# Professionalization, Gender and Anonymity in the Global File Sharing Community

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## Introduction

In April 2011, the famous logo of the global file sharing community *The Pirate Bay*[1] was complemented with the picture of a magnifying glass and the site's name was changed to *The Research Bay*.[2] Visitors who clicked on the altered logo were transferred to an online survey and in the 72 hours that the study ran, 75,000 file-sharers filled out a questionnaire hosted by our research group, Cybernorms. This probably makes it the largest survey conducted within a file sharing community ever. The survey was conducted in English and contained both multiple choice and open questions. The aim was to better understand the behaviors, driving forces and organization behind, and within, the phenomena of file sharing. Hence, social norms within the file sharing community that clearly differ from the ones stipulated in law are the focus of this study. The sharing of computer programs, movies and music via the Internet marks an all time high in the persistent controversy between intellectual property owners and the users of different distributive technologies. Among a large segment of the global population, illegal file sharing via the Internet has gradually become a natural element of everyday life. People who would never otherwise engage in criminal activities for some reason find it acceptable to violate intellectual property rights.[3]

The aim of the online study of The Pirate Bay community has been to describe a file sharing community from within and thereby to shed light on the underlying demographics and social structures of the phenomenon that has emerged as one of the greatest challenges to IP law ever. Unauthorized file sharing is especially interesting due to the combined fact that (a) the regulation it often violates is globally homogeneous in terms of sharing a few core conceptions;[4] and (b) the social norms corresponding to the legal norms are exceptionally weak, especially amongst the young.[5] These two facts – legal homogeneity and legal/social norm conflict – are what drive the research interest for this study. However, to be more precise, there are a

[1] The Pirate Bay is one of the world's largest and most resilient Bit Torrent sites for file sharing. It has, for several years, been ranked as among the top 100 most visited websites in the world. The site is one of the largest facilitators of illegal downloading on Internet.

[2] For a more extensive version of this article in English, also including a comparison between the quantitative data from the Research Bay survey and a study consisting of focus group interviews of 15-16 year-olds, see Svensson et al., (2013).

[3] O. R. Goodenough, G. J. Decker GJ, *Why do Good People Steal Intellectual Property?*, in «Law, Mind and Brain», n. 2, 2008, pp. 1-31; M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, in «New Media & Society», n.14, 2012, pp. 1147-1163.

[4] S. Larsson, *Metaphors and Norms. Understanding Copyright Law in a Digital Society*, PhD Thesis, Lund Studies in Sociology of Law, Lund University, S. Larsson, *The Path Dependence of European Copyright*, in «SCRIPT:ed. A Journal of Law, Technology & Society», n. 8, 2011, pp. 8-31.

[5] Y. Feldman, J. Nadler, *op. cit.*; S. Larsson, *Metaphors and Norms. Understanding Copyright Law in a Digital Society*, cit; S. Larsson, M. Svensson, *Compliance or Obscurity? Online Anonymity as a Consequence of Fighting Unauthorised File-sharing*, in «Policy and Internet», n. 2, 2010, pp. 77-105; M. Svensson, S. Larsson, *Social Norms and Intellectual Property. Online norms and the European legal development*, cit.; M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, cit.

number of important questions related to file sharing and the file sharing community, that remain unanswered. There are, for example, reasons to believe that the image of file sharers as members of one homogeneous community (representing a clear joint sense of justice) is too simplistic and needs to be revised. For example, file sharers have dissimilar needs in terms of encrypted anonymity and potentially dissimilar attitudes towards different types of sharing, such as BitTorrent, one-click hosts, offline sneakernets, streaming, and so forth.[6]

## Law and social norms in relation to file sharing

The development of law tends to be conservative and retrospective.[7] Embedded values are long lasting and the main principles of coherence and predictability are pivotal. This can create a much-discussed legal path-dependence that, when confronted with rapid social and technical change, runs the risk of creating gaps between the law and its corresponding social norms.[8] Furthermore, copyright and the legal protection for intellectual property is rather homogenously formulated globally, and the trend in recent years has been to further harmonize and extend protection, as well as strengthen its enforcement.[9]

Results in a previous study, performed in 2009, on copyright enforcement and social file sharing norms indicate that the implementation of enforcement strategies in Sweden

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[6] For a better understanding, in this field, of the gap between law and norms has, you may also refer to: S. Altschuller, R. Benbunan-Fich, *Is music downloading the new prohibition? What students reveal through an ethical dilemma*, in «Ethics and Information Technology», n. 11, 2009, pp. 49-56; C. Jensen, *The More Things Change, the More They Stay the Same: Copyright, Digital Technology, and Social Norms,* in «Stanford Law Review», n. 56, 2003 pp. 531-570; S. Larsson, *Metaphors and Norms. Understanding Copyright Law in a Digital Society*, PhD Thesis, Lund Studies in Sociology of Law, Lund University, 2011; S. Larsson, *Conceptions in the code: What "the copyright wars" tells about creativity, social change and normative conflicts in the digital society,* «Societal Studies», n. 4, 2012, pp. 1009-1030; S. Larsson, M. Svensson, M. de Kaminski, K. Rönkkö, J. Alkan Olsson, *Law, norms, piracy and online anonymity – Practices of de-identification in the global file sharing community*, in «Journal of Research in Interactive Marketing», n. 6, 2010, pp. 260-280; S. Larsson, M. Svensson, M. de Kaminski, *Online piracy, Anonymity and Social Change – Innovation through Deviance*, in «*Convergence», n. 20. 2012, pp. 1-20, L.* Lessig, *Code: and other laws of cyberspace,* Basic Books, New York 1999; L. Lessig, *Remix: making art and commerce thrive in the hybrid economy*, Bloomsbury Academic, London, 2008, tr. it. *Remix. Il futuro del copyright*, Etas, Milano 2009; G. Moohr, *The Crime of Copyright Infringement: An Inquiry Based on Morality, Harm, and Criminal Theory,* «Boston University Law Review», n. 83, 2003, pp. 731-783; M. Schultz, *Copynorms: Copyright and Social Norm,* in «SSRN eLibrary», 2006; M. Schultz, *Fear and Norms and Rock & Roll: What Jambands Can Teach Us about Persuading People to Obey Copyright Law,* in «Berkeley Technology Law Journal», vol. 21, 2006, pp. 651-728; L. J. Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks,* in «Virginia Law Review», n. 89, 2003, pp. 505-595; L. J. Strahilevitz, *Social Norms from Close-Knit Groups to Loose-Knit Groups,* in «The University of Chicago Law Review», n. 70, 2003, pp. 359-372; M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, in «New Media & Society», n.14, 2012, pp. 1147-1163; J. Tehranian, *Infringement Nation: Copyright Reform and the Law/Norms Gap*, in «Utah Law Review», n. 3, 2007, pp. 537-551; T. Wingrove, A. Korpas, V. Weisz, *Why were millions of people not obeying the law? Motivational influences on non-compliance with the law in the case of music piracy,* «Psychology, Crime & Law», n. 17, 2011, pp. 261-276.

[7] S. Larsson, *Den stigberoende upphovsrätten. Om konsekvenserna av rättslig inlåsning i en digital tid*, in «Retfærd, Nordic Journal of Law and Justice», n. 4, 2011, pp. 122-146.

[8] M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, cit.

[9] S. Larsson, *Den stigberoende upphovsrätten. Om konsekvenserna av rättslig inlåsning i en digital tid*, cit; S. Larsson, *The Path Dependence of European Copyright*, cit.

have not triggered any sudden changes in the strength of social norms relating to illegal file sharing, thus supporting the often-repeated claims that law is unlikely to lead to any change in the functioning of norms.[10] This study also shows that one possible cause for people commonly ignoring copyright online is the lack of social norms that reinforce the legal framework.[11] Generally, people observe *informal social control*, and when the law, as in this instance, lacks a social equivalent, there are only weak incentives for them to comply with it.[12] As stated by Feldman and Nadler,[13] there are a number of laws that are widely ignored, including traffic laws[14] and tax laws.[15]
Given the gap shown to exist between copyright law and social norms in the study performed in 2009, there are likely negative and unconsidered consequences of the enforcement strategies. Legal enforcement of a copyright regulation that does not correspond with social norms risks working as a stimulus to countermeasures. Given the generativity of the technologies of online communication in networks, these countermeasures may imply an increased diffusion of techniques of online anonymisation. This means that the legal enforcement of copyright not only risks undermining public confidence in the legal system, but also facilitates the diffusion of technological knowledge that will undermine legal enforcement in general when it comes to computer-mediated crime.[16] A section of the same study focused on the use of encryption technology in terms of anonymity services in relation to file sharing. This study showed that unauthorized file sharing of copyrighted content was at least one reason for seeking stronger anonymity online. The increase after the implementation of the enforcement directive was significant for high-frequency file sharers.[17] Below, we return to the role of anonymity, because it plays a significant role in displaying awareness of risk and is a powerful countermeasure for individuals seeking to avoid prosecution for online copyright violations.

## Methodology

How can one decide whether an online survey conducted on a website like The Pirate Bay, where users are anonymous and the administrators are notoriously shady, is statistically significant or not? The challenges are of course considerable, but not insurmountable. The first step is to get an understanding of approximately how many visitors The Pirate bay had during the 72 hours that we conducted our study. This is important because we needed to know if our survey had attracted enough respondents for us to be able to say something about the whole community. The total amount of

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[10] S. Larsson, M. Svensson, *Compliance or Obscurity? Online Anonymity as a Consequence of Fighting Unauthorised File-sharing,* cit; M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, cit.
[11] Cfr., O. R. Goodenough, G. J. Decker, *op. cit.*
[12] R.C. Ellickson, *Order without Law: How Neighbors Settle Disputes*, Cambridge, MA, Harvard University Press, 1991; R.C. Ellickson, *Law and economics discovers social norms,* «The Journal of Legal Studies», n. 27, 1998, pp. 537-552.
[13] Ibid.
[14] E. Cheng, *Structural Laws and the Puzzle of Regulating Behavior*, in «Northwestern University Law Review» n. 100, 2006, pp. 655-718.
[15] V. Braithwaite, *Dancing with tax authorities: Motivational postures and non-compliant actions*, in V. Braithwaite, (edited by) *Taxing Democracy: Understanding Tax Avoidance and Evasion*, Ashgate Publishing, Aldershot, 2003, pp. 15-39
[16] S. Larsson, M. Svensson, *Compliance or Obscurity? Online Anonymity as a Consequence of Fighting Unauthorised File-sharing*, cit.
[17] *Ivi*, p. 99

front page views (where we displayed the logo linked to our survey) within the site during the time span, according to The Pirate Bay's own records, was 4,598.081 views 18th April; 4,541,690 views 19th April; and 4,384,835 views on 20th April. Hence, there were in total 13,524,606 front-page views during the three days that the survey ran. However, according to the web information company Alexa[18] approximately 30 percent of the visits consisted of only one page views (i.e., are bounces) and must therefore be deducted. This means that there were 9,467,244 actual front-page views during the period that we conducted our online survey. Even if this does not give us an exact number of unique visitors on The Pirate Bay during the period, it is a good indication.

On March 31, 2011, there were 2,095,006,005 Internet users in the world,[19] and The Pirate Bay was at any given day visited by 1,1 percent of the users (Alexa). This makes The Pirate Bay one of the top 100 most visited websites on the planet and the number one largest BitTorrent tracker. Hence, more than 2,300,000 Internet users visited The Pirate Bay every day in April 2011. However, since approximately 30 percent of the visits consisted of only one page view (i.e., are bounces) and must therefore be deducted in order to show a true number of visitors, this leaves us with around 1,600,000 actual visitors per day. Our study shows that 34.2 percent of the visitors returned to the site every, or almost every day, which means that if there were 1,600,000 visitors in the first 24 hours, there should be 1,052,800 new visitors the following 24 hours and, at the most, the same amount of visitors the last 24 hours. This indicates an estimated 3,705,600 unique visitors at The Pirate Bay during the 72 hours that the online survey was running. Given that we know that the front page had 9,467,244 views, this means that each visitor viewed the front page in average 2,55 times. During that time 75,616 visitors clicked on the link that led to our questionnaire. These respondents represent 2 percent of the estimated total amount of unique visitors during the time that the online survey was active. Having a sample of 2 percent of the visitors during the three days gives us more than enough answers in order to produce significant data.

## Empirical Findings

### *Gender and age*

Of the 75,616 file sharers that answered the question of gender, 93.8 percent are male (70,938) and only 6.2 percent (4,678) are women. This overrepresentation of men is consistent through all age groups. Furthermore, file sharers tend to be young. Almost half of the respondents (32 301) are between 18-24 and just about 5 percent of them are over 46 years old.

**Table 1: Age**

| | -17 | 18-24 | 25-29 | 30-36 | 37-45 | 46-52 | 53-65 | 66- | No response | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Count | 11345 | 32301 | 13934 | 8671 | 4566 | 1663 | 1409 | 571 | 1441 | 74460 |
| Percent | 15,2 | 43,4 | 18,7 | 11,7 | 6,1 | 2,2 | 1,9 | 0,8 | | |

[18] www.alexa.com is one of the leading providers of free, global web metrics. They offer analysis based on data collected through their toolbar installed by users around the world.
[19] Internet World Stats 2011 http://www.internetworldstats.com/stats.htm.

### *Geography*

When it comes to geographical location of the file sharers, the overweight is clearly on Europe, with 54.7 percent of all respondents, and North America, with almost 27.7 percent of all respondents. Of the remaining 17.8 percent, Asia has the most respondents with 7.3 percent, followed by Oceania (4.8), Central and South America (4.1) and Africa (1.6).

### *Media types*

One important focus is on understanding what kind of media is shared. Music is despite "free" legal streaming solutions such as Spotify still one of the media types that are most shared (65.4 percent), movies (80.2), TV shows (60.3) and games/software (57.1). We see that BitTorrent seems to be a good tool for large files, such as for movies and TV series. What might be somewhat surprising is the amount of sharing concerning e-books (28.2 percent). File sharers are apparently more interested in books then in pornography (17.1 percent), for example. Through the open answers we can see that some of the (file) shared books are university course literature.

**Table 2. Media type**

| | **Count** | **Percent** |
|---|---|---|
| Music | 46554 | 65,4 |
| Movies | 57076 | 80,2 |
| TV Shows | 42925 | 60,3 |
| Sports Material | 3970 | 5,6 |
| Games/Software | 40662 | 57,1 |
| E-books | 20103 | 28,2 |
| Pornography | 12172 | 17,1 |
| Other | 9578 | 13,5 |
| No response | 4696 | |
| **Total** | 71205 | |

### *Alternative techniques for sharing files*

It is clear that BitTorrent is not the only technique used for sharing files. For example, the use of so-called one click hosting sites where you can share a folder or upload files for others to download via a specific link are used by almost half of the respondents (47.6 percent), see table 3. Note that more than half of the respondents (53.3 percent) claim to use offline sharing, for example usb sticks, mobile phones, CDs. This is likely a sign of that social networks are important too, which we return to below.

**Table 3. Other file sharing techniques that are used (besides TPB)**

| | **Count** | **Percent** |
|---|---|---|
| Other/Private BitTorrent Trackers | 39395 | 57,1 |
| Other peer to peer networks | 17824 | 25,8 |
| One click hosting sites (Dropbox, Rapidshare, Megafile,etc.) | 32850 | 47,6 |

| | | |
|---|---|---|
| FTP servers | 11367 | 16,5 |
| Instant messaging (MSN, Skype; Gtalk etc.) | 17546 | 25,4 |
| E-mail | 16120 | 23,4 |
| Offline file sharing (USB sticks, mobile phones, burned CD:s/DVD:s) | 36823 | 53,3 |
| Other | 8495 | 12,3 |
| None | 7724 | 11,2 |
| No response | 6859 | |
| **Total** | 69042 | |

***Upload v. download***

BitTorrent technically means that while you download, you by default also share the same file (upload) with "the swarm" or network of nodes downloading the same file. However, it is clear that most file sharers mainly intend to download and not to share with the community, (see table 4). A majority of 67.5 percent never uploads any new material to the community, and only about 11 percent do so more than once a week. Of course after a new file of good quality has been uploaded, there is little reason for anyone else to upload the same file. Hence, there is a very limited need of members who upload new material.

**Table 4. Frequency of p2p file sharing**

| Download | | | | | | |
|---|---|---|---|---|---|---|
| | **Never** | **More than once a month** | **More than once a week** | **Every or almost every day** | **No response** | **Total** |
| Count | 5131 | 19338 | 20841 | 23542 | 7049 | 68852 |
| Percent | 7,5 | 28,1 | 30,3 | 34,2 | | |
| Upload | | | | | | |
| | **Never** | **More than once a month** | **More than once a week** | **Every or almost every day** | **No response** | **Total** |
| Count | 45774 | 14267 | 4204 | 3593 | 8063 | 67838 |
| Percent | 67,5 | 21,0 | 6,2 | 5,3 | | |

***Anonymity and file sharing***

A way to measure an increased awareness of the need for protection against legal actions in the file sharing community is to ask about the use of anonymity services, such as encrypted ones. Of relevance is that the amount is not to be neglected; for example, almost 18 percent use some variant of VPN or encrypted anonymity service, (see table 5). We regard encryption as playing a significant role in measuring risk awareness, but also as an indicator of how different roles in a file sharing community can develop, which is returned to in the analysis. Significantly, for example, more than half of the respondents claim that they want to be more anonymous online, (see table 5). The role

of anonymity and file sharing is further focused on in another article,[20] which also looks for anonymity in relation to file sharing frequency[21] and geographical location, etc.

**Table 5. VPN as means for anonymity**

| | Yes, free | Yes, paid | No but I would like to be anonymous online | No, I don't care about anonymity | I do not know | No response | Total |
|---|---|---|---|---|---|---|---|
| Count | 8805 | 3235 | 34664 | 12417 | 8352 | 8428 | 67473 |
| Percent | 13,1 | 4,8 | 51,4 | 18,4 | 12,4 | | |

**Analysis and conclusion**

The struggle over illegal file sharing and its survival or demise is an obvious indication that a serious chasm is truly opening up between the legal system and the social norms of society. The inability of legislators to induce people to fall in line shows the strength of the social changes now under way. There is evidence that the Internet and new technologies are changing society in a radical way, and that copyright and the dilemma of unauthorized file sharing may represent a socio-legal challenge.[22] This highlights the importance of understanding the issue, since it could be crucial for questions on social, economic and technological structures in the future, as well as interrelated issues of privacy in a connected world. When analyzing the data from the online survey, we have found two themes that we consider to be vital to the understanding of file sharing communities, such as The Pirate Bay:

a) The gender issue: a community of young men.
b) "Professionalization" or specialization: the file sharers division of work.

In this concluding section, we will discuss these two themes in the light of our empirical findings. The aim is to shed light on the underlying demographics and social structures in the global file sharing community, which means an analysis related to social and legal norms. As mentioned, a striking result of the survey was that 93.8 percent of the respondents are men and only a low 6.2 percent were women. This inequality can also be weighed against the fact that 77.3 percent were younger than 30 years of age. In fact, 58.6 percent of the respondents are under 25 years old. The fact that young men are in majority is not a surprise, and is in line with other studies on gender and ICT. For example, Cooper talks of a "gender digital divide"[23] as a result of socialization patterns of boys and girls in relation to these types of technology.[24]

[20] S. Larsson S., M. Svensson, M. de Kaminski, K. Rönkkö, J Alkan Olsson, *Law, norms, piracy and online anonymity – Practices of de-identification in the global file sharing community*, cit.
[21] Cfr., Larsson, M. Svensson, *Compliance or Obscurity? Online Anonymity as a Consequence of Fighting Unauthorised File-sharing*, cit.
[22] S. Larsson, *Metaphors and Norms. Understanding Copyright Law in a Digital Society*, cit.; L. Lessig, *Remix. Il futuro del copyright*, cit.; M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, cit.
[23] J. Cooper, *The digital divide: The special case of gender*, in «Journal of Computer Assistant Learning», n. 22, 2006, pp. 320-334.
[24] In a recently published study on social norm strength of copyright in relation to illegal file sharing, no significant difference is found in terms of gender. The social norm is equally low for both sexes M. Svensson, S. Larsson, *Intellectual Property Law Compliance in Europe: Illegal File sharing and the Role of Social Norms*, cit.

However, the fact that this majority is so extremely predominant is still somewhat of a surprise. One of the important answers to the question of what there is instead is rather disheartening, at least from an equality perspective. The global BitTorrent file sharing community seems to be inhabited by men below 30 years of age and from either Europe or the USA.

However, the relatively low share of uploaders, that are more inclined to seek protection from identification via encrypted means[25] in combination with the fact that offline sharing is common, is an indication of that the file sharing community is differentiated within. One could talk of a professionalization or specialization, including different roles in the "eco system" of sharing files, which is further supported by Svensson et al.[26] This means that those informants we have found via the Pirate Bay website may represent a link in a bigger chain, as a technology competent and vital link for a bigger ecosystem of file sharing. This professionalization hints at a larger structured organization within the file sharing community, of which BitTorrent plays an important, but not all-encompassing, part. It is not a result of a planned form of organization, but constitutes nonetheless a structure for content dissemination, where gender plays a significant role.[27] It includes a smaller and more specialized group (of young men) downloads from the global BitTorrent networks. This group has good knowledge of both technical and legal issues. They, in turn, hand over the content to more locally located networks, where it is distributed through various means; for example, sneaker-nets.[28] This provides the whole chain of operation with strong protection from enforcement entities. Off-line file sharers are notoriously difficult to monitor and control. The emerging structure is one of gender and age and is focused on protecting the file sharing communities from different surveillance techniques. Of the 67,473 that answered the question on anonymous practices in the Research Bay survey, 17.8 percent claimed they use "VPN or similar service to protect their anonymity". This means that the overall use of anonymity services is higher among file sharers on The Pirate bay compared to young people in general.[29] This alone raises the question of *why* a file sharing community uses anonymity services to a higher extent than a random selection of young Swedes, and can be interpreted as a sign of the rationality of sensing a greater need for protection from copyright enforcement.

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[25] S. Larsson, M. Svensson, M. de Kaminski, K. Rönkkö., J. Alkan Olsson, J., *Law, norms, piracy and online anonymity – Practices of de-identification in the global file sharing community*, cit.; S. Larsson, M. Svensson, M. de Kaminski, *Online piracy, Anonymity and Social Change – Innovation through Deviance*, cit.; *ibid*.

[26] M. Svensson, S. Larsson, M. Kaminski, *The research bay – studying the global file sharing community*, in W. Gallagher, D. Halbert (edited by) *Intellectual Property in Context: Law and Society Perspectives on IP*, Cambridge University Press, Cambridge, 2013.

[27] Cfr, *ibid*.

[28] S. Larsson, M. Svensson, *Compliance or Obscurity? Online Anonymity as a Consequence of Fighting Unauthorised File-sharing*, cit.; S. Larsson S., M. Svensson, M. de Kaminski, K. Rönkkö, J Alkan Olsson, *Law, norms, piracy and online anonymity – Practices of de-identification in the global file sharing community*, cit.; S. Larsson, M. Svensson, M. de Kaminski, *Online piracy, Anonymity and Social Change – Innovation through Deviance*, cit.

[29] Cfr. S. Larsson, M. Svensson, *Compliance or Obscurity? Online Anonymity as a Consequence of Fighting Unauthorised File-sharing*, cit., p. 93.