also, throughout 2000, in propagating anti-Estrada messages such as news related to government corruption, hostile slogans and satirical jokes (Katz and Aarkhus 2002, 2-3). The ability to communicate without a single intervening node increases both the security of the communication network and level of trust between those using it. It would hardly be surprising if the police were among the subscribers to TxtMob groups at the RNC demonstrations, nor, indeed if they had used the network to spread disinformation (c.f. Dwyer 2005). Security benefits flow from changes the structure of communications. While the RNC case evidences the creation of a many-to-many structure, in the Estrada case we see something that may be best described as 'few-to-few-to-few...'. Messages were simply forwarded on to friends and acquaintances and this increases trust in the network because there is a closer fit between this particular information network and pre-existing social networks. Furthermore, such communications likely benefitted from the long-established 'strength of weak ties' (Granovetter 1973). When text messages are passed on through social networks by named individuals, to the extent that the message seems to be true and important to the receiver, it is likely that it will be passed on beyond the densely networked clusters of friends and allies from which it originates, into the wider (mobile phone owning) society.

One final example returns us to anti-war activism in the UK. In the most technologically sophisticated intervention by the StWC to date, we can see an example that mixes different modes of communication to achieve both the coordination of action and the representation of a particular view. In early 2007, the StWC promoted an anti-war single by a band constructed as a spoof of Tony Blair's university rock group, Ugly Rumours. They produced a cover of the anti-war song, 'War (What is it Good For?)' which was made available as a download only release (Moran 2007). The intention of the group was clear, to attempt to embarrass the Prime Minister and gain attention and significant funds for StWC. Success depended on enough people buying the single in the same week, to push it as high into the singles charts, and therefore into the national media's attention, as possible. And for the individual protester, buying the single counted as both a symbol of dissent and an active way to support a key anti-war organization.

The song was released shortly after a change in regulations relating to the official singles charts that allowed songs released as 'download only' to be counted, as well as those distributed on CDs. Beforehand, the costs for physical production and distribution would have made it impossible for a protest group to successfully promote a single. However, the single sold well, achieving a top-ten position in the mid-week charts and thus gaining publicity from a wide range of media. Success was produced partly by organizers spotting a relevant change in the regulatory structure governing the use of particular technologies. As such, it represents a wide understanding of the system, and its application to protest is, from the point of view of regulators, an unintended possibility. The mode of promotion and distribution used to generate the sales offered further evidence of technological understanding and creativity. The band performed on two high profile national demonstrations in London and Glasgow in the week of the single's release. An arrangement had been made so that participants at the demonstrations could purchase the single simply by sending a text message to an automated service that enabled the sender to subsequently download the song from an online distribution outlet. During Ugly Rumours' performances, instructions for buying the single were given repeatedly and shown on a large outdoor screen (field notes, London, February 2007). Both at the demonstration and on ordering the single, protesters were encouraged to send the message on to everyone in their phone's address book – recalling the potential power of integrating a political message with social networks. A humorous video for the song was also produced and made available through YouTube. It seems, therefore, that StWC had picked up some of the techniques of 'viral marketing', getting their message into a wide range of outlets in a form that was likely to be passed on through social networks. Doing so required piecing together a number of different modes of communication in a novel configuration in order to both represent a protest message to a wider

audience and to coordinate participants to help promote the single.

In each of the above examples we can see the application of key aspects of the hacker attitude to activists' interactions with technology. In relation to the technologies utilised each case illustrates some novelty in the communication structures created, especially in adopting the mobile phone in ways that enable communication among larger groups than the device was intended for. Given the inherently collective nature of social movement activism, which stems both from their aims to promote particular ideas among a wider population and from the necessity to organize and coordinate around events, it is logical that innovative uses of ICTs would take this direction. The one example that doesn't increase the number of communicants is DeLappe's intervention into the US military computer game in which he reverses this process, taking a mode of communication intended for group discussion and using it for his personal, political broadcast. For this reason, it is perhaps unsurprising that that DeLappe's messages were reacted to with hostility. This echoes Italian Prime Minister Berlusconi's use, in the 2004 regional elections, of 13 million 'personal' text messages to voters, which faced an indignant popular reaction (Castells et al. 2007, 211). In these cases the messages were uninvited and essentially one-way, since any response would reasonably be presumed to be ineffective. The comparison between the intervention in America's Army and the other innovations described above is instructive, moreover, because it highlights divergent concerns with participants and audience. One purported benefit of Internet communications is in broadening the audience for radical media sources but the website designers and media officers among the interviewees for this research were concerned that it was impossible to know who the online audience was. There is certainly a general suspicion that people coming to the website will already have some sympathy, or at least familiarity, with the group's arguments and that different strategies are therefore required for wider outreach (Gillan, Pickerill & Webster 2008: ch. 3). DeLappe's case was different because he self-consciously sought a new audience whereas the other examples described above are all more concerned with widening the number of participants, rather than the number of spectators. The more common innovations, then, demonstrate a concern with increasing the quality of information flow and engagement among protest participants and the social networks to which they belong.

Conclusions

This chapter began with a reminder of the familiarity of engagement with technologically sophisticated information systems in everyday social movement practice in the UK. This mirrors developments in wider society in a country where internet penetration had reached around 66 per cent

in 2007 (ITU 2007). As in wider society, activists bring different attitudes to their engagement with technology, varying particularly around the willingness to experiment with technological tools in order to create new functions from those already available. Notions of the hacker and user attitudes help us understand the different forms of ICT activity we see evidenced in political activism.

The hacker attitude, in its minimal specification set out above, indicates a commitment to the discovery of latent functionalities enabled by any technology, which allows the application of technologies to new tasks. Whatever the precise behaviours evidenced by a particular hack, it should demonstrate a good level of understanding of an information system that enables the creation of relatively simple new uses that somehow break the rules codified into the devices being used. In all the cases described above the rules being broken concerned the communication structures within which particular devices were designed to operate. Most commonly we saw the insertion of the mobile phone into more horizontal structures of communication, which enabled information sharing or political claims making among groups of activists, thereby stretching the benefits of perpetual contact beyond the one-to-one communications typical of the phone.

The user attitude, in contrast, is evidenced where activists make use of the manifest functionalities purposively designed into technological systems; adopting, without adapting, technologies that may have been primarily intended for uses in other administrative contexts. Since movement groups have always needed to perform many of the same informational and communicative tasks as any other organization it makes sense for them to adopt technologies in this way. The web is cherished as a vast store of information and seen as a new sphere in which one ought to be represented; email allows for asynchronous communication, valuable in both information sharing and decision-making; and the mobile phone allows perpetual contact which has great utility for micro-coordination around events. It is these sorts of activities that have led activists to embed technologies deeply into their everyday action.

The costs of innovation, in terms of expertise required and the time taken to develop new applications and encourage their wider adoption, make the hacker attitude relatively uncommon. At least in anti-war activism, where the urgency of action has tended to outweigh the potential benefits of experimentation, straightforward adoption of ICTs is the norm. Activists' practices are not unreflexive – indeed, there is evidence presented above that suggests the careful application of manifest functionalities that take account of the political nature of decision-making, the potential social benefits and drawbacks of ICT use and the security concerns related to electronic communications. (Such evidence is amplified in Gillan, Pickerill & Webster 2008, ch. 7.) The positive

implications here clearly relate to efficiency. Conversely, it is where social movement groups' activities differ from those organizations in the private and public sectors for which most ICTs are primarily intended – such as where rapid but deliberative communication across horizontally organized networks is desirable – that innovation is particularly valuable. It is particularly in these areas, therefore, that the benefits of applying the hacker attitude may be most keenly felt.

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