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# Stealing the Fire

## *Communication for Development from the Margins of Cyberspace*

Stefania Milan

### Abstract

Over the years, countless social movements have created their own digital media to advance social change. Like the mythological Prometheus, these activists appropriate technology in order to breach the monopoly of states and media and technology conglomerates over people's voices. These activists remind us of two things: that the everyday means of communications are not neutral but embed power inequalities and unfair relationships between producers and users; and that technology should ultimately embody a moral dimension, and mirror the values of justice, equality and transparency. This chapter connects grassroots technology creation to the realm of communication for development. Moving from the ethics of technology that informs grassroots activist practices, I reflect on what we can learn from tech activists to re-contextualize "voice & matter" in relation to the opportunities and the challenges of digital technology. In particular, I focus on the following amongst the activist values: access & sharing, openness & transparency, self-determination, collectivism, the "hands-on" and "do not harm" imperatives.

Keywords: tech activism, emancipatory communication practices, prefigurative realities, deconstruction of technology, hacker ethics

Over the years, countless social movements across the world have created their own analogue or digital media to advance social change. Think of the myriad of community-owned low-power radio (see, among others, Dunbar-Hester 2014a; Halleck 2002; Hollander, Stappers, and Jankowski 2002; Rennie 2006; Rodriguez 2001), but also of the manifold pamphlets, posters and radical publications that have popped up at the four corners of the world (Atton 2002; Downing 2001 & 2011). With the advent of the internet, then, the possibilities for creatively engaging with self-organized communication have multiplied, giving rise to an array of platforms, software, and infrastructure created, owned and operated by nonprofessionals (see, for example, Atton 2004; Gordon & Mihailidis 2015). Similarly to the mythological Prometheus, who stole the fire from the deities of Mount Olympus in order to share it with his fellow humans, these activists appropriate technology in view of breaking the monopoly of states and media and technology conglomerates over people's voices. Rather than

merely appropriate off-the-shelf technology, these variably tech-savvy activists put their skills at the service of social movements and engage in the creation of self-organized platforms as part of their struggle for human development, equity and social change. They take the “voice” imperative one step forward, enabling individuals and social groups to convey their own messages bypassing the filters of commercial gatekeepers and state monitoring and surveillance. They decode the connection between “voice” and “matter” by creating prefigurative realities of alternative communications, translating into practice *here and now* their political values, and disseminating new narratives on technology, society and change.

This instance of self-organized technology that bypasses the dynamics of control of states and corporations represents a *specific form of empowerment through technology* that I term tech activism. Tech activism concerns itself with the creation and shaping of digital technology infrastructure and tools to facilitate communication and networking of social change activists, and free like-minded individuals and groups from the constraints and threats of commercial communications. Examples of tech activism include self-organized internet service providers offering privacy-minded email services and blogging platforms; community wireless networks; customized open-source software and hardware (i.e., whose source code and functioning are accessible to and modifiable by the final user, as opposed to proprietary); noncommercial low-power community stations, and encryption or re-routing services that protect users’ privacy and exchanges. These activists teach us two things: on the one hand, that technology and other everyday means of communication ultimately embody a moral dimension, and on the other, that they should mirror the values of justice and equality progressive activists and development practitioners stand for.

This chapter straddles critical technology studies and social movement studies, in view of re-contextualizing “voice & matter” in relation to the opportunities and the challenges of grassroots digital technology.<sup>1</sup> In what follows, we track the activists in their exercise of *everyday deconstruction of media and technology*: in order words, with their help we critically look inside the “black-box” of old and new communication technology to uncover power inequalities and the unfair relationships between producers and users that commercial technology typically sustains and promotes. Second, we explore the strategies of emancipatory communication enacted by tech activists. Third, we delve into their values and into the norms and ethics of technology that inform their activism, focusing on the moral dimension of technology. Finally, we reflect on what we can learn from tech activism to rethink “voice & matter” in the contemporary *technoscape*.

### The emancipatory practices of tech activists

Focusing on infrastructure might appear of minor importance in times of “free” social media and apps enabling people from all over the world and walks of life to voice their

opinions and share self-generated content at virtually no cost. But ultimately these services are owned and controlled by corporations whose profit-oriented agenda is at odds with the principles of participation, empowerment, and social justice advocated by the progressive civil society sector. As a result, activist groups keep challenging corporations on their own terrain, bringing to life “infrastructures of resistance” to the neoliberal order that permeates our *technoscape* (Halleck 2002: 191).

These groups and individuals, like mythological Prometheus, “steal the fire”. Fire is a metaphor for technology; stealing means reclaiming and re-appropriating, but also repurposing and customizing technology to fit the needs and values of progressive activists, as illustrated by a US-based low-power radio practitioner: “Stealing the fire’: we think it is a metaphor for the democratization of technology, for technology that is the servant of the political and social process of making decisions about our future. Not technology in the hands and at the service of elites” (Milan 2013: 1). By “stealing the fire” these novel Prometheuses seek to breach the monopoly of the private sector and the state over the use and control of communication tools and infrastructure.

Tech activism typically stays under the radar of scholarly investigation and media attention, and certainly it does not represent a mainstream approach to development activism, or to communication for development. One might argue that tech activism denotes some sort of “first world activism”, as it presumes the availability and access to technology – but it is an increasingly global phenomenon. By way of example, not only has Latin America historically been the cradle of community radio (see, e.g., Gumucio-Dagron 2001; Rodriguez 2011); today it is at the forefront of the critical engagement with digital technologies, with a myriad of open source software projects, maker labs and hacker spaces. For instance, the first community-owned cellular network in the world was created in 2013 in the Mexican southern region of Oaxaca. It uses the so-called “wasteband”, a portion of the spectrum not used by other providers, to create a private non-commercial network operated according to the communal lifestyle typical of the area (Magallanes-Blanco & Lozno-Maurer 2015). Although the primary role of tech activists is to operate the crucial tech backbone of communities and movements, they are not merely service providers – they are deeply engrained in grassroots activism, including environmentalism, community activism, and transparency movements. Most importantly, they embody specific narratives of technology and social change – and this is precisely why they can contribute valuable “lessons learnt” to both the study and the practice of communication for development.

Tech activists engage in what I have termed *emancipatory communication practices*. “Practice” evokes the hands-on approach of these individuals and groups in promoting reform from below of the contemporary *technoscape*. “Emancipatory” refers to their knowledge sharing and redistribution ethos, which embodies a message of liberation. By redistributing access to technology and promoting critical engagement with it, these activists encourage public participation and critical thinking, and oppose the consumption and privacy-threatening approach promoted by commercial platforms. Thanks

to their work, non-expert users are given the possibility to control their own communicative processes without having to rely on commercial tools and infrastructure.

Emancipatory communication practices represent a challenge to dominant powers in the technology and media field. Far from being considered only as neutral tools, communication technologies have become a site of struggle in its own right. The power at stake is communicative power, that is to say the ability of deciding who should speak and which messages should be transmitted, but also of controlling at what conditions content is exchanged, as exposed by the whistle-blower Edward Snowden (American Civil Liberties Union 2014). But at stake too is the power of participation, which refers to the possibility of accessing the unrestricted internet, and the power of making informed contributions to democratic decision-making and public life, and of engaging in unfiltered online deliberation. At the micro level, challenging power entails defending the right of disadvantaged communities and individuals to have their voices heard. It includes disrupting the data collection machine by means of encryption and other forms of resistance and subversion. It implies protecting local content and independent producers, and finding always-new ways and platforms for sharing knowledge. At the macro level, it means resisting the aggressive commercialisation and monopolization of the *technoscape* by a handful of powerful corporations, most notably Google, Apple, Facebook and Amazon, also known as GAFA (Doctor 2015), which have extended their tentacles over the content and platform industry as well as the collective imaginary. It includes opposing the multifaceted information ecology of the “surveillance hegemony” (Keiber 2015), and countering services like Project Loom or Internet.org, which targets less developed countries and grants access to selected internet services only (J. Levy 2015). It involves pressuring national regulators to licence not-for-profit media and self-organized ethical telecom infrastructure, or to protect privacy and user data.

Three notions, often evoked in communication for development but relatively underspecified in the literature, may help us to understand emancipatory communication practices. First, of course, the notion of emancipation, indicating the efforts of disempowered groups and individuals to obtain equality and/or freedom in the technology sphere, both for themselves and for other social groups and individuals. Emancipation is often associated with media and technologies that “take sides” and have partisan values embedded deep in their structure. For example, Shah’s notion of “emancipatory journalism”, a radical philosophy of journalism that seeks to “promote and contribute to human development” (Shah 1996: 146), conceives of media practice as a way to engage in social movements in order to support their social change efforts. Second, self-determination, that is to say the free choice of individuals and groups with regards to their communicative futures. Self-determination finds correspondence in notions of negative liberty, and in particular in the idea of “freedom from” the commercial and the surveillance logics. Third, the concept of empowerment, that is to say the process through which individuals and groups take active part in the actions that reshape their communicative processes, in so doing exercising control over their

communication messages and resources. It is in this *active exercise of control over* technologies that people, including non-experts, are empowered. A similar process has been observed by Rodriguez (2001) in her analysis of citizens' media as a space for people to enact their democratic agency. Drawing on radical democracy and feminist theories, she refers to "a collectivity [...] enacting its citizenship by actively intervening and transforming the established technoscape; second, that these media are contesting social codes, legitimized identities, and institutionalized social relations; and third, that these communication practices are empowering the community involved, to the point where these transformation and changes are possible" (Rodriguez 2001: 20). However, notwithstanding its emancipatory and empowerment ethos, tech activism is fundamentally oppositional in nature: emanating from the lifeworld and centred on lifeworld change, it seeks to cultivate alternative public spheres (Carroll and Hackett 2006). By their very nature, tech activists "express an alternative vision to hegemonic politics, priorities, and perspectives", and in doing so often "break somebody's rules, although rarely all of them in every aspect" (Downing 2001: v-ix).

But the revolutionary potential of these practices of creativity and resistance is to be found in their ability to "constitute the politics of the quotidian" (Rodriguez 2001: 21). Repurposing, adapting, shaping, resisting and subverting technology that is deeply engrained in our everyday, they expand and multiply spaces for political action, which is no longer confined to institutional arenas but embedded in social life. So what does this continuous effort to criticize, take apart and create technology consist of?

### The everyday deconstruction

We can identify four main strategies in tech activism, namely the creation of alternative infrastructure; the appropriation of enclosed spaces; hacking and the tinkering of software, hardware and social norms, and the recourse to technical fixes in order to bypass the bottlenecks enacted by states and corporations.

Tech activists engage primarily in the *creation of alternative technology and infrastructure*. In other words, they operate at the level of the "plumbing", or the technology architecture, both hardware and software. They do so on the ground that "resistance to power programmed in the networks also takes place through and by networks" (Castells 2009: 49). They seek to establish control over the conditions under which messages and content can be shared, and online connections and exchanges take place. Examples include noncommercial, privacy-minded Internet Service Providers such as the Italian Autistici/Inventati (autistici.org), which operates the NoBlog platform, and the US-based Riseup (riseup.net), which has recently launched Crabgrass, a web application designed to "meet the needs of bottom up grassroots organizing" and enable activists to "work together on projects in a democratic manner". But tech activists might engage in setting up radio stations, perhaps assembling radio transmitters from a toolkit jointly with the community (Dunbar-Hester 2014a). Research has shown

how demystifying technology through the creation of alternatives is a liberating and empowering experience for both tech activists and lay users (see, for example, Dunbar-Hester 2012; Dunbar-Hester 2014b; Milan 2013).

Tech activists also engage in the *appropriation of enclosed spaces* as an ethics of liberation. In other words, they take advantage of unregulated spaces, for example in the airwaves, as exemplified by the Oaxaca self-organized cellular network. Along similar lines, the Telestreet movement, which emerged in Italy in the early 2000s, set up pirate micro-TV stations in metropolitan areas. The self-produced transmitting hardware consisted of slightly modified receiver electronics that allowed the stations to broadcast within a range of a few hundred meters. Similar experiences popped up in other European countries, including the Netherlands (Pelizza 2006). But tech activists do not hesitate to deliberately engage in pirate actions that take over space previously appropriated by other, typically commercial, players, as pirate radio stations have consistently done over the decades (see, for example, Chapman 1992; D'Arcy 1996).

The action repertoires of tech activism comprises also *hacking and tinkering*, which addresses software and hardware but also social norms (see, for example, Coleman 2013; Hintz 2013; Maxigas 2012; Nissenbaum 2004). These tactics are to be seen as attempts to adapt and repurpose the existent and the available to meet one's own needs and values. On the one hand, activists tear apart, adapt and rebuild tools and software, while on the other they might also circumvent or subvert original intended usages. For instance, they might engage in the so-called penetration tests, deliberately attacking a computer system with the intention of identifying security weaknesses, gaining access to it, or testing its functionality. Hacking and tinkering are not creation of technology as much as they are re-creation, and as such they intersect practices of remediation typical of other instances of alternative media in the digital realm (Lievrouw 2006).

Last but not least, activists embark in exploits intended to *bypass legislation and surveillance through technical fixes* (Milan & Hintz 2013). They envision different working rules and implement them “by design” in their daily practices and in the tools and networks they built for their communities. This approach is in line with the “engineering philosophy to ‘make things work’ ” as it encounters an “insistence on adopting a technocratic approach to solving societal problems and to bypassing (‘hacking’) legislative approaches” (Berry 2008: 102). But it also intersects the ethos of resistance to the hegemonic forces in the technoscape, no matter of nature. Examples of technical fixes adopted by tech activists include encrypting data against traffic analysis and network surveillance such as Tor ([torproject.org](http://torproject.org)), an anonymity software and network of virtual tunnels that improves privacy and security online.

Creation and self-organization are constant presences in tech activism, regardless of what specific technological support activists mobilize around. By engaging in these practices, they try to influence the socio-political at two levels. On the one hand, they resist the hegemonic practices enacted by the complex ecosystem of states and corporations. Resistance takes place primarily at the material/technological and at the cultural level; marginally and often indirectly, also at the level of institutions. On the other

hand, activists seek to create prefigurative realities, that is to say they try to translate their political values into practice into the present, rather than lobbying for systemic change down the line. We can imagine these prefigurative realities as “little islands” in the sea of commercial technology and infrastructure (Downing 2001: 72). The little islands of diversity and counter-hegemonic practice contribute to shape the present and to frame possible futures. Feminist thinker Sheila Rowbotham explained how the vision of a more just society cannot be detached from the process of its making. Politics “must provide staging posts along the way, moments of transformation, however small” (Downing 2001: 72). These staging posts serve the purpose of developing and disseminating new narratives on technology, society and change, and new cultural codes. This well captures the role of these usually small projects for social change and development activism. Not only are these liberated technologies a crucial backbone for much of civil society’s political activities; they represent a critical voice that reminds people of the constraints and the dangers that characterize our “tethered devices” (i.e., that can be modified exclusively by the manufacturer – Zittrain 2008) in the post-Snowden era. Technology, tech activists remind us, encodes specific design and policy choices that are diametrically opposed to the values and practices of social change activists – and their use endangers activist practices across the board. In this sense, the innovation of tech activism is at the same time technical and political, and as such embodies a message to society that goes well beyond the scope of technology as a tool to political action. Next, we look at the norms of technology through the eyes of tech activists.

### Norms and ethics of technology from the ground up

When rethinking “voice & matter” it is useful to examine the norms that inform the emancipatory practices of tech activism, on account of two other lessons activists offer us. They remind us that “the way is the goal”, that is to say that the way in which action unfolds and groups organize to pursue change is a goal in itself, and that process is not second in importance to outcomes (Milan 2013). But they also tell us that technology and communicative action embody a moral dimension, and the tools people so much rely upon should ideally mirror the society they strive for. To extend this argument to one of the central concerns for the contemporary articulation of “voice & matter”, there is a fundamental contradiction in promoting development and social change by means of centralized, top-down, opaque social networking services.

The ethics of tech activism can be approached from two distinct but interrelated perspectives. We can dip into the values regulating the daily operations, the interpersonal and group dynamics of activists, and we can delve into the norms and ethics of technology that inform this activism, focusing on the moral dimension of technology. The two mirror and strengthen each other in a continuous dialectic exchange. They merge in the moment of technology design, which is simultaneously a process and an outcome, where both are deeply permeated by moral values. Table 1 illustrates the



two ethical codes of tech activism: the internal code, regulating interpersonal relations and intra-group dynamics, and the technology code, which polices how technology should look.

**Table 1.** Ethical codes of tech activists

<b>Internal code – regulating interpersonal relations &amp; group dynamics</b>	<b>Technology code – regulating how technology (hardware and software) should look like</b>
Equality: no hierarchies, direct democracy, consensus, 'dictatorship of action'	Equality of information and code, but also in access to and engagement with hardware (e.g., net neutrality)
Autonomy: hands-on, do-it-yourself, self-organization, self-determination	Autonomy & self-determination as inscribing moral values in software and hardware; no state interference
Participation: first-person engagement and individual responsibility, shared ownership, collective improvement	Openness: accessibility, malleability, transparency of standards and architecture; knowledge sharing, collective improvement
Collectivism: communitarianism above and apart individualism	Freedom(s) of access, to dissent, of expression, to share, to 'hack'; "do not harm"

The internal code of groups revolves around the four tenets of equality, participation, autonomy, and collectivism. Equality refers to the preference for flat hierarchies and decision-making mechanisms rooted in direct democracy and consensus. Notwithstanding the commitment to horizontality, however, potential distortions are always around the corner. By admission of the same activists, the small size of groups and the urgency of taking action might occasionally result in the "dictatorship of action", a dynamic by which whoever intends to take action can do so, but is responsible for its development (Milan 2013). This mechanism speaks to the centrality of action in tech activism, and individual action and reputation in particular. It is made possible by the fact that activists tend to share the same political values prior to action, to the point that discussion and negotiation become seemingly redundant in the face of the urgency of the action. Next, participation refers to first-person engagement and the individual responsibility that comes with it, but also to the emphasis on shared ownership of projects and collective improvement of society as a whole. In turn, autonomy concerns the hands-on and do-it-yourself attitude so widespread in the field. But it relates also to the autonomy of the various agents involved in the process: users on the one hand, and activists on the other. Further, it evokes self-organization and self-determination as driving forces behind the engagement of tech activists. Finally, collectivism entails a commitment to communitarianism that is above and apart from much of the individualism typical of internet-related activism.

The technology code mirrors closely the internal code, declined to specifically fit technology in its hardware and software forms. Equality is understood in terms of bits and code, which cannot be subjected to content-based discrimination or discrimination in transit (hence, the notions of e-commons and net neutrality). But it speaks also to

the equality of users in the access to technology, and translates into a commitment to support open source software against proprietary services. Autonomy, in turn, evokes self-determination in the design, adoption and engagement with technology. In practice, it translates into initiatives to inscribe moral values in software (e.g., privacy by design, encryption tools), but also in the belief that institutions, and the state and security agencies above all, should not interfere with grassroots initiatives or police user behavior. Next, openness refers to the accessibility, malleability and transparency of code, standards and architecture, which translates into support for open source software development and adoption. Knowledge sharing and openness are believed to create the conditions for overall collective improvement of people and societies. Finally, the multifaceted notion of “freedom” concerns not only access to information and the practice of dissent, but has to do with the realm of self-expression, sharing and hacking, that is to say the freedom to modify software and hardware in view of adapting it to the users’ needs, preferences, and wages. Freedom can be interpreted in at least three ways: freedom from the monetary exchanges typical of capitalism, freedom from restrictions to, for example, movement, and freedom from the exclusive control by groups or individuals. It is important to note that one’s freedom should not limit the freedom of others, at least on intent – hence the injunction not to harm that derives from the so-called hacker ethics, a set of core principles that allegedly guide the activity of hackers.<sup>2</sup>

### The margins speak up

What can we learn from the emancipatory practices of tech activism to re-contextualize “voice & matter” in relation to the opportunities and challenges of technology, and digital technology in particular? The ethics of liberation and self-organization that inform these practices bear strong linkages with the aims and approaches of communication for development scholars and practitioners. Here I draw lessons learnt from the margins of cyberspace, focusing in particular on the alternative narrative of technology and change that emerges from the fringes. This alternative narrative can be grouped in six clusters: access and sharing, openness and transparency, self-determination, collectivism, the hands-on and do-not-harm imperatives. In what follows, I explore each set of values from the perspective of tech activism, and then hook them up with the practice of communication for development, offering suggestions for engagement with communities and projects alike.

i. *Access & sharing* indicate that access to information, technology and knowledge in general should be free, on account that access, sharing and shared ownership equal collective improvement. If we transition these ideas to the realm of communication for development, access and sharing mean to give people ownership over information that is key to their development, but also ownership over the design of policies and projects that concern their future. It entails sharing knowledge within the field, and

promoting the exchange of best practices as a means to collective improvement, and the flywheel of human and social development.

ii. *Openness & transparency* speak to the malleability of technologies, but also to the freedom to hack, adapt, and modify tools and processes, for example in the policy realm. In the field of communication for development, it means freedom to own one's own development process, but also the possibility of accessing, dissecting and understanding policies, empirical data, and decision-making processes that concern the future of people and communities.

iii. *Self-determination* evokes autonomy of individuals and communities, and respect for their privacy and decisions. It speaks to information ownership, but also consensus and horizontality in decision-making processes. In the development arena, it means respecting the individual and the community, but also defending privacy as well as individual and collective stories and data. Individuals and communities should be granted the right to be listened to, and to be effectively engaged as stakeholders in the design, implementation and evaluation of development projects.

iv. *Collectivism*. Collectivism and communitarianism above and apart from the individual evoke the cooperative approach that contemplates individuals-within-the-group, rather than spokespersons, leaders and chiefs. Communication for development has to hold as a point of reference a collectivist approach that emphasizes communities over mini-groups, communities of interest, or invested individuals. Projects and policies should not counter, disrupt or break the collective dimension of communities, but value, respect, and leverage their internal dynamics.

v. *Hands-on*. The first-hand engagement with technology and the do-it-yourself approach are liberating because they are at the same time playful and empowering. It is practiced by individuals and groups who “believe that essential lessons can be learned about the systems – about the world from taking things apart, seeing how they work, and using this knowledge to create new and more interesting things” (S. Levy 1984: 36). Similarly, communication for development programs should trigger first-person engagement and foster individual responsibility, as ways to instill a sense of ownership over the development process. Experimental practices are prime demystification tools, and encourage people and communities to take responsibility for change without being overly dependent from donors or foreign aid. In other words, the hands-on imperative gives agency back to the individual.

vi. *Do not harm*, which is a central pillar of the so-called hacker ethics, typically translates into the injunction not to deliberately damage machines and data if at all possible. If applied to the context of communication for development, it calls for thinking about the consequences of any given action, project or decision on the system as a whole, but also on the broad context in which one operates. Do not harm calls for taking a holistic approach to development of people, communities and nations – one able to balance costs and benefits, but also counter-balance or offset the risks in the long-term.

## In conclusion

This chapter explored the ethics of liberation and self-determination that support the emancipatory practices of tech activists. It offered six principles – access & sharing, openness & transparency, self-determination, collectivism, hands-on imperative, do not harm – as heuristic devices to rethink “voice and matter” in the post-Snowden era.

Focusing on the technological level of the interventions in the field of communication for development exposes that technologies are not neutral. Rather, they are designed to fit certain values, programs, and priorities as opposed to others; they embed forms of capitalist power and exploitation, and contribute to perpetuate inequalities (see Fuchs 2014 & 2015). More often than not, this power is well hidden, and people find it increasingly difficult to enact “antiprograms” (Bijker & Law 1992) able to resist, jeopardize, appropriate or take advantage of technology – in other words, to enact “line[s] of escape from the determinism” of code and algorithms (Cox 2013).

Critically engaging with the power within technology we so much rely upon is fundamental to any empowerment and liberation process, and even more so after the Snowden revelations. We live in an increasingly commercialized and securitized cyberspace, under attack by draconian data retention legislations and blanket surveillance programs, as well as threats to net neutrality and to the integrity of the internet as we know it. If Snowden’s revelations have made many indignant, most still continue using those very same services that are well known to collaborate with the likes of the National Security Agency – but especially the commercial platforms and devices we use are typically not designed to serve the purposes of development, social change, or a better world. If increasing the engagement with the “plumbing” and the “tech” of technology as well as with its ethics is a moral imperative for every citizen after Snowden, it is even more so for scholars and practitioners of communication for development, tasked with shaping the future of communities and nations and with educating the citizens of tomorrow.

## Notes

1. This chapter is based on extended fieldwork with tech activists and community radio practitioners, which resulted in a number of other publications (Milan 2008, e.g.; Milan 2013; Milan and Hintz 2013; Milan and Padovani 2014). The analysis here refers to platforms, software, and projects as if they were stripped of content. Focusing on the tech level, although reductionist, is functional to exposing the notion, particularly ignored by the latest occurrences in communication for development, that technologies are not neutral.
2. The hacker ethics includes references to sharing, openness, decentralization, free access to computers, and world improvement (see S. Levy 1984). However, the “do not harm” imperative is not equally shared within the activist community. For instance, while some might not hesitate to “deface” a website temporarily changing its visual appearance, others would consider it a fundamental breach of freedom of speech.

