Freedom Stolen:

FOSS discursive practices on intellectual property

Research Paper

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 $ANTH 498C-Cyber space\ Ethnography$

Concordia University

Loading Ubuntu...

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22:15:51 kernel: [17179588.740000] ts: Compag touchscreen protocol output
22:15:51 kernel: [17179588.784000] NET: Registered protocol family 23
22:15:51 kernel: [17179588.816000] found SMC SuperIO Chip (devid=0x5a rev=00 base=0x002e): LPC47N227
22:15:51 kernel: [17179588.816000] smsc_superio_flat(): fir: 0x230, sir: 0x2f8, dma: 03, irq: 3, mode: 0x0e
22:15:51 kernel: [17179588.816000] smsc_ircc_present: can't get sir_base of 0x2f8
22:15:51 kernel: [17179588.940000] parport: PnPBIOS parport detected.
22:15:51 kernel: [17179588.940000] parport0: PCstyle at 0x378, irg 7 [PCSPP,TRISTATE,EPP]
22:15:51 kernel: [17179589.032000] Linux agggart interface v0.101 (c) Dave Jones
22:15:51 kernel: [17179589.048000] agpgart: Detected an Intel 855 Chipset.
22:15:51 kernel: [17179588.188000] pci_hotplug: PCI Hot Plug PCI Core version: 0.5
22:15:51 kernel: [17179588.192000] shpchp: Standard Hot Plug PCI Controller Driver version: 0.4
22:15:51 kernel: [17179588.364000] input: PS/2 Mouse as /class/input/input1
22:15:51 kernel: [17179588.392000] input: AlpsPS/2 ALPS GlidePoint as /class/input/input2
22:15:51 kernel: [17179588.572000] input: PC Speaker as /class/input/input3
22:15:51 kernel: [17179588.648000] wbsd: Winbond W83L51xD SD/MMC card interface driver, 1.5
22:15:51 kernel: [17179588.648000] wbsd: Copyright(c) Pierre Ossman
22:15:51 kernel: [17179588.648000] wbsd: probe of 00:0a failed with error 16
22:15:51 kernel: [17179588.704000] hw_random: RNG not detected
22:15:51 kernel: [17179588.740000] ts: Compaq touchscreen protocol output
22:15:51 kernel: [17179588.784000] NET: Registered protocol family 23
22:15:51 kernel: [17179588.816000] found SMC SuperIO Chip (devid=0x5a rev=00 base=0x002e): LPC47N227
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22:15:51 kernel: [17179588.940000] parport0: PCstyle at 0x378, irg 7 [PCSPP,TRISTATE,EPP]
22:15:51 kernel: [17179589.032000] Linux agpgart interface v0.101 (c) Dave Jones
22:15:51 kernel: [17179589.048000] agpgart: Detected an Intel 855 Chipset.
22:15:51 kernel: [17179589.048000] agpgart: Detected 16252K stolen memory.
22:15:51 kernel: [17179589.056000] agpgart: AGP aperture is 128M @ 0xb0000000
22:15:51 kernel: [17179589.492000] 8139too Fast Ethernet driver 0.9.27
22:15:51 kernel: [17179589.492000] ACPI: PCI Interrupt Link [LNKF] enabled at IRQ 10
22:15:51 kernel: [17179589.492000] ACPI: PCI Interrupt 0000:01:01.0[A] > Link [LNKF] > GSI 10 (level, low) > IRQ 10
22:15:51 kernel: [17179589.492000] eth0: RealTek RTL8139 at 0xdfb24000, 00:02:3f:1a:5a:a3, IRQ 10
22:15:51 kernel: [17179589.516000] 8139cp: 10/100 PCI Ethernet driver v1.2 (Mar 22, 2004)
22:15:51 kernel: [17179589.556000] ACPI: PCI Interrupt 0000:00:1f.5[B] > Link [LNKB] > GSI 10 (level, low) > IRQ 10
22:15:51 kernel: [17179589.908000] ieee80211: 802.11 data/management/control stack, git1.1.13
22:15:51 kernel: [17179589.908000] ieee80211: Copyright (C) 20042005 Intel Corporation < jketreno@linux.intel.com>
22:15:51 kernel: [17179589.948000] usbcore: registered new driver hiddev
22:15:51 kernel: [17179589.964000] input: Logitech Optical USB Mouse as /class/input/input4
22:15:51 kernel: [17179589.964000] input: USB HID v1.10 Mouse [Logitech Optical USB Mouse] on usb0000:00:1d.22
22:15:51 kernel: [17179589.964000] usbcore: registered new driver usbhid
22:15:51 kernel: [17179589.964000] drivers/usb/input/hidcore.c: v2.6:USB HID core driver
22:15:51 kernel: [17179589.996000]
22:15:51 kernel: [17179590.004000] Acknowledgement
22:15:51 kernel: [17179590.004000] Thanks to Khémarie Tith for the help with my English
22:15:51 kernel: [17179590.004000] to Llovd Andreas for the design of this page
22:15:51 kernel: [17179590.380000] and especially to all those who accept to be part of this project.
22:15:51 kernel: [17179590.380000]
22:15:51 kernel: [17179590.380000] ACPI: PCI Interrupt 0000:01:04.0[A] > Link [LNKA] > GSI 10 (level, low) > IRQ 10
22:15:51 kernel: [17179590.380000] Yenta: CardBus bridge found at 0000:01:04.0 [14c0:0012]
22:15:51 kernel: [17179590.380000] Yenta: Using CSCINT to route CSC interrupts to PCI
22:15:51 kernel: [17179590.380000] Yenta: Routing CardBus interrupts to PCI
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Introduction

"The narrative of programmer is not that of the worker who is gradually given control; it is that of the craftsperson from whom control and autonomy were taken away" (Weber 2004, 25)

The history of computing has been a large struggle over the mean of production and distribution of data. The virtuality of data makes it easy to use, copy, share, modify and distributed. Over the course of time, there were those who sought to restrict the access to data and sell it, and those who wanted to shared it freely. Internet exacerbates the fluidity of data by enhancing connectivity through network that made data sharing incredibly quick, easy and accessible. In such a digital world, boundaries for data are nonexistent. They needed to be conceived, made and enforced. And thus, copyright and intellectual property law appeared as the tool of predilection for those who wanted to control the flow of data. Those laws were applied to new technology, transforming the way data is conceived, created, used, shared and distributed.

The way data is managed is due to the application of the notion of property over something intangible, hence the notion of intellectual property. The notion of property in itself refers to the right to exclude someone from using the data. However there is a movement for which this notion is configured around the right to distribute: the open source movement (Weber 2004, 1).

Use. Modify. Share. Wherever you want, whenever you want. Free of cost. This is the free and open source software's motto. Lately, those softwares have come to the public attention mainly through the success of the web browser Firefox. But the root of this movement goes back to the beginning of computing. There was a time when there were no distinction between hardware and

software. This distinction came into existence through a discursive practice that separated the software from the hardware and turned it into a commodity, applying to it the notion of intellectual property and turning it into merchandise.

This paper relates how the schism of paradigms occurs between hardware and software, between programmers and users and how this schism shaped our own understanding of property over data. Furthermore, this paper gives voice to a community which through discursive practice contests the proprietary software world and shows how their discourses translate into everyday's practice and action.

To achieve this task, this paper is divided into two main sections. The first one traces back the early history of the open source process, how discursive practices engendered a major schism in the computing world, and finally how this schism led to the enforcement of intellectual property over software.

The second part expounds an ethnographic work that was done with an open source community, based on the Ubuntu project. It covers the methodological approach used and the ethical concern it raised. This part seeks to present how today's open source community's members dispute the corporate notion of intellectual property through their discursive practice.

First Part: The making of closed source and proprietary software

The history of computer is one of control being taken away from the user. The emergence of the free software movement in the '90 is a reaction to this attempt to deprive users from control. It is

thus mandatory to understand the emergence of proprietary software and intellectual property in the discursive field of computing if one is to understand what free software is all about.

As Michel Foucault (Foucault 1969) suggested, discursive formations are the lieu of struggle between ideas and statements for the control of a discourse. He proposes an archeology of knowledge to describe discourse as object and as practice. He is looking for a breaking point where new statements take control of a certain discursive practice. In this paper, we will see how the notion of intellectual property breaks into the discursive formation of computing, changing the way we conceive our relation with data and knowledge.

The project that Foucault proposes is to analyze how a discourse is formed and how it is institutionalized. What is the context that permits the appearance of a statement such as intellectual property into the world of computer? If this statement seems to go without saying today, it is only because there was a political effort to invest the computing discursive formation and institutionalize it into everyday life practice.

The Early History of Open Source and computing

To understand how discursive practice allowed corporation to take control over the flow of data through the history of computing, one has to understand how data has been made distinct from the hardware supporting it. In his book The Success of Open Source, Steve Weber summarizes the beginning of computing history as follows:

"In the beginning there was no meaningful distinction between what we call today hardware and software, or between user and programmer. There was only the computer and the people who worked with it." (2004, 21)

This very beginning can be traced back to the first commercial electronic computer sold by IBM in 1952. Those machines cost \$15,000 a month and came without any form of software or instruction. The user had to program every instruction the machine had to perform, all this without compilers (a software that translates high-level programming language, understandable by programmer, into instructions that the machine can understand and execute.) This task was titanic. Weber gives the example of a software used by the department of defense in 1952 that rendered dynamic radar images that contained 80,000 lines of codes (idem 2004).

The need to write compiler from scratch arose, and the engineers working with computers understood that they needed to get together to face this challenge. This is the earliest form of open source collaboration, right at the beginning of history of computing. Business models call this precompetitive collaboration. Everyone needed a set of tools to compile but no one could afford to develop it alone. Basically, many enterprises mutualize the development cost of such tools. This kind of cooperation is the base of today's open source economic models (Moreira de Sa Coutinho 2006).

Microsoft claimed ownership

Since open source was the very first form of software development, how did it pass from this economic model to the well-known proprietary software model? It was neither a natural nor a necessary evolution of a maturing business. Hence, it is the making of individuals who worked hard to develop a discursive practice that separates the software from the hardware, the users from the developer. Property emerges as a notion applying to the lines of codes that the computer

programmers used to share, thus turning the sharers into thieves.

This episode in software history happened in the beginning of the proliferation of the first personal computers (PCs), the IBM Altair 8800. At first designed for hobbyists, the Altair is now recognized as the machine that made popular personal computing. This machine brought together hobbyists into computing clubs where enthusiasts where sharing and experimenting the diverse possibilities. Their relation to code was not different from that of the hardware.

"For the personal computer (PC) experimenters, there was no distinction between programmer and user, and certainly no meaningful distinction between hardware and software. As in early days of computing, the code was the machine in a real sense. And code was something you naturally collaborated on and shared. This was natural because everyone was just trying to get their boxes to do new and interesting things, reasonably quickly, and without reinventing the wheel." (Weber 2004, 36)

The main software used on the Altair 8800 was BASIC that Bill Gates and Paul Allen had written for the hobbyists market. In fact, nothing was really possible on the Altair 8800 without BASIC. So members of hobbyist clubs like the Homebrew Computer Club shared the BASIC software in the same way they shared their common knowledge of the machine. In fact, the rule was that you could take the BASIC tape only if you returned to the next meeting with two copies to give away (idem).

The amalgam between software and hardware came to an abrupt end in peoples perception when Bill Gates, co-founder of Micro-soft enterprise wrote his now famous "letter to hobbyist" published in the Homebrew Computer Club Newsletter. In this letter, Bill Gates accused the hobbyist of thievery:

"As the majority of hobbyists must be aware, most of you steal your software. Hardware must be paid for, but software is something to share. Who cares if the people who worked on it get paid? [...] One thing you do prevent good software from being written. Who can afford to do professional work for nothing? What hobbyist can put 3-man years into programming, finding all bugs, documenting his product and distribute for free? The fact is, no one besides us has invested a lot of money in hobby software. [...] [T]here is very little incentive to make this software available to hobbyists. Most directly, the thing you do is theft." (Gates 1976, 2)

This statement constitutes a radical shift in the discursive field of computing. Even if there was some cases of claiming ownership over software in the past, this letter brought the notion of software as intellectual property to a large public of hobbyists and enthusiasts who had more interest in experimenting with the system than being efficient in their use of it (Weber 2004, 36). Intellectual property over software turns cooperation between neighbors into "piracy". Yet, the notion of property dictates whether it is right to take an object away from someone else. It doesn't naturally include making a copy of something. Nothing is really taken away (Stallman 1994). The notion of "stealing software" is thus made up, and it was brought to the world's attention through Gates' letter to hobbyists.

The reason for promoting the notion of property comes from modern economic models: as market prices are based on rarity and demands. When putting data in the equation, there is no rarity. Data

can be copied and shared at a negligible cost. Rarity needs to be created in order to make money out of data. And the only way software owners found to cause this artificial rarity was to make illegal the copying, modification and distribution of "owned" data. This is what Gates achieved in his letter. He wanted to build a market out of softwares. His closing statement clearly illustrated his intention: "Nothing would please me more than being able to hire ten programmers and deluge the hobby market with good software." (Gates 1976, 2) He planted the seeds of a discursive practice that will be enforced and on which today's main perception of software is built: merchandize.

Emergence of Free Software

Richard Stallman is one of the most iconic figures of the free software movement. After struggling with nondisclosure agreement and doing work in double to ensure progress on multiple closed platforms, he decides to launch his own project, based only on free (as in freedom) softwares. Here is the manifest he wrote in 1983 on a newsgroup: "Why I Must Write GNU (Gnu's Not Unix). I consider that the golden rule requires that if I like a program I must share it with other people who like it. I cannot, in good conscience, sign a nondisclosure agreement or a software agreement. So that I can continue to use computers without violating my principles, I have decided to put together a sufficient body of free software so that I will be able to get along without any software that is not free." (Stallman 1983 cited in Chopra and Dexter 2007, 14)

To ensure that his work will remain free and that no corporation appropriates it, he wrote the General Public License (GPL). Among other things, the license states that you can run the program for any purpose, modify it to suit your needs, and have the freedom to redistribute copies, either gratis or for a cost, and finally that every derivative of the work must be published under the same

license. This is the origin of free softwares as they are known today (Weber 2004, 48).

It is important to note that the last clause is the source of the distinction between the free movement and the open source movement. Open source advocates, such as the notorious programmer Eric S. Raymond, do not care about closed-source software using his work: "[T]he excellence of our software is a far more persuasive argument for openness and freedom" (cited in Szczepanska, Bergquist, and Ljungberg 2005, 437). Hence, the Open Source movement focuses on the technological issue while Free Software embraces a political and philosophical approach to the problem. But both challenge "many central concepts of intellectual property. [...][T]hey have prompted much debate about the foundations, both ethical and economic, of apparently well-established notions such as property and ownership. (Chopra and Dexter 2007, xv)

Second part: Ethnography

In the next section of this paper, we will see how members of the free and open source community engage themselves in discursive practice that struggles to bring back the notion of open source to the main discourse and to general attention. Since the discursive field is dominated by the notion of intellectual property, we will see how their discursive practice challenges this notion.

Locus

In order to expose this discourse and the practice linked to it, data have been collected over a period of two months and a half in a support team associated with the open source project Ubuntu. Ubuntu's support teams are primarily defined by the geographic locations of their members, but nothing impedes the implication of members from other places to get involved. For example, many

French Canadians are involved in the French local community (LoCo) team because it is the biggest French-speaking team. The scale of the geographic locations associated with a team varies from a state size to a country size.

The LoCo team I investigated uses different platforms and means of communication to work together and to discuss. The first one, and the one that was most used for this paper is the discussion list established on Ubuntu's server and each LoCo has his own discussion list. Those lists, first built to offer technical support also offered a place where members can discuss different sets of themes that the moderator will have to judge appropriate. As we will see, it is the place where lots of the political discussions involving the Free / Open Source movement is developed and shared. The second platform in importance is the Launchpad website. This website is the official developer's platform for many open source projects and it is maintained by Canonical Ltd. The website offers an interface that allows teams to have their own place to discuss, work on projects, share code, translate software and answer technical questions. The third site is the team's website. That one is maintained by the community and exists only in accordance to the volunteers' will to build it. The one from the team that was used contains blogs, rss aggregates and a forum. The discussions on the forum are often of the same nature than on the discussion list, but are less active. For the month of March, the forum contained only 22 messages in comparison to the 225 messages from the discussion list. The last place is the Internet Relay Chat (IRC) room dedicated to the team on the #freenode server. This is the place where one can get a direct conversation with some of the members of the LoCo. There are always people logged in, but discussions are scarce and are almost uniquely for support. Moreover, the members that offer support on IRC are doing so during their time at work during the day. So often they would only answer to messages when time

permits it and delay can be longer than one would expect from a chat room. However, it is still quicker than discussion list.

Methodology

The main method used to collect data is observant participation over a period of two months and a half. Through immersion into the community, this method offered an inner look and provided insight of the workings of the community that would not have been possible without my involvement. Thus, I participated in conversations on the discussion list, offered technical support whenever I could on the list and on Launchpad (this did not occured often considering that my skill are quite limited), offered help, built a profile page on Lauchpad and used the platform to perform French translation, posted comments on the forums, and went on the IRC chat room. I did also engage in activities promoted on the discussion list, such as offline workshops on specific open source programs, and I joined a non-profit organization promoting free and open source software.

This participation gave me an insight that would not have been possible otherwise. I have learned about entering procedures, on how to deal with the technical possibilities of the embedment of the different platforms, earned credibility through participation and involvement in discussions, all this as far as possible in the short spawn of time.

The information collected through observant participation was completed with interviews with a few informants. Two of those discussions were made through emails and the third one was a lengthy discussion over the phone. Those discussions were made according to the methodology suggested in Comprendre by Pierre Bourdieu (1993, 1389-1424). According to him, the interview

is a social relationship that exerts effects on the data obtained, and through his asymmetric nature exercises symbolic violence upon the informants. To avoid those distortions, Boride suggests the use of the active listening techniques. This involve to develop an empathic and comprehensive viewpoint that authorizes the informant to express and explain himself while the researcher assists him subtly toward a provoked self-analysis. He also insists on the necessity to take the responsibility of the signification and the efficacy of the informant's discourse when the time comes to translate the interview into a text. Those were the guidelines I used when conducting interviews.

Ethical concern

I have followed ethical guidelines for this project, which involved two mains aspects: consent and anonymity. All the discussions on the forum platform are logged and archived, and those logs are accessible to general public. Nonetheless, I did ask authorization to the LoCo administrators to use the discussion list, the forum and the IRC chat room as a source of information. I also made an open statement on the discussion list, where I was most active, to inform the members of my intention and my role as a researcher. I also asked direct consent to informants that are cited in this paper and those that were interviewed. I offered and strongly suggested anonymity to the informants, but I let them the liberty to chose to have it or not.

Since most of the data collected was from the discussion list, the negotiation of absence and presence was also an important issue. It shared many similarities with the ethical problem raise by Rutter and Smith in their text Ethnographic Presence in a Nebulous Setting (2005). The core of the problem is the notion of presence on this kind of setting. Even if the researcher is not always

actively participating in discussions, he is still present, but appear to be absent to the whole community, thus achieving the "lurker" status. Rutter and Smith sum well the visibility problem: "how to be seen as a person or a researcher when you cannot be seen (...)?" (2005, 14). This is a problem that was faced in this project, mostly at the beginning when participation was more scarce. A broader participation brought a better presence, which lessen greatly this concern.

Limitation

This ethnography is based on a rather thin sample of the free / open source community. The informants cited in this paper were choosen because they did have public and open discourses and practices on free and open source softwares. Accordingly, this is a point of view that cannot be associated with the whole free and open source mouvement. Nonetheless, this discursive practice reflects the philosophy promoted by the Free Software Foundation and most of Richard Stallman's statements. In sum, the discursive practice of the individual cited in this work do have larger incidence than on their own group, but cannot be generalized as the opinion of the whole community, even if it is an important part of it.

Ubuntu and community

"It is fabulous to work for a community and for his evolution... together toward the democratization of free software!", wrote a member on the discussion list.

Ubuntu is a community developed Linux-based operating system based on the free software philosophy. All the software packaged with the operating system comes with the right to use, copy, modify and redistribute those softwares, all this free of cost. The community revolving around the project is vast, and its role is varied. From developing the platform to support service to users

getting together, the Ubuntu community offers a convivial way to share informations and services.

There are two different aspects that define the group of users studied in this paper as a community. First, as Andreas Lloyd pointed out, "the Ubuntu hackers' shared use and development of the Ubuntu system constitutes a community of practice around their collaborative work and commitment to the project." (Andreas 2007, 10). The same concept easily applied to the LoCo community I participated in. Their practice, i.e. the support the community members share among themselves, constructed their relationships into a community defined by their practice. The second aspect is the discursive advantage that provides the community:

"People feel a bond with others not because they share the same interest, but because they need that bond in order to make sense of what they are doing. Discourses [...] enable members of a community to affirm themselves as subjects of their action and parts of a collective action." (Szczepanska, Bergquist, and Ljungberg 2005, 433)

The bonds created through their shared use of the support platform provide the opportunity to make sense of their discursive practice. Many statements on free software vs. proprietary software are shared on the discussion list which gives them the possibility to justify their use of free software.

In order to have a clear understanding of the impact of the community's discursive practice in the everyday life, it is important to look into how they build intellectual property into a problematic concept.

A problem exposed

The first step in the construction of contestation discourse is having a problem with the protagonist. In this case, the users experiment various limitations due to closed source software that spark their reflections over the necessary use of free and open source software.

The first limitation that a computer will face is often the loyalty fee. Software owners often request high financial cost for license usage. It is to note that when "purchasing" a software, the buyer does not become the owner of the software, he only buy the "right" to use it. Thus, this cost for a "right" to use often irritated the users or was too high. The particular story of one of the informant who is visually impaired is quite evoking on this matter. He needed software adaptation to keep using his computer, but the sum was quite prohibitive:

"My first contact with free software began with the desire to return to programming, as I did when I could see. [...] Proprietary software could not let me come back to programming because of the cost. For example, here is the cost for an adapted computer:

- 1: Computer 1,000\$ or more...
- 2: Window's XP pro 300\$ (Pro is a necessicity for assistance software)
- 3: Zoomtext 920\$ (mandatory, can't use a computer without it)
- 4: Victor 440\$ (reading software), etc.

Under Linux, the equivalent (Ubuntu, Orca and MP3) are... free! My laptop cost 800\$ including RAM and Webcam upgrade. Thus, a blind person who is not working nor studying cannot afford using a computer."

The second annoyance caused by proprietary softwares is the closed source nature of the softwares

and how it is forced by various enterprises into people's lives. One of the most recurrent example are the video encoding codecs used by webcaster. Most of traditional television stations used Microsoft codecs to broadcast their shows over the Internet, and those codecs are not easily available for Linux platforms such as Ubuntu. Members of the community are feeling excluded and often engage in contestation with the site owner. This is one of many examples of practices by proprietary software owners to exclude people who do not have the license to communicate with those who have it. Microsoft corporation is notorious for his effort in blocking the diffusion of open and standard format. The .doc extension issued by their Office suite is another example. Their web browser, Internet Explorer, is also well known for not supporting web standard, rating 14% on the ACID3 test (a popular test that checks the user's browser compatibility with web standards). (Hoffman 2008) Hence, it is often the target of criticisms from the community.

Another example of frustration experienced by the community is the power of the corporate lobby that it has to face when advocating free software. For example, one of the informants used to have a television show on a communautarian channel in his region about Linux and free software. At some point he wanted to use the material he produced for promotion over the web, but as he said, "there were force preventing the widespread diffusion of such material". In his particular case, the television channel was owned by a subsidiary company of a large telecommunication corporation which refused to release the copyright on the material he produced, because "they lent him the camera." The telecommunication corporation, in this case, is offering multiple web services, all based on Microsoft products.

For those reasons, intellectual property appeared as a major force that impeded the choice of action

of the members which led to a contestation from the community.

Free discourse and the contestation of intellectual property

"The true message behind free software is not about technology. It is politic." - interview extract

One cannot help but notice that intellectual property shapes the way everybody uses a computer and information. But as an informant points out, "the masses do not know what really is at stake, as long as Windows is working, everything is fine."

The use of free software to evade proprietary software is often accompanied by a politicization of the discourse surrounding ownership of intellectual property. Is it because free software brings awareness to a new discursive practice, or because the new discursive practice brings awareness of free software? It depends on the individual, but it is evident that the two notions belong to the same discursive field.

Intellectual property notion is questioned: "Piracy doesn't really exist, you don't steal anyone. If you make a copy out of it, the original still exist. You are not taking anything away." This make echo to Richard Stallman's essay on Why Software Should Not Have Owners where he states: "Our ideas and intuitions about property for material objects are about whether it is right to take an object away from someone else. They don't directly apply to making a copy of something. But the owners ask us to apply them anyway." (Stallman 1994) Informants do realize that this mere distinction have dire consequences: "Those youths [referring to the Pirate Bay trial] are sentenced to jail, and fined heavily over a law enforced by corporate interests." Many are concerned by the

way democracy is shaken by the notion of intellectual property. Examples of aggressive use of intellectual property were cited, namely Monsanto's appropriation of indigenous knowledge, the patenting of life forms, pharmaceutical industrial complexes and their restriction on patented drugs, countries forced by international lobbies to stop the production of generic drugs to relieve AIDS, etc. "Those are the real crimes against the humanity, not the file-sharers" said this one informant, before adding: "United Nation's World Intellectual Property Organization (WIPO) should be the World Intellectual Wealth Organization."

In sum, this informant acknowledges the fact that intellectual property may have at some point help to protect initial investment, but today, large corporations such as Microsoft are building their richness out of intellectual property; they are not protecting initial investment anymore. All those problematics around the intellectual property show the necessity to embrace free software.

The important point here is that their discursive practice challenges the notion of intellectual property, the same notion that Bill Gates used thirty-three years ago to snatch the Altair's users from their liberty to use the machine. They are trying to unmake the idea that knowledge can be owned and that one can restrict access to it. This is what free software is about: sharing knowledge without boundaries. Their use of free software is a contestation of this notion.

From discourse to practice

The contestation is not limited to discussion on the list. Many actions are carried out to promote the notion of free software and to contest the proprietary ones. Over the course of this project, I witnessed many concrete actions that are worth mentioning. For example, there were a few get-

togethers and workshops organized to promote free softwares to initiated and non-initiated person. At those meetings, there was lengthy discussion around the necessity of having control over your computer, and the disadvantages of being cornered by licensed software. They did offer help to anyone who wishes to format his computer and install Ubuntu on it. As one informant said, "communication over the Internet is great, but it will never replace the need of face to face interaction."

Many also engage in debate with telecom corporations and argue with them over the necessity of open format use. Even if those debates never provoked change, it did give insight to the community on what was really at stake and what are the force opposing the change. Some even push further the contestation in uploading content of a TV broadcast channel on the web in open format to prove those corporations of the superiority of their software. This was done only once in an experimenting context to demonstrate their viewpoint to the TV channels and to avoid any possible copyright infringements.

Users also use the list to advertise the necessity of foundations dedicated to the promotion of free software. Members of the community were encouraged in financing a foundation engaged in a legal pursuit against a government administration for not considering free softwares in their contract attribution. At the time of the writing of this paper, the foundation had almost gathered 6,000\$ through contributions.

Those are a few examples out of many practices induced by the free software discursive formation.

Those actions aim to shake the dominance of a well-established system of closed-source,

copyrighted and patented software.

Conclusion

What is the future of the discourse over intellectual property? Internet sparks a proliferation of free and open source softwares that build themselves in opposition to the economic model proposed by Bill Gates and the closed-source advocates. It has opened the gates to an easier way to share data, codes, ideas, cultural contents, knowledge, and thus challenging as never before the notion of Internet property. People have the feeling that everything is possible over the Internet, data is free to flow and content is easy to acquire.

The Internet did change our relationship to media and information. Users and producers are in many cases indistinguishable. People did build a chaotic but democratic sharing of information. Anyone can see and download anything, anytime. This vision of the Internet is slowly fading away. The traditional media enterprise, which at first neglected the Internet as a marginal source of information and spectacle, is now claiming back the industry that is slipping through their hands. They want on the Internet the power they have over traditional media channel. They need to put order in the chaotic realm of the Internet. Law needs to be enforced and intellectual property must be respected. The specter of the old economic model is catching up over the Internet.

Lots of energy and money are being put into this attempt to take back the power from the users. The recent Pirates Bay trial is only an example (BBC, 2009). Record and movie industries are in court everywhere in the world to claim back their place in the distribution process of cultural products. Internet Service Providers (ISPs) are capping traffic, inspecting it with new deep packet

inspection technology and assigning different speeds depending on your activity and blocking service they dislike and enhancing their own web service (Anderson 2007, 1).

As in 1976 when users and programmers were made into two different categories, producers and consumers of contents on Internet, hard to tell apart at first, are engaged in the same path. Corporations are redefining the Internet in a way that best serve their interests, taking the control out of the hands of the common users who used and turned it into, as a participant said, "a shopping mall at home". In order to achieve this, they need to control and restrict access to data, and their discursive practice is promoting this idea.

In this version of the Internet, there is little place for free software communities. They are already suffering from some ISP's traffic cap imposed on the peer-to-peer file-sharing protocol, the most efficient and popular protocol for downloading and sharing Linux distribution. The future of knowledge and information sharing is at stake as long as there are institutions to maintain and enforce the discursive formation of intellectual property.

In order to survive, the free software philosophy needs to extend its debate to new fields and actively engage itself in debates on net neutrality, free culture, copyleft, free and open knowledge and so on. But as an informant states: "Free software philosophy does not restrict itself to software.

[...] This fight is not over, there is still hope."

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