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Serge Proulx

Introduction

User-centred innovation research by scholars such as Eric von Hippel (USA) and Christophe Aguiton and Dominique Cardon (France) has demonstrated how, by freely sharing ideas and artefacts, users who innovate develop dense communications links to bind themselves within larger communities of innovators. Research in that tradition has thus far been concerned chiefly with technological innovation. In examining the mechanics of innovative processes within the social field, this paper turns to how user innovation in the technological sphere have transitioned to innovations that resonate in the sociocultural sphere. In a research project undertaken at LabCMO in Montreal over the last two years, we observed and described the activities of two groups of users innovating in the technological sphere. The first group operates in the free software domain; the second group’s activities involve urban wireless networking. Paired with their joint technological innovation, however, members of these groups (“techno-activists”) have developing joint ideological platforms oriented toward social change. That ideological platform is built around specific activities, values and beliefs: enrolment of their activities in international networks and exchanges, not an exclusively local community of user-innovators; a heterarchic structure of work organisation, not an exclusively hierarchical one; an ambivalent economic relationship with existing capitalistic forms; and a set of social representations of the technological world used as a foundation upon which to construct a politically progressive platform—one driven, that is, with political and economic contradictions. These activists position their technological practices as an opportunity to renew social forms of organisation, of collaboration and of communication. In criticizing the prescriptive and normative composition of technical devices marketed by large-scale software and by telecommunication providers, they foreground deliberation as an essential innovation mechanism within the community of users. The sociological questions we want to address involve the extent to which these new forms of organizing collaboration are permeable vis-à-vis other groups and communities with which these techno-activists interact. In what ways can techno-activist practices influence other groups already engaged in social and political action? Do such practices play a significant role in transforming the public sphere more generally? To address these questions, I begin with a brief presentation of a theoretical model for what I call the “social appropriation” of digital technology. I then present the socio-economic factors, which underpin these digital technologies’ emergence in the context of informational capitalism. Third, I will describe our study of two specific techno-activist groups’ practices at LabCMO (Montreal, Canada) over the last two years. In conclusion, I show that these grassroots digital technology movements help build a bottom-up
alternative to the dominant top-down view expressed in the promotion of a so-called “global information society”.

The “social appropriation” of technology as an ideal-type

The concept of “appropriating” a technology fits well with what German sociology Max Weber has termed an “ideal type”, which is:

‘(…) formed by the one-sided accentuation of one or more points of view and by the synthesis of a great many diffuse, discrete, more or less present and occasionally absent concrete individual phenomena, which are arranged according to those one-sidedly emphasized viewpoints into a unified analytical construct.’

To establish that a genuine appropriation of technology is taking place, one prerequisite - access to the technical device - and five conditions must be satisfied:

a) Technical and cognitive mastery of the artefact;
b) Meaningful integration of the device’s use into the user’s everyday practices. It is here that I introduce the distinction between mere use of a technical device, on one hand, and a user’s enrolment of it in social practice, on the other hand. Using word processing software as a technical device, for instance, is distinct from the user practice of writing in which it participates;
c) Innovation: using the device introduces new creative avenues into the individual’s social practices, rather than merely participating in them;
d) Community mediation: learning processes and support are shared within a mobilised collective or community of practice with which the user identifies;
e) Political representation: social appropriation presupposes that user collectives are adequately represented, a matter which regards both public policy and innovation markets.

Satisfying all of these conditions signifies successful appropriation. Yet, without fulfilling the prerequisite requirement, which is access to the technical device, appropriation will be impossible. Cognizance of this prerequisite alongside the conditions allows us to distinguish appropriation from mere access - a distinction which comparative national statistics on technology penetration often confuse. Access to a device does not necessarily imply mastering its use.

The emergence of informational capitalism as context for techno-activist social innovation

The emergence of informational capitalism

Social experiments in “informational cooperation”, whose analysis is central to our research, echo the position some groups of social actors have taken in the ongoing transformation of highly digitised societies. Analysts describe certain, emergent forms of the mode of production in contemporary societies as belonging to a new “informational

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1 Wikipedia.
capitalism” (Aigrain, 2005), by which they mean that our current societies tend to yield a particular type of industry—those industries which capitalise on the ownership of the code (Lessig, 1999; Weber, 2004; Ghosh, 2005), such as the software, pharmaceutical, or media industries. Activists engaged in cooperative projects in the information and communication fields question the legitimacy of this new dominance (Blondeau and Latrive, 2000; Moody, 2001). As opposed to a proprietary definition of information, these actors maintain that information is a public good. It is this commitment to values such as gift economies, accessibility, open exchange and communication—all first linked to information by software pioneers—that anchors the commitment of so-called “code activists” or “techno-activists.”

Our research aims to situate the innovative practices of these “techno-activist militants” within the broader context of emergent social protest movements that denounce the code-owning industries in the context of informational capitalism (Granjon, 2001; Castells, 2002). We seek to identify the extent to which code activists are part of a process of civic negotiation of our societies’ digitisation (Boltanska and Chiapello, 1999). Some contemporary thinkers have located a novel perspective on democratisation in civic forms of technological appropriation (Loader, 1998; Feenberg, 2004). Our study is an opportunity to grasp the values put into play by these processes of innovation, from their initiation, negotiation, and coagulation to their wider public deployment.

Innovation by use
Most of the time, technological objects issued from information and communication technologies (ICT) are perceived by users as “black boxes”, ordinary users paying scant attention to the objects’ inner workings. Code activists, on the other hand, act as a sort of technical handyman, they do not hesitate to look inside codes or devices to take an active role in how informational objects work, particularly through computer programming and the design and dissemination of new technological devices. Technologies’ network organisation favours cooperation between users and designers, facilitating not only acts of appropriation, diversion, and tinkering (Certeau, 1980; Perriault, 1989), but also those of co-construction (Neff and Stark, 2003; Oudshoorn and Pinch, 2003) rising even to the level of tangible technological innovations linked tightly to innovative usage. Set in motion from below, these innovations break with prescribed uses, emerging to respond to users’ ad hoc needs. Considered decisive by creative process analysts, these innovations are known as “ascendant” because they proceed upward and onward from the exploration of users seeking to improve what they can do with already-existing technologies (Von Hippel 2001, 2005; Cardon, 2005). Born of the ordinary practices of resourceful users, these innovations diffuse through networks of user exchange.

Technical innovation and social change. Analysts of innovation posit a complex linkage with between it and social change. Analysing sociotechnical controversies (Callon, 1981) has demonstrated both the non-linear, socially constructed character of innovation, and some of the mechanisms by which the ideological and political challenges these innovative processes mobilise are staged in public (Latour, 2001). Usage studies (Proulx, 2005) have, for their part, demonstrated the non-linear manner in which technological objects are distributed (Rogers, 1995), underlining users’ ability divert (Certeau, 1980), reinterpretation (Bijker and Law, 1992), and socially appropriate (Proulx, 1994, 2002) the technology. New principles for collective action emerge from these hybridisations of
social and technical spaces. Only those uses of technology that lead to tangible change in social practice can be characterised, according to Tuomi (2002), as innovation.

A research project studying techno-activist practice as a source of innovation

Main objectives of the project
Anchored in a participative approach associating our team directly with the groups connected to this research, our project seeks to provide detailed description and analysis of groups of persons experimenting with what we have called “informational cooperation” within Canada. The research focuses on the practices and values of “code activists” creating non-proprietary devices which, as alternatives to the code industries, produce social innovation. The project’s main theme is to evaluate the transferability of the values associated with these practices of technical innovation into other spheres of activity (Himanen, 2001; Lessig, 2004; Brand, 2005). To what extent can these technologically innovative practices provoke socially innovative practices in the political sphere of citizen and democratic action?

Our analysis centres on two groups located in Montreal (Canada). They operate at the intersection of the Quebec community movements and free software movement. Their activities are highly technological but, at the same time, oriented toward social change. Members of the two groups agreed to join our team as part of a participative approach involving them as full participants in the research process. The groups are: Île sans fil (ISF). ISF, a Montreal volunteer organisation, was founded in 2003 by three university students, and now forms a municipal network of over 100 Internet access points provided free of charge in public spaces like bars, restaurants, and cafés. ISF is a non-profit organisation whose goals are to promote free, public access to WiFi-based Internet access, to create and maintain a network of WiFi access points in public locations, and to use WiFi as a tool to promote art and cultural content and social applications. Thirty active volunteers contribute to hardware and software development, install equipment in public places, and manage marketing, communications, and public relations. In the past two years the working model of ISF has been lauded, and its hotspot management software held up as an innovation worthy of reproduction (Powell, 2006). The group considers wireless technology to be a means of creating social networks. For the past 18 months, ISF has focused its efforts on two infrastructure projects. The first of these is the deployment of hotspots in public spaces, such as parks and cafés. The second is the creation of open access, roof-to-roof high-speed Internet infrastructure. The group was awarded the Montreal Social Innovation prize in 2005 and currently has close to 10,000 users.

Koumbit is a Montreal-based volunteer organisation founded in 2002 whose mission is to promote the appropriation of free and open software by social groups in Quebec, in Canada, and abroad. This group works on the development of a collective software platform and provides support for users of free and open software. The name “Koumbit” is a derivation of the Haitian Creole word Konbit, which can be translated as an association of people working towards the realisation of a common goal. On their Web site, the group describes its founding principles as follows:
‘Collectively managed: we believe in a greater autonomy for people and collectives. We believe that it is essential for groups and individuals to manage by themselves their direction, life and authority.

Educational space: we believe that our organisation must not be a simple service company but must also integrate continuing education of workers and members to new technologies, but also along the principles of participative organisation like ParEcon and other horizontal organisational techniques.

Transparency: we believe that organisations should be transparent towards their members but also towards society at large. No organisation evolves in a void and all our actions have consequences. Therefore, it is essential that the public can follow on the actions and decisions of the different organisations that make society. We believe that the flow of information coming out of organisations must not be blocked, but be broadcasted so that citizens can take enlightened decisions on the issues that affect them.

Copyleft (free software): we believe in developing free and open source software. Free software is a matter of freedom (as in speech): everyone should be free to use software for any socially useful purposes. Software is not a tangible material object, like a chair, sandwich or oil, so it can be copied and changed easily. Those possibilities render software useful as such; we believe that software users must be able to appropriate those possibilities.

Self-sufficiency: we believe that our organisation must be self-sufficient and not depend exclusively on one big customer or state to finance itself. We are always looking for ways to diversify our sources of income and believe in partnership to develop durable and functional links with other organisations. Similarly, we offer technological solutions that empower people with their own tools within their organisations.

Solidarity: we believe that our organisation must support citizen initiative and the left behind of our society. We also believe that an organisation must build itself in support and respect of each other, their integrity and their dignity. We also believe that some sacrifices must be made so that the organisation doesn't harm mankind and nature as a whole. “Above all, do no harm”.

Equity and equality: we believe that everyone must have the same chances not only at the start, but also during the race. We are trying to eliminate inequities between individuals and compensate those which are impossible to eliminate.

Participatory economics: we believe in balanced job complexes, variable modes of decision, in participation of workers in the definition of their workplace, in participation of parties affected by the services of the organisation in its orientation. In short, we are strongly inspired by the Participatory Economics model enounced [sic] by Michael Albert. (see Goldenberg, 2006)’
Some studies on governance and cooperation models in activist groups exist (Granjon, 2001; Auray, 2005; Conein and Delsalle, 2005; Aiguiton and Cardon, 2006). The study of informational cooperatives, however, must take into account how these localised practices are articulated with the militant ambitions expressed in international networks of activists and global social forums. Since the local groups are simultaneously bound to international networks, we are given to analyse their local activities in light of broader debates concerning the so-called information society which have unfolded in the global arena (Fontan, 1998). Our ethnographic descriptions, produced in collaboration with the actors in a participatory approach, have the following four objectives:

1) to explain the context in which these groups situate their activities and describe how they seek to innovate socially and technologically;
2) to analyse how the groups define the modalities of democratisation through informational cooperation, and the transferability of their innovations into other spheres of activity;
3) to identify the controversies that emerge in thus-constituted local public spaces and their interaction with the broader questions that inform contemporary debate; and
4) to trace the prospects for generalizing these practices and innovations to contribute to the common good.

**Methodology: Participative ethnography**

Putting a participative approach in place (Dallaire, 2002; Barnsley and Elis, 1992), our ethnographic descriptions were compiled by two observers. Each observer first clearly identified herself to the group as an observer and a university student. After some time, and on a voluntary basis, each observer became a full member of the organisation. This obviously gives rise to several questions about the relationship between the observer and the observed. We are aware the knowledge that we generate about each group teaches the group about itself and thus stimulates self-analysis within groups regarding clarification of their missions and organisational models. Our observations brought key points to the fore about group identity, sources of controversy, and mission. Each observer simultaneously played both the role of conveying information between the research team and the observed group, and of actor provoking the group’s self-reflection and self-analysis.

This participative ethnography tends towards a progressive appropriation by the observed group of the research goal’s (re)definition in line with its specific interests. We reject the dominant sociological position that requires a “suspended” position to study the group being observed. The precautionary principle characteristic of our approach lies in seeking not to impose the researcher’s vocabulary on actors in the field. We contemplate a reciprocal enrichment of worldviews and a reciprocal contribution to knowledge between the research team and observed group. Our methodological approach’s purpose is to understand the meaning that the actors themselves ascribe to their identity, their project, and their activities in order to support a reflexive approach within each of the target groups. This approach thus presupposes an epistemological (re)articulation between the production of scientific knowledge and its potential use by users in the field. How can our results be incorporated back into the activities and reflexivity of the target group? How can socio-political commitment be articulated in conjunction with scientific rigour?
Hints and results: Towards a politicisation of technology

Code activists offer users the possibility of approaching technological culture in a different way. They suggest a new way to represent technology. They reconceptualise technology, not simply as a set of “tools” to be used to further a project of personal or social emancipation, but rather as a “culture” or set of devices and apparatuses that are not neutral tools but, on the contrary, are value-laden and organised into technical configurations that encode power relations, promoting one type of activity to the detriment of other possible types. Technological devices are not neutral. The innovation process operated by these activists is part of a transformation of the relationship between users and the technological world (Bencheikh, 1986; Jouët, 1987). Yet, once technology is conceived of as a culture (Simondon, 1958), representing the technological world as this type of transformation becomes profoundly political, and therefore disposed to provoke significant change within the broader register of social values (Lessig, 2001).

Can these new representations of technological culture help carve out new spaces of citizenship inside the public sphere (Feenberg, 2004)? Informational cooperation projects import a taste for change into a technological world whose incumbent values the large, proprietary code industries which police its borders would prefer we accept passively. More radically, Cardon and Granjon (2003) note that a politicised segment of the techno-activist population presents itself as a militant counter-culture in which collective software production, technical process and anti-institutional digital insurrection coalesce. Code activists in this sense produce new spaces for collective action and, through their actions, put forward a model for extended participation in which developers and users can participate jointly in the collective production of public technological and informational goods. We hypothesise that this construction of new public space around technologies could lead to citizen empowerment. As our earlier research regarding the free culture controversy revealed, activist practice in the technological sphere is a source of social innovation, particularly from the standpoint of collaborative practices established in how work is organised (Proulx and Couture, 2006).

Innovations in informational cooperation

In experimenting with new forms of collaboration around the organisation of their production work, code militants act politically. Analysis of these collective practices suggests that such models of action and involvement are neither unified nor stabilised. As in some scientific communities, multiple controversies over how technology uses are articulated into work organisation appear to stimulate group activity among code activists. For some of them, the opening up of technological apparatuses is a technological victory; for others it is a measure of democracy. As the search for consensus within activist groups reveals, informational cooperation’s pragmatic objectives invites a novel deliberative process around themes such as the decentralisation of technological action, procedural governance, and collective management of training (Proulx et al., 2008; Proulx et al., 2007).

Conclusion: what sort of digital world are we constructing?

Grassroots digital technology movements have a role to play in the construction of a bottom-up alternative to the top-down dominant view expressed through the promotion of
a so-called “global information society”. Homilies repeated for the past thirty years on the apparently inevitable rise of an “information society” have made this rhetoric commonplace, entrenching the quasi-certainty of this inevitably in the popular imagination. A similar message has issued forth from national governments, international organisations, and the large electronic entertainment, software and telecommunications industries. Critics have demonstrated that this rhetoric is bound to a pervasive groupthink-style approach steeped in neo-liberalism and appeals to globalisation (Mattelart, 2003). That representation of a “global information society” has become the dominant top-down model for describing the future of Western societies.

The activities of the techno-activists described here contribute to a bottom-up model that anticipates the rise of a network of “shared knowledge groups” (Ambrosi et al., 2005). This alternative representation of the future information society contrasts with the unitary vision for an information society conceived in the boardrooms and cube farms of global multinationals. The bottom-up alternative was in evidence in Tunis in December, 2005, during the last World Summit on the Information Society (WSIS); it is a vision that expresses the position adopted by “organised civil society” as part of what economist Eli Noam has called a “third wave” of Internet leaders (Noam, 2005), more politicised than those of the first wave that emerged from the military, university and hacker milieus, and than those of the second, who were wedded to the Internet’s encasement by market logics. The alternative vision of an information society associated with “shared knowledge societies” is rooted in the social practices of exchange and knowledge-sharing; these emerge from societies asserting their cultural diversity against a standard of cosmopolitanism (Beck, 2006).

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References


