

How Geeks do Politics:  
The Transnational Advocacy Network  
Emerging from  
The Free And Open Source Software Movement

Ambjörn Elder  
Candidate for a Masters in International Relations  
The American University of Paris  
[ambjornelder@gmail.com](mailto:ambjornelder@gmail.com)

December 28, 2011

Licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License](https://creativecommons.org/licenses/by-nc-sa/3.0/).

Permissions beyond the scope of this license may be available by contacting the author by email or through his

blog at [netizenoftheworld.wordpress.com](http://netizenoftheworld.wordpress.com).

Ethical choices, some technologists say, surround the creation and distribution of computer software. This belief unites people, often referred to as ‘hackers’ or ‘geeks’, into a technologically inclined sub-culture which is also gradually becoming a politically cohesive network. This network shares features with other networks, those with activist missions, which similarly organise around other principled ideas and have been studied before by academics. The 1998 book *Activists Beyond Borders* (Keck and Sikkink: 1998) labels such civil society groups *transnational advocacy networks*. The view of hacker culture as a kind of advocacy network makes it possible to identify the politically relevant characteristics. It opens up further avenues for research into the interactions between governments and technologists, and into the forces shaping the internet today.

### **About software freedom and open source**

Early advocates for a moral view of software couched the ethics of computer programs in principled language like that used by political activists around the world. They talked of freedom and invented a standard by which to judge software in moral terms. Known as the Free Software Definition, this standard enumerates four freedoms<sup>1</sup> that adherents to this philosophy believe software must allow in order to be considered ethical.

- “The freedom to run the program, for any purpose (freedom 0).
- “The freedom to study how the program works, and change it to make it do what you wish (freedom 1). Access to the source code is a precondition for this.

---

<sup>1</sup>Following a convention of computer languages, the Free Software Definition uses zero-based numbering, in other words it starts labeling the items in a list at zero, not at one.

- “The freedom to redistribute copies so you can help your neighbor (freedom 2).
- “The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.” (GNU.org: 2011)

Free software may also be called ‘open source’ referring to the accessibility of the source code that is “the blueprint for programs that most non-technical users rarely see.” (Coleman: 2009, 508) More on the difference between the two terms below.

Beginning in the 1980s, when Richard Stallman established the Free Software Foundation to promote his moral ideas about computer programs, subscribers to these views have come together in a social network. Members of this community develop free software, distribute it, and define an ethical, technological, and legal framework that protects the principles at the heart of the enterprise. The movement has grown over time, and the software it produces now forms an integral part of the world’s global information network. The activity of these computer programmers arises partially out of the ideals they share, partially from self-interested motives, and partially as the result of a self-catalyzing, un-guided process, the dynamics of which have been designed, through the creation of software licenses and technological tools, but which produces a community with emergent properties.

Alongside proprietary software,<sup>2</sup> free software pervades the modern computing landscape. For example, the popular Firefox internet browser is free software, as is the Apache webserver which hosts the majority of the world’s

---

<sup>2</sup>The Jargon File glossary of hacker slang defines ‘proprietary’ as a “Synonym for closed-source or non-free, e.g. software issued without license rights permitting the public to independently review, develop and redistribute it.” (Raymond: 2011)

web sites. (Netcraft: 2011) The adaptability of free software makes it suitable for a wide range of uses. Free software runs on mobile phones, operates computerised household appliances, and manages industrial mainframes, among many other applications. The reach of free software even extends beyond the planet, to NASA projects such as the Mars Rover. (Schwarz: 2010)

As digital technology grows in importance throughout the world, free and open source software also spreads more widely. Wherever the software goes, it brings with it a set of ethical ideas. The attraction of these ideas and the accessibility of the software based on them brings users into the community.

The country of Brazil is one of several states that have adopted free software as part of their national technology policy (Tiemann: 2010); multinational companies like Red Hat and the recently defunct Sun Microsystems (now acquired by Oracle) base their industrial strategy on free software. In consequence of the spread of free software as a tool and of free and open source software methodologies, the often insular social world that has grown up around free software has itself begun to gain prominence. Members of the free software community have begun to play a role in issue politics at a local, sub-national, national, and international level.

Over the last fifteen years, a small but growing body of social science has focused on free software, the people who create it, and the principles behind it. Eric S. Raymond, himself a respected hacker, penned the first analysis of those who gather around free software. His “still evolving” book *The Cathedral and the Bazaar*, (Raymond: 2010) presents not an academic but a community member’s view of the community and its methods, written for an audience of other computer programmers. More formal studies

include Christopher Kelty's book *Two Bits*, which takes an anthropological approach. *Two Bits* describes the motivations of individuals whom the author calls 'geeks'; it identifies their interests as a group, and provides examples of the social dynamics of free software in action. Another influential academic, Laurence Lessig, describes the dynamics of internet governance and argues for the political engagement of technologists in *Code: version 2.0*.

Despite these and other insightful analyses, the influence of free software and its partisans on real-world politics has been largely ignored by academia at a time when computer technology plays an increasingly important role in public life. None of the existing frames explain the contemporary political interests of free software or its partisans, show how they pursue their political interests, or provide tools to analyse the extent of their influence. However, a frame of analysis contemporaneous with free software's emergence into the mainstream may provide a useful way of thinking about the political influence of those who code free software and support its principles.

### **Transnational advocacy networks**

At about the same time that Eric Raymond was first articulating the methodology behind free software, Margaret E. Keck and Kathryn Sikkink were analysing a similarly diffuse, international phenomenon. In their 1998 book *Activists Beyond Borders*, they identify an innovation of 20<sup>th</sup> century politics: a "network [of] actors working internationally on an issue, who are bound together by shared values, a common discourse, and dense exchanges of information and services" (Keck and Sikkink: 1998, 2) that they dub 'transnational advocacy networks.' *Activists Beyond Borders* studies the details of these principled movements by describing specific examples such

as the women's rights network and the environmental movement. The book traces the reach of networks like these across traditional state boundaries. It also analyses their activities, and identifies the range of actors who participate in them.

In its diffuse, international network structure, in the ways that it exerts its limited political influence in the off-line world, and to the extent that shared values bring its members together, the free software movement resembles a transnational advocacy network as described by Keck and Sikkink. While the model does not fit in all particularities, by applying the conceptual template laid out in *Activists Beyond Borders*, patterns emerge in the interaction between Open Source partisans and entities in government and industry. By exposing these patterns, it should become clear that the worldwide free software network contains advocacy projects, participates in advocacy activities, and even, in some ways operates as a transnational advocacy network in itself.

## **Terminology**

Technologists and academics spawn neologisms right and left. As a result, a language of apparently endless fine distinctions has developed to describe the people and the objects discussed in this paper. For the most part, the subtle differences between one term and a similar alternative do not matter to the argument presented below. However, precise definitions do attach to most of the terminology used here, and these deserve some attention.

## **Free vs Open Source**

In the late 1990s, a disagreement over ideology, terminology, and the importance of a wide public appeal split the free software community. On one side,

followers of Richard Stallman believed that the ethical principles of software freedom should determine the direction of the movement. Taking a contrary position, pragmatics insisted that by instead emphasising the practical benefits of software freedom and avoiding ideological language, the movement could find mainstream appeal and ultimately achieve wider adoption of free software and its principles. A small group of individuals belonging to the second group met in early 1998 for a strategy session that produced a document called the Open Source Definition. In order to “dump the moralizing and confrontational attitude that had been associated with ‘free software’,” (Open Source Initiative: 2011) the group invented a new label: ‘open source software.’

The rhetorical positions defined by this cleavage have hotly debated each other ever since the drafting of the Open Source Definition. However, self-conscious re-branding notwithstanding, the two divisions of the movement continue to resemble each other closely. Most software released under terms that meet the Free Software Definition also satisfies the requirements of the Open Source Definition, and vice versa. Moreover, the two branches of the movement “are doing exactly the same thing at the level of practice;” (Kelty: 2008, 14) the same processes produce free software that produce open source software. As a result, software coded with the ideals of this movement in mind is often referred to as Free and Open Source Software or FOSS. An alternative formulation, Free/Libre and Open Source Software (FLOSS), a variation coined to clarify the ambiguous meaning of the word ‘free’ in English. Although within the FOSS community, the terms have distinct definitions, for the purposes of this paper, the terms ‘free’ and ‘open source’ will be used interchangeably.

## Geeks and Hackers

Computer programmers who write free and open source software inherit a tradition of programming from members of a community at MIT in the late 1970s and early 1980s who referred to themselves as hackers. In contrast with the meaning the term acquired in the late 80s and 90s, which connotated malicious intent, a hacker of this period was:

“a person who enjoys exploring the details of programmable systems and how to stretch their capabilities, as opposed to most users, who prefer to learn only the minimum necessary. . . . [The] Internet Users’ Glossary usefully amplifies this as: A person who delights in having an intimate understanding of the internal workings of a system, computers and computer networks in particular.”

The sense of community so important to contemporary hackers existed then as well: “the term ‘hacker’ also tends to connote membership in the global community defined by the net . . . [and] also implies that the person described is seen to subscribe to some version of the hacker ethic.” (Raymond: 2011)

Instead of the word ‘hacker’ Christopher Kelty uses the term ‘geek,’ in order to include non-coders, such as “geek-sympathetic entrepreneurs and lawyers and activists” in the analysis in his book *Two Bits*. Kelty defines his subject as people who “find affinity with one another because they share an abiding moral imagination of the technical infrastructure, the Internet, that has allowed them to develop and maintain this affinity in the first place.” (Kelty: 2008, 28)

Although both terms may carry negative connotations in colloquial usage, this paper intends no judgment about the social skills or moral standing



of ‘geeks’ or ‘hackers’. Without unpacking the subtext of these terms, this paper will use both, taking ‘geek’ to refer to free software users in their social aspect, with the word ‘hacker’ speaking more to members of the community in their capacity as creators of software. In many circumstances, these two meanings overlap.

### **Groups of Geeks**

Finally, while many geeks and hackers consider themselves part of a movement, and many talk about ‘the Open Source community’, others disdain such labels. Nevertheless, this paper will refer to collections of geeks and hackers as members of a community and as participants in a movement in order to have a terminology with which to refer collectively to groups of people interested in Free(/Libre) and Open Source Software.

For the observations that follow, it would be most convenient to be able to talk only about a *movement of geeks* whose moral imagination of the internet leads them to develop *free software*. These terms draw the strongest comparison between the activities around FOSS and those of transnational advocacy networks. However, limiting the discourse to these terms would pursue coherence at the cost of validity. It would suggest an inaccurate one-to-one link between these particular FOSS-related labels and the constituency on whose behalf internet advocacy takes place. Geeks do not primarily use the strategies of a social or political movement nor do they consistently espouse the moral philosophy of Richard Stallman.

### **The Political Science Framework**

To capture how the diverse interlinked communities that revolve around the ideas and practices of free and open source software have begun to operate

in concert to achieve political goals, it is necessary to employ concepts from political science. The conceptual framework of the transnational advocacy network suits this task particularly well.

Keck and Sikkink identify the subject of their book *Activists Beyond Borders* as “networks of activists, distinguishable largely by the centrality of principled ideas or values in motivating their formation” (Keck and Sikkink: 1998, 1). Such networks of heterogeneous groups of actors represent alternative sources of power in the international system. Although neither governments nor businesses, they may include both, or subdivisions of both. In themselves, as a whole, they belong instead to civil society. These activist networks employ an identifiable set of strategies in pursuit of their goals. Because they typically do not represent established, powerful institutions, they therefore turn to other forms of politics, which Keck and Sikkink distinguish in four categories: information, symbolic, leverage and accountability politics. Furthermore, their activities have a self-perpetuating tendency: the network directly strengthens and expands itself as it attracts interest.

### **What it means to be transnational**

A variety of actors participate in transnational advocacy networks. They range in size from individual activists to portions of governments. Non-governmental organizations, (NGOs) occupy a central role as organizers and leaders. In this capacity, NGOs help bring together other actors who share their goals and who themselves become members of the network. Examples of other actors observed to participate in transnational advocacy networks include charitable foundations, the media, traditional civil society organisations such as churches and trade unions, parts of intergovernmental organisations, and sub-sections within the executive and parliamentary branches

of government. (Keck and Sikkink: 1998, 9)

The research on transnational advocacy examines interactions between these actors as they coordinate in networks across the boundaries of sovereign states. They bring political pressure to bear on powerful institutions from inside and outside national borders. To this extent, advocacy networks challenge the traditional international relations picture of global politics which only recognizes one primary level of actor, the sovereign state. However, transnational networks focus on issue-specific change, not on transformation of the international system. They work within the existing global system in which states still represent the main nodes of power and the source of policy.

Nevertheless, the term ‘transnational’ means more for Keck and Sikkink more than merely ‘composed of actors from a variety of states’ or ‘operating across borders’. Transnational advocacy networks both reflect and construct shared values, strong ones that people will back up with action and that spawn persistent institutions. As a result, these networks constitute “something resembling a global civil society.” (Keck and Sikkink: 1998, 33) However, the idea of a global society remains largely unrealised. Ethical principles subject to broad, international, moral agreement, continue to be “an arena of struggle, a fragmented and contested area,” (Keck and Sikkink: 1998, 33) therefore an area in which the niche activity of advocacy remains the primary driver of institution building and norm standardisation.

### **Advocacy as an activity**

The aforementioned global norms, although they remain incompletely shared, nevertheless “[exert] power in, and because of, what people do.” (Keck and Sikkink: 1998, 35) Therefore, Keck and Sikkink take care to describe the

practices of transnational advocacy networks, using both theory and example. Advocacy activities “amplify the . . . power of norms, broaden the scope of practices these norms engender, and . . . transform the norms themselves.” (Keck and Sikkink: 1998, 35) The methods activists use to accomplish this work rely on the influence of values, information, symbolism, and the impact of moral suasion instead of on economic power, force, or the institutionalisation of relative military might.

### **Strategies**

Transnational advocacy networks heavily rely on the collection and distribution of information. By using their structural capacity to manipulate it, activists can disseminate more accurate information more quickly than the targets of their campaigns. In turn, this may endow activists with a strategic advantage over the targets of their advocacy. They may become more reliable sources of knowledge than their opponents. When they use information successfully, advocates can change the terms of a debate, empower their members to make truth claims, and out-manoeuvre larger, more traditionally powerful institutions.

When well used, the information advantage gives activists the opportunity to choose their ground. They can frame debates in ways that best support their goals and tap into the most widely shared values. Issue areas “involving bodily harm to vulnerable individuals,” and those “involving legal equality of opportunity” (Keck and Sikkink: 1998, 27) evoke the strongest response from network members, as do stories which make it easy to assign individual blame to powerful actors and thereby motivate broad outrage. The efficient flow of information through the network gives activists the opportunity to interpret issues in such strategically favourable terms.

In measures of traditional geopolitical power, transnational advocacy networks remain feeble compared with other actors on the international level. However, while information cannot directly oppose the power of states in international politics, it can bring moral pressure to bear both on small groups and on larger institutions. By convincing influential individuals who work in powerful organisations such as governments or financial institutions, of the importance of their claims, advocates can enlist the help of more weighty international actors. These heavyweights in turn can bring more traditional tools of power to bear using leverage politics, for example linking the resolution of a moral issue to access to money or goods. Activists can also use their information-based influence to ‘mobilize shame’ on behalf their cause, so that “the behaviour of target actors is held up to the light of international scrutiny.” (Keck and Sikkink: 1998, 23) The same kind of public pressure can hold governments to their publicly stated commitments, in a strategy labeled ‘accountability politics’.

### **The Network constitutes itself through networking**

One goal of the study of transnational advocacy networks is to address how and why they arise. No comprehensive picture of network formation has yet emerged, perhaps due to the number and variety of activist networks. However, in their foundational book Keck and Sikkink marshal historical examples together with a description of network dynamics to illustrate a detailed self-catalytic process that often plays a role.

The advocacy impulse often originates, according to the argument, when some blockage prevents a domestic group from receiving justice directly from their own government. In a pattern called the ‘boomerang effect’, those in search of redress turn to international sources of influence. In so doing,

they join a network capable of giving them aid. The activist community then mobilises and works on behalf of its new members, using the network structure to communicate and spread information. The communication process strengthens the ties between members of the network, reinforcing the network structure, even as it fulfills its function, catalysing a process of self-creation in which advocacy networks “embody elements of agent and structure simultaneously.” (Keck and Sikkink: 1998, 5)

### **How the idea applies**

The concept of transnational advocacy networks, discovered by Keck and Sikkink through the study of historical and contemporary issue activists, has provided a conceptual framework through which to analyse civil society politics that crosses state borders. Since its publication, *Activists Beyond Borders* has proved the basis for further study into the field. One of the salient features of their book is its detailed descriptions of processes that both bind the network together and effect change in the world at large. These descriptions of dynamics particularly facilitate the analysis of how networks influence state-level politics (meaning sovereign states). In terms of scope, it applies especially well to groups that engage in formal, intentional campaigns to change social policy based primarily on principled ideas. The model of a transnational advocacy network applies less well to groups whose political influence is unintentional, not morally motivated, or a side-effect of other goals. Therefore, the conceptual framework developed in *Activists Beyond Borders* has some, but not comprehensive, descriptive power when applied to the free and open source community.

## The Transnational FOSS Network

The voluntarism at the heart of the free and open source software movement can present an initial conceptual hurdle for those unfamiliar with the hacker community. ‘Why would anyone give away software for free?’ an outsider may justifiably ask. Explanations couched in terms of self interest of course exist, and the particular answer to ‘why’ varies with each contributor to a FOSS project. Some patterns emerge, however.

Some software companies may build a business strategy based on giving away an incomplete version of their product and selling the fully featured package, so-called ‘cripple ware.’ Other businesses may sell support services for free software. Individuals may gain from the participation of other programmers in the creation of an essential working tool. Also, given Cory Doctorow’s observation that “it’s . . . impossible to monetise obscurity” (Doctorow: 2010) some software coders prefer to maximize the distribution of their work by giving it away. Fundamentally, however, the fact that most open-source software is available for free, as in ‘let’s go to the tailgate, there’ll be free beer!’, reflects the principled grounding of the foss movement in another definition of the word ‘free’. It is this ethical idea which makes the free software movement susceptible to analysis as a transnational advocacy network.

Keck and Sikkink observe of transnational advocacy networks that their objectives often “cannot be easily linked to a rationalist understanding of their ‘interests,’ ” (Keck and Sikkink: 1998, 9) but rather reflect a belief in “causes, principled ideas, and norms.” (Keck and Sikkink: 1998, 8) Similarly, for geeks, code does not simply represent a product, a source of income, or a tool. Code is a passion. It consists not just of algorithms,<sup>3</sup> but is composed

---

<sup>3</sup>According to Thomas H. Cormen’s *introduction to algorithms* an algorithm is “any

of ideas. Hackers say that they express themselves through code. Moreover, they believe that the open source methodology for writing code results in better computing, and represents a better approach to problem-solving in general, lending a progressive attitude to the movement. Once written, free code enters a global commons, available to all, which geeks defend using the ideas and tools of free software. This is why geeks say that the word ‘free’ in free software, instead of ‘free as in beer’ means ‘free as in speech.’

## The Worldwide activities of FOSS

Though naturally not every user of free software subscribes to or is even aware of the principled ideas and norms behind the programs they run, the ethical framework of free software disseminates along with its technological artefacts. This gives software freedom and associated ideas broad acceptance. As Christopher Kelty points out, the internet determines the borders of the geek community: those with no access to the internet cannot participate. On the other hand, aside from access to the web, no political borders limit a person’s participation. Open source projects find acceptance on every continent and large ones field input from throughout the globe. For example, a glance at the participation in a single sub-project of the team who produce the popular Ubuntu Linux operating system<sup>4</sup> can demonstrate how widely free software spreads. The list of Local Community (LoCo) teams posted on the website, whose role is to “advocate, promote, translate, develop and otherwise improve Ubuntu,” enumerates groups in more

---

well-defined computational procedure that takes some value, or set of values, as **input** and produces some value or set of values as **output**. An algorithm is thus a sequence of computational steps that transform the input into the output.”Cormen (2003)

<sup>4</sup>Linux, also known as GNU/Linux is the computer program that combines the Linux kernel and the GNU tools to produce an operating system that runs personal computers and many other devices. The class of software known as an operating systems also includes commercial products like Mac OSX and Microsoft Windows.



than one hundred countries. (Canonical: 2011) However, such a snapshot, while evocative, does not fully capture the map of participation in the free and open source ecosystem. Ubuntu, as a full operating system environment – the most popular, though hardly the only one made primarily from FOSS – incorporates and builds on tens of thousands of other projects, and thus represents the accrued work of uncounted individuals throughout the world.

As with the advocacy networks studied by Keck and Sikkink, the composition of the free and open source software advocacy network reflects broad diversity. For-profit companies like Canonical, the UK-based firm that leads the Ubuntu project, and Nokia, the Finnish mobile phone company that shepherds the Qt Framework project included in Ubuntu and many other Linux distributions,<sup>5</sup> contribute manpower and money to the Open Source community. Some government departments also contribute to the global commons of code, including the United States Department of Defence who state on their web site that there are “far too many examples to list” of their contributions to open source projects. (United States Department of Defense: 2011) Academics play an important role in the community. Many of the most widely-used free software projects began at universities. (Slashdot contributors: 2011) Foundations, such as the one that oversees the popular Firefox browser, also fill a role. In addition, information important to the movement disseminates through a host of internet sites. Some represent established technical publications, like Wired.com, whereas some, like Slashdot.net (“News for nerds, stuff that matters”) are community-driven forums for debate and clearing-houses for informative links. It is possible to particularize the industrial, governmental, and individual participants in the community in endless detail, but all of these actors – as well as many

---

<sup>5</sup>A distribution, or *distro*, is a version of the GNU/Linux operating system.

others – have a stake in free software.

The FOSS community gathers a large groups of heterogeneous actors from throughout the globe. They share many characteristics similar to those of participants in prototypical transnational advocacy networks. Like issue activists, geeks come together around principled ideas and causal beliefs which act as a contributing factor to the formation of their network along with collaboration on shared software projects.

### **The Infrastructure of the FOSS community**

Like other networks, the free software movement depends on flows of information both to form the ties that bind the network together and to enable collective network action. Therefore, rapid, reliable means of communication facilitate everything the FOSS community does. In 1998, when *Activists Beyond Borders* defined the term ‘transnational advocacy network’, global communications extended less pervasively than they do today. Keck and Sikkink cite the importance of fax machines, now largely obsolete, in the diffusion of information through activist networks. In 2011, the worldwide web has taken on many of the functions of older technologies, such as those of the post, newsletters, fax, and other paper-based media. It is no longer true that “international networking is costly.” (Keck and Sikkink: 1998, 12) Instead, since the end of the last century, “digital media has greatly expanded the opportunities for collaborative distributed working and the sharing of information and expertise” (Dutton: 2008, 1) that is essential to the operation of activist networks.

What is true of a network like the international environmental movement is doubly the case for collaborative network organisations like free software projects. (Dutton: 2008) Among the resources that play a part in the in-

teraction between geeks are: wikis,<sup>6</sup> internet forums, mailing lists, internet relay chat,<sup>7</sup> and version control systems,<sup>8</sup> to name just a few. Evidently, the “dense and constant information flows” (Keck and Sikkink: 1998, 89) that typify advocacy networks, and which favour the effectiveness of network structures, also characterise the communication between participants in open source projects. Indeed, information exchange plays, if anything, a more integral role in the FOSS network, as shall be shown shortly.

### **The Goals of FOSS**

For most geeks, the primary purpose of organising, advocating, and coding is simply to enable more code. While the FOSS movement originates in an ethical proposition, as exemplified by Richard Stallman’s continuing advocacy to promote software freedom, for most free software advocates, the primary value of software lies not in its moral qualities, but in its daily use. This means that internally, the free and open source software movement discusses coding practices, the value of software tools (such as the long-standing, playful debate between users of the Emacs and Vi text editors),<sup>9</sup> the internal politics of the movement (e.g. why so many more men than women code free software), and similar topics. Political goals, or a programme of social change, occupy a small rhetorical space in the discourse of geeks. Instead, hackers concern themselves primarily with their own programming activities.

---

<sup>6</sup>Wikis allow the collaborative editing of web pages. This technology provides the infrastructure behind Wikipedia, the free encyclopedia.

<sup>7</sup>IRC enables real time written communication at a distance. Google, for example, provides similar functionality through its web chat interface.

<sup>8</sup>Version control facilitates collaboration on the creation of documents not primarily intended to be served online, such as word processing documents and especially the source code of computer programs.

<sup>9</sup>This paper was written with Emacs.

## The Dynamics of a Recursive Public

In its self-concern, the geek community functions as what Christopher Kelty calls a ‘recursive public’, a neologism he coins to encompass the way in which the geek network is “constituted by a shared concern for maintaining the means of association through which they come together as a public.” (Kelty: 2008, 28) More particularly, this concern focuses on “the material and practical maintenance and modification of the technical, legal, practical, and conceptual means of its own existence as a public.” (Kelty: 2008, 3) In plain English, the activity of hacking brings geeks together in order to enable more hacking.

It is possible to trace the process by which the geek/hacker network constitutes itself, both in technical and in social terms. Doing so should clarify the way it resembles and differs from an advocacy network.

In technical terms, the hacker network revolves around computer code and the process of writing it. Hackers code in order to produce structures of code that take the form of computer programs. They use the programs they produce to share their code. For example, open source programs interact using open internet protocols to send pieces of open source code back and forth between hackers by email, by IRC, and by other means. The code they share allows them to code in new ways, for instance using programming languages (the language in which code is written) that are themselves open source. The code written using open source languages allows collaboration on the writing of code: for example using an open source version control program like *Git* which facilitates the cooperation of many hackers on a single project. In addition, the shared code plays a role in the process of coding since many of the tools that hackers use to code, like compilers that transform human-readable code into machine language, are themselves

open source. In this way, the open source ecosystem forms a web of interdependent programs that facilitate each other and give each other purpose.

In social terms, the network of code emerges as the product of the activities of a human network. In this view of the FOSS network, it resembles the social network structures previously studied by social scientists, of which advocacy networks are an example. The social relations between geeks are defined by the coding projects on which they collaborate. The applications they create represent communally agreed problem-solving strategies applied to computing obstacles, which is why marketing speak dubs such programs ‘solutions’. Often a sort of boomerang effect recruits new members into the network when individuals face problems other hackers have encountered before. They therefore turn to an easily accessible (because freely distributed) open source solution. After using and adapting the solution for their own purpose, these new users in turn remit their modifications to the global commons of intellectual property that emerges from FOSS coding activity, creating a virtuous circle. Thus, these networks, like those analysed by Keck and Sikkink, simultaneously exhibit the characteristics of structure and actor, constituting themselves by solving common problems.

The social activity of coding itself benefits from collaboration because, to use aphorisms from *The Cathedral and the Bazaar*, one of the foundational documents of open source, “many eyeballs tame complexity” (Raymond: 2010, Many Eyeballs Tame Complexity) and “given enough eyeballs, all bugs are shallow.” (Raymond: 2010, Release Early, Release Often). More plainly put, working together makes difficult problems easier, and the more people there are to spot errors, the more quickly mistakes get corrected. The creation of free software produces a commons of intellectual property – available to all – which accrues value by attracting more contributors. The

methodologies first exposed in *The Cathedral and the Bazaar* represent one category of the ‘causal ideas’ (Keck and Sikkink: 1998, 1) that unite free software programmers: the idea that releasing code to the global common results in better computer programs.

Despite the similarities between the FOSS community and archetypal social networks, the free software movement differs from other networks because of its connection to the internet. “The history ... of Free Software has been intricately mixed up with that of the Internet over the last thirty years ... Free Software and the Internet are related like figure and ground or like system and environment.” (Kelty: 2008, 4) Free software relies intimately on internet communications. At the same time, the activities of the free software movement produce much of the software behind the internet. Influential figures in the history of the internet, such as the ‘father of the world wide web’ Tim Berners Lee, who invented the Hypertext Transfer Protocol (HTTP) that forms the basis of communication over the web, played important roles in formulating the open standards that allow the web to function. Moreover, much of the software that runs the web is open source. What results is a situation where “there are a number of practical, technical, and historical places where [Free Software and the internet] are essentially indistinguishable.” (Kelty: 2008, 4) This means that in addition to the self-generating social processes shared with movements for human rights, for example, the free and open source movement also creates the technical infrastructure for its own activities, in a way that no other group can.

The multiple recursion of a movement can result in an inwardly focused community. Witness the stirring words of John Perry Barlow in his 1996 tract, *A Declaration of the Independence of Cyberspace*:

“Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.” (Barlow: 1996)

However, the FOSS network escapes from simple self-referentiality, and disappoints Mr Barlow’s ambition for an independent web, because of the power of technology to work as “a principle actor in social change.” (McLuhan: 1962, 3) The ever-growing significance of the internet to social interactions outside the community of geeks, mean that “coding, hacking, patching, sharing, compiling, and modifying of software are forms of political action that now routinely accompany familiar political forms of expression like free speech, assembly, petition, and a free press.” (Kelty: 2008, 8) The Internet’s capacity to catalyse social change, was recently illustrated by the role of facebook (which is not free software, though built on the same foundations) in the ‘Arab spring’ uprisings that swept across North Africa and the Muslim world at the beginning of the 2011. The social impact of free software provokes responses from establishment powers in government and industry, thereby forcing geeks to act in turn in their own defense to “maintain and extend the . . . public spheres . . . [of] Free Software and the Internet.” (Kelty: 2008, 309)

### **Political advocacy in the community**

Even apart from the profound social and political changes that can come with new technology, the free and open source community fits into “a coherent subcategory within the general category of collective action and [social movements] that facilitates the comparative study of some dimensions of the

study of social movements and technology.” (Hess: 2005, 516) The movement incorporates, among its diverse and wide-spread community, subsidiary networks that explicitly pursue social and political change.

The recently-founded Diaspora project offers an example of how hacking and its attendant activities can be part of a self-conscious social programme. In a lecture at the New York branch of the Internet Society, “free software activist” (Nussbaum: 2010) Eben Moglen decried the successful social networking site facebook as a source of “harm to the human race,” but rejected an expressly political approach to solving the problem: “I’m not suggesting [facebook] should be illegal. It should be obsolete. We’re technologists we should fix it.” (Software Freedom Law Center: 2010) Four New York University students, sharing the view that software can “both express and ‘implement’ ideas about the social and moral order of society,” (Kelty: 2008, 8) began a free software project with a social goal: to code a social networking tool that will “let us connect without surrendering our privacy.” (JoinDiaspora.com: 2010)

Parts of the FOSS community also act in ways even more readily recognisable as activism. The spark for political contention over free software derives from the transformative power exhibited by digital networks. File sharing threatens the entertainment industry; email threatens the postal service; groups like Wikileaks can threaten secrecy on the part of many organisations, including the governments of sovereign states. The intentional or inadvertent effects of these free software, free-software-enabled, or free-software-inspired projects demand a response from regulators and legislators. Governments react to such disruptions using their established powers: they pass laws, prosecute criminals, jail individuals, negotiate treaties, and pressure private parties. When in the process of exercising their power, gov-



ernments act contrary to the perceived interest of geeks, when they threaten the speed, ease, and pervasiveness of communications, the movement organises around campaigns lead by NGOs.

As in other advocacy networks, FOSS-related activism comes together around a specific set of issues. Among the issue areas that inspire geeks to get politically engaged are intellectual property rights, internet governance, online privacy, and internet security. The short history of the internet already supplies multiple examples of network advocacy campaign around these interests.

In December 2010, the Spanish parliament voted on a piece of legislation called the Ley Sinde (Sinde law) that would have instituted an expedited process to shut down sites accused of engaging in activity contravening intellectual property law. Bloggers and small internet businesses saw this as a threat to due process and free expression. The geek community saw it as a threat to the culture of the internet and the commercial viability of open source software. NGOs such as the Electronic Frontier Foundation and the Asociación de Internautas lead the campaign against the law. In the resulting legal and media battle, the FOSS advocacy network displayed tactics typical of international advocacy. They reached out internationally to involve organisations like the EFF. With the help of Wikileaks, who released US State Department cables showing direct American involvement in the drafting of the legislation, the network engaged in information politics, changing the terms of the debate from the merits of the law to focus on the sovereignty of the Spanish government. Pressure brought to bear on the Spanish news daily El Pais eventually resulted in the release of Spanish translations of the memos. The compromising picture painted by these leaked documents allowed Spanish voters to exercise a form of accountabil-

ity politics on Spanish legislators, holding them to their responsibilities as representatives of the public.

The free software movement also engages with international politics. An on-going NGO-led campaign targets the Anti-Counterfeiting Trade Agreement (ACTA), an international intellectual property treaty<sup>10</sup> with implications for the cultural commons and the future of the web. The Electronic Frontier Foundation and La Quadrature du Net spearheaded efforts to open the secret negotiations up to public scrutiny, and to change the text of the document. (Electronic Frontier Foundation: 2010) Their efforts exhibited patterns of transnational politics recognisable, for example, from the emergence of the human rights network. The campaign has thus far failed to prevent the ratification of the treaty in several countries, but has influenced the European Parliament and the US Trade Representative, and apparently changed the text of the document.

Transnational advocacy networks commonly interact with governments, bringing international or transnational pressure to bear on state actors. However, the patterns associated with transnational activism may equally target powerful non-state actors. Keck and Sikkink cite the campaign to convince Nestlé to stop selling infant formula to poor women in developing countries, in which the campaign target was a corporation instead of a state. Indeed, thus far, the FOSS movement has engaged most often and at greatest length with the computer industry. The proprietary practices against which free software defines itself originate in the leading software companies. Therefore, for many years the open source community has used a variety of methods to disarm the hostility of large computer companies toward open source and to convince them to join the open source commu-

---

<sup>10</sup>Many, including some parties who negotiated it, refer to ACTA as a treaty, though its status in international law remains a point of contention.

nity. These efforts have met with some success; for example, Apple builds its Mac OSX operating system on top of an open source project, and Microsoft started its own open source foundation.

## **Conclusion: FOSS + advocacy =**

When compared with the more effectively targeted advocacy networks that have formed around issue areas like women's rights or the environment, free software may appear less purely ethically motivated and less politically focused. As noted above, practical considerations and the process of creative collaboration occupy the greatest place in the discourse of geeks. The community's appetite for political struggle remains limited and much of its influence derives from unintentional side effects of the effort to ensure the continuation of its own activities. Perhaps because of this, campaigns undertaken by free software advocates to influence governmental policy decisions face tough challenges. For example, a slightly modified version of the *Sinde* law, mentioned above, passed the Spanish parliament in late January 2011 with little protest from the larger geek community.

Instead, geeks put their faith in technology and prefer technological solutions to social and political problems. "Lex informatica" (Reidenberg: 1998) rules in cyberspace, or as Laurence Lessig put it, on the web "code is law." (Lessig: 2006) However, as real law, international law, federal law, state law, law as "a command backed up by the threat of a sanction" (Lessig: 2006, 355) increasing extends its reach into cyberspace, the self-referential world of the geeks has begun to respond.

Certainly the free and open source software network engages in the kind of "struggles over power and meaning that ... are central to normative change." (Keck and Sikkink: 1998, 210) As a result of these battles,

whether fought in the halls of power, in the minds of the public, or in the infrastructure of the web, “what was once unthinkable becomes obvious.” (Keck and Sikkink: 1998, 211) No description could better capture the rapid pace of digital technology change over the past thirty years and the influence it has had on daily life.

Framing the free software movement in terms of transnational advocacy opens up the possibility to apply a wider range of established social science approaches to the activities of geeks and hackers. It allows, for example, an analysis of efforts on the part of organisations like the Electronic Frontier Foundation to influence policy decisions: what theory of the policy process best explains their advocacy process? A body of existing research provides methodologies for measuring the success of advocacy, and offers evidence of what factors cause the success or failure of an advocacy campaign. What most inhibits attempts by geeks to influence policy? A lack of popular support? An unfavourable image with policy makers? The relevance of the advocacy frame itself could use testing; do geeks who attend open source conferences, for example, exhibit other characteristics of a members of transnational advocacy network?

In the sphere that directly concerns them, geeks exert broad influence: the web, too, is a form of society, and in the context of digital culture, geeks bring a comprehensive, ethical point of view. They have developed working methods, the principles of which have been shown to apply in the creation of online content and in the dissemination of cultural artefacts, as evidenced by the success of Wikipedia and the Creative Commons. Geeks bring insight to contentious issues areas around intellectual property, the governance of the web, and technology policy in general. Therefore, analysis building on the casual observations of this paper could provide useful conceptual tools

for geeks. It could allow them to participate more fully and more effectively in public debate, to bring them in to the political process, if they so desire. Given the central place the internet plays in contemporary public life, the insights of geeks and hackers, dreamers and architects of the online space, deserve a hearing.

## References

- Barlow, John Perry. “A Declaration of the Independence of Cyberspace.” web, 1996.  
[https://w2.eff.org/Censorship/Internet\\_censorship\\_bills/barlow\\_0296.declaration](https://w2.eff.org/Censorship/Internet_censorship_bills/barlow_0296.declaration).
- Canonical. “Ubuntu LoCo Teams List.” Web, 2011.  
<http://loco.ubuntu.com/teams/#Europe>.
- Coleman, Gabriella. “Code is Speech: Liberalism, Legality, and the Ethics of Free Software.” *Cultural Anthropology* 24 (2009).3: 420—454.
- Cormen, Thomas H. *Introduction to Algorithms*. MIT Press, 2003, 2 ed.
- Doctorow, Cory. “Cory Doctorow: Publish books free online.” *The Observer* (2010): 26.  
<http://www.guardian.co.uk/technology/2010/may/23/cory-doctorow-my-bright-idea>.
- Dutton, William H. “The Wisdom of Collaborative Network Organizations: Capturing the Value of Networked Individuals.” *Prometheus* 26 (2008).3: 211–230. PDF retrieved from EBSCO.
- Electronic Frontier Foundation. “Anti-Counterfeiting Trade Agreement.” Web, 2010.  
<http://www.eff.org/issues/acta>.
- GNU.org. “The Free Software Definition.” Web, 2011.  
<http://www.gnu.org/philosophy/free-sw.html>.
- Hess, David J. “Technology- and Product-Oriented Movements: Approximating Social Movement Studies and Science and Technology Studies.” *Science, Technology, and Human Values* 30 (2005).4: 515–535. PDF retrieved from JSTOR.

- JoinDiaspora.com. "A Little More About the Project." Web, 2010.  
<http://blog.joindiaspora.com/2010/04/21/a-little-more-about-the-project.html>.
- Keck, Margaret E. and Sikkink, Kathryn. *Activists Beyond Borders*. Ithaca: Corner University Press, 1998.
- Kelty, Christopher. *Two Bits: The Cultural Significance of Free Software*. Durham and London: Duke University Press, 2008.
- Lessig, Laurence. *Code version 2.0*. New York: Basic Books, 2006.
- McLuhan, Marshall. *The Gutenberg galaxy: the making of typographic man*. Toronto and Buffalo and London: University of Toronto Press, 1962.
- Netcraft. "January 2011 Web Server Survey." Web, 2011.  
<http://news.netcraft.com/archives/2011/01/12/january-2011-web-server-survey-4.html>.
- Nussbaum, Emily. "Defacebook." Web, 2010.  
<http://nymag.com/news/features/establishments/68512/>.
- Open Source Initiative. "History of the OSI." Web, 2011.  
<http://www.opensource.org/history>.
- Raymond, Eric Steven. "The Cathedral and the Bazaar." Web, 2010.  
<http://www.catb.org/~esr/writings/cathedral-bazaar/>.
- . "The Jargon File." Web, 2011.  
<http://www.catb.org/~esr/jargon/html/index.html>.
- Reidenberg, Joel R. "Lex Informatica: The Formulation of Information Policy Rules Through Technology." *Texas Law Review* 76 (1998).3: 553–584.
- Schwarz, Randall. "FLOSS Weekly – The Mars Rover Drivers." Web, 2010. Podcast.
- Slashdot contributors. "Ask Slashdot: Successful Software From Academia." web, 2011.  
<http://ask.slashdot.org/story/11/09/27/140212/ask-slashdot-successful-software-from-academia>.
- Software Freedom Law Center. "Highlights of Eben Moglen's Freedom in the Cloud talk." Web, 2010.  
<http://www.softwarefreedom.org/news/2010/feb/10/highlights-eben-moglens-freedom-cloud-talk/>.

Tiemann, Michael. "The role of open source in emerging economies: A Malaysian success story." web, 2010.

<http://opensource.com/government/10/12/role-open-source-emerging-economies-malaysian-success-story>.

United States Department of Defense. "DoD Open Source Software (OSS) FAQ." Web, 2011.

[http://cio-nii.defense.gov/sites/oss/Open\\_Source\\_Software\\_%28OSS%29\\_FAQ.htm#Q:\\_Has\\_the\\_U.S.\\_government\\_released\\_OSS\\_projects\\_or\\_improvements.3F](http://cio-nii.defense.gov/sites/oss/Open_Source_Software_%28OSS%29_FAQ.htm#Q:_Has_the_U.S._government_released_OSS_projects_or_improvements.3F).